ntea

Standards

CSCL 07D

H2/06

IG

ŤA

174-25647

£

Final Report 275.03-72-11

on

- Survey - Compatibility of Materials with

High Pressure Oxygen Service

prepared for

National Aeronautics and Space Administration George C. Marshall Space Flight Center Huntsville, Alabama

October 1972

NASA Order Number H-9 2180A Principal Technical Representative John G. Austin Huntsville, Alabama

Prepared by

J. G. Hust and A. F. Clark Cryogenics Division Institute for Basic Standards National Bureau of Standards Boulder, Colorado 80302

THIS REPORT FOR SPONSOR OFFICIAL USE ONLY AND IS NOT TO BE RELEASED TO DDC OR CLEARING HOUSE Maybe histribits & triface and per phone conversation with austint 91. madel with on 2/28/73

IMPORTANT NOTICE

The results of this report are not to be used for advertising or promotional purposes, or to indicate endorsement or disapproval of the product(s) by the National Bureau of Standards.

PRECEDING PAGE BLANK NOT FILMED

A SECTION OF A SEC

A Survey of Compatibility of Materials with

High Pressure Oxygen Service

	Page	5
I.	Introduction	
П.	Material Selection	
	A. Structural Considerations	
	B. Chemical Reaction Considerations	
	1. Reaction Sensitivity	
	2. Reaction Intensity. \ldots 7	
	3. Ignition Sources	
	C. Recommended Selection Procedure	
III.	Material Compatibility Tests	
IV.	Material Compatibility Data 19	
	A. Metals	
	B. Non-Metals	
ν.	High Pressure Oxygen Equipment	
VI.	High Pressure Oxygen Facilities	
VII.	Recommendations 34	
VIII.	Summary	
IX.	References	

PRICEDING PAGE BLANK NOT FILMED

12

Contract A 12 Survey of the

and the second second

A Survey of Compatibility of Materials with High Pressure Oxygen Service

I. Introduction

-

A CONTRACT OF A CONTRACT OF

The Cryogenics Division of the National Bureau of Standards (NBS-CD) was recently requested by the Marshall Space Flight Center of the National Aeronautics and Space Administration (NASA-MSFC) to perform a survey and assess the existing state of knowledge regarding compatibility of materials with high pressure oxygen. Particular emphasis is to be placed on past practical operational and research experience.

Material compatibility, in general, implies a harmonious coexistence of all the materials of a system. The lack of such compatibility can lead to undesirable and sometimes disastrous results. For example, the chemical reaction of a combustible material with oxygen in a system results in corrosion, burning, or even explosion. It is clear that the general definition of incompatibility encompasses many phenomena. In this study, however, we have restricted ourselves to the consideration of materials exposed to high pressure oxygen. Because only high pressures are considered, any manrelated incompatibilities are ignored. The harmonious coexistence of materials in a high pressure oxygen system implies the physical containment of the oxygen as well as the lack of significant chemical reactions with the oxygen, Thus compatible materials are defined, in this study, as those materials or combinations of materials with sufficient mechanical strength to withstand the high pressures and whose properties are not significantly degraded by the presence of oxygen. We will pay particular attention to the ease with which any degradation is initiated (reaction sensitivity), the rate at which degradation progresses (reaction intensity), and the sources of degradation

initiation (ignition sources). The dependence of these parameters on physical properties, such as thermal conductivity, specific heat, density, and heat of combustion, as well as system characteristics, such as pressure, pipe wall thickness, total mass, radius of pipe bends, and surface roughness, is considered. It is to be noted that the dependence on pressure is the primary consideration here; however, the interdependence of the effects of these characteristics makes it essentially impossible to analyze any one separately.

The objective of this survey is to gather the available information on the compatibility of materials with oxygen as applied to the production, transport, and applications experience of high pressure liquid and gaseous oxygen and to compile this material into a usable reference report. High pressure is here defined to be above about 2000 to 3000 psia. Since high pressure projections sometimes can be made from lower pressure data, some low pressure data are also included. Low pressure data are included if they are considered helpful to a better understanding of the behavior at high pressures.

14.V.S.

ないないないないないないないで

It is anticipated that this technical input to NASA-MSFC will assist in the establishment of practical and safe, but not stifling, guidelines in the future use of high pressure oxygen. It is hoped that such guidelines will eventually be commonly accepted throughout NASA, other government agencies, and the commercial sector as well.

Recently, Clark (1971) of NBS performed a survey on oxygen compatibility of materials at ordinary pressures. Information from Clark's report which is especially applicable to high pressure application will be repeated for convenience. Surveys of oxygen related accidents have been conducted recently by Ordin (1971) and Johnson (1970) for NASA and by McQuaid and Ccle (1972) for the Navy. Each of these surveys indicate a surprisingly high rate of accidents caused by material incompatibility. The surveys by Ordin and Johnson covered

2

ġ.

· 7

NASA, some Air Force, and some related contractor records. Or in reported 20% of the mishaps with liquid oxygen and 36% of the mishaps with gaseous oxygen involved material incompatibility. Johnson reported 56% were caused by the presence of oxygen incompatible materials. In many cases more than one factor was involved in the mishaps. For example, procedural errors were involved in 78% of the mishaps and design errors were present in 63% of the mishaps according to Ordin. Even though material incompatibility with oxygen was present in fewer instances than procedural or design error, the percentage due to incompatibility is significantly large and it is expected to be even higher in high pressure oxygen systems. It is also noted that the accident rate due to material incompatibility in high pressure gaseous oxygen is almost twice that in liquid oxygen.

McQuaid and Cole's (1972) survey indicates an accident in a Navy compressed gas system due to spontaneous ignition every four weeks during the period January 1968 to May 1971. They do not indicate what proportion of these are due to material incompatibility, but do state that material failure accounts for about half of these accidents; the cause of the other half is unknown. No accidents are attributed to design failure or personnel error. From this information one can not rule out that a sizable proportion may be due to material incompatibility.

Recent trends in NASA, military, and commercial use of liquid (LOX) and gaseous (GOX) oxygen point toward use of higher pressures. With this increased use to 10,000 psi and higher, compatibulty considerations are of paramount importance. Deep concern with safety is rightfully prevalent throughout the field, both by the producer and the user. This survey will better define material incompatibility problems and hazards caused by the use of high pressure LOX and GOX. This report contains recommended guidelines in later sections which will hopefully allow the necessary flexibility and compromise between cost - effectiveness and

safety. Also included is a tabulation and assessment of available high pressure compatibility data and an indication of the availability of equipment. The next section is a discussion of the compatibility parameters affecting the selection of materials for high pressure oxygen service. Following sections include discussions on structural integrity, chemical compatibility, and experimental tests and data which characterize the relative compatibility of different materials.

II. Material Selection

<u>____</u>____

·. +

ş

Z

The selection of a given material to fulfill a specified function in high pressure oxygen service must be based both on its physical-mechanical properties as well as its chemical properties. The principal chemical property of interest here is its potential reactivity with oxygen. The relevant physical-mechanical properties are primarily strength and plastic deformation properties. For example the plastic deformation of polytetrafluoroethylene may make it unusable for a valve seat material at sufficiently high pressure and copper may be too weak for a pressure chamber, even though they may be judged chemically compatible with oxygen. Also, the designer needs to consider that plastics and nearly all metals become more brittle at LOX temperatures. Other properties such as specific heat, thermal conductivity, density, and thermal diffusivity influence material compatibility. For example, nickel-copper alloys are rapidly replacing stainless steel in high pressure oxygen systems because of the increased thermal conductivity and diffusivity of the nickel-copper alloys. The higher thermal conductivity results in lower reaction sensitivity. Also, mechanical properties may be altered in the presence of high pressure oxygen, e.g. crack propagation may be enhanced.

Several good reviews of lower pressure oxygen compatibility have been written. Many of these contain information basic to the understanding of the higher pressure phenomena. The most recent review is by Clark (1971);

à.

other noteworthy reviews and technical papers are by Pelouch (1972), McQuaid and Cole (1972), McKinley (1971), Attwood and Allen (1971), Ordin (1971), Schwinghamer (1971), Keeping (1971), Blackstone and Ku (1971), Johnston (1970), Kimzey (1970), Guter (1967), Olson (1967), White and Ward (1966), Nihart and Smith (1964), Baum, Goobich, and Trainer (1962), Dean and Thompson (1961), Van Dyke (1959), and Grosse and Conway (1958). An assessment of the views presented by these authors along with our own views are described in this report.

Of particular interest is the work on oxygen safety by the Aerospace Safety Research and Data Institute (ASRDI) at NASA - Lewis Research Center. They will be publishing, soon, a series of NASA Special Publications entitled "ASRDI Oxygen Technology Survey: - - - - " covering the subject areas of metals and alloys, cleaning requirements, hardware, and contamination control. Of special interest for material selection is the report in this series by Pelouch (1972). Another pertinent report of this series is a state-of-the-art survey on oxygen instrumentation, including a section on pressure measurement. This survey is being performed by the Crycgenics Division, NBS, Boulder. ASRDI has also collected a large amount of oxygen safety related information into a computerized data retrieval system called RECON. These reports and the readily accessible data bank should be very helpful for assessing specific problems.

An extensive treatise on the subject of material selection for application in manned spacecraft is NASA MSC-02681 (1972). This volume contains more general technical information and design guidelines regarding oxygen compatibility than any other single reference work. It is not addressed toward problems associated with high pressures; however, as is stressed later, low pressure guidelines are directly applicable at high pressure as well.

A. Structural Considerations

Prior to chemical reaction considerations, one should be assured that the material selected for a given application is structurally adequate. If the material is not structurally adequate there is little point in assessing its chemical compatibility. The physical - mechanical properties of interest for high pressure service are strength, hardness, mechinability, brittleness, thernial expansion, etc. Data necessary for structural design can be found in many sources. A few recent sources are <u>Aerospace Structural Metals</u> <u>Handbook</u> by Weiss (1966), <u>Cryogenic Materials Data Handbook</u>, Schwartzberg (1968), and <u>Materials Properties Data Handbook</u> by Aerojet Nuclear Systems Company (1970), NATO-AGARD (1959).

ASRDI recently contracted Linde Division of Union Carbide Corporation to report on their vast experience in design and handling of oxygen systems. The resulting report, Linde (1971), includes a section on "Structural Compatibility" with emphasis on thermal expansion problems encountered with LOX equipment. **B.** Chemical Reaction Consideration

Chemical reactions with system materials are important in that the material properties may be altered to the point of system failure. Material incompatibility here is generally synonymous with oxidation or burning. Important factors in the consideration of oxidation are reaction sensitivity, reaction intensity, and ignition sources. The effect of high pressures on these factors and ultimately on equipment design is essentially the subject of this study.

1. Reaction sensitivity

Reaction sensitivity is a measure of how readily a material will react with oxygen. Most of the experimental tests performed to characterize oxygen compatibility (described in a later section) are directed toward obtaining a measure of reaction sensitivity. Examples of reaction sensitivity tests are those involving reactions initiated by impact, by heating, or by electric arc. The variable most important to reaction sensitivity is the

ignition temperature of the material. However, this may be considerably altered by the presence of oxide coatings or contamination. It is to be noted that many of the materials tested include contamination or impurities. Oxide coatings on metals usually raise the apparent ignition temperatures; while contaminants generally lower the ignition temperature. Impurities such as cil or grease, rust, metal filings, etc. on metals usually drastically increase the probability of reaction. Other factors which are significant in the consideration of reaction sensitivity are specific heat, thermal conductivity, density, thermal diffusivity, and material configuration.

45

<u>م</u>

1

The ignition temperature is the most critical factor in determining a material's reaction sensitivity. As will be shown later, the ignition temperature of a solid generally decreases with increasing pressure up to about 2000 psia. Above this pressure the ignition temperature is relatively independent of pressure. Thus, the reaction sensitivity is not expected to change appreciably at higher pressures. However, the possibility of ignition at higher pressures is enhanced because the possibility of the release of sufficient energy is greater.

2. Reaction intensity

Reaction intensity is a measure of the rate of energy release of the reaction once it is started. The importance of reaction intensity to material selection is discussed by Blackstone et al (1971), (1970), (1967) and Jamison (1971). Reaction intensity determines to a large extent the degree of damage done to a system, the speed with which the damage progresses, and the ability of the reaction to spread to other materials in the system. The factors which most influence reaction intensity are heat of combustion and oxygen availability. Oxygen availability is determined by temperature, volume, pressure, and rate of flow. Other factors influencing reaction intensity are material density, configuration (e.g. the size of the heat sink) and the properties of combustion products. Reaction intensity is expected to be greater in high pressure systems due to the increased availability of oxygen and concomitant increased burning potential.

3. Ignition Sources

It is often stated that a reaction is only possible in the presence of a fuel, an oxidizer, and an ignition source. This statement is of little consolation in an oxygen system when one realizes that the fluid is the oxidizer, the system is the fuel, and ignition sources are everpresent in varied forms. Probably the most important source of ignition in a high pressure system is the heating due to rapid adiabatic compression. The use of materials with high thermal diffusivity and high heat capacity are most beneficial here since the most rapid rates of heating by compression are not appreciably faster than the effective surface cooling rate of good heat conductors.

Another important source of ignition is impact, such as by small particles or bull pieces in a flowing stream of oxygen. Heating caused by friction and static discharges can also ignite system components. In high pressure systems the probability of ignition is greater because of increased likelihood of encountering high temperatures and possible lowered ignition temperatures. High pressures generally also result in greater flow velocities, increased impact energies, and frictional heating effects. いたちというなど、とうしたいというとうというなどのためないないないないであるというないですのないです

A chemical reaction of significance that is seldom considered is the fracture or crack propagation enhancement by an oxygen atmosphere. The fatigue behavior of a high pressure oxygen container is very critical, particularly if the pressure is cycled, yet very little work has been done [Linde (1971) and Baum, Goobich, and Trainer (1962)]. Crack growth enhancement has been reported for a titanium alloy by Jackson et al (1963) and the absence of any enhancement for a nickel alloy has been reported by NASA (1970). This is an area of investigation that has been sorely neglected and, therefore, projections to high pressure are impossible.

8

東京大部門の市

C. Recommended Selection Procedure

1

As indicated earlier, it is best to first select materials which physically fulfill the mechanical demands of the component considered. These materials are then analyzed to select the most chemically compatible material. This selection process is often based upon the material ranking of a given compatibility test. Or it may be based upon the concensus of the material ranking recommendations found in the literature, as is also frequently advocated. However, we believe that both of these suffer from two serious drawbacks; (1) no consideration is given to the uniqueness of the particular demands of the application in question and (2) the materials ranking recommendations based upon the results of individual investigations often are highly contradictory. These contradictory results are frequently due to the specialized nature of the test and the biased interpretation of the results. A case in point is the wide disparity in the ranking of aluminum and stainless steel reported by various investigators: Dean and Thompson (1961), Kirschfeld (1961), (1965), (1967) and (1968), and Nihart and Smith (1964). We believe the material selection process should be accomplished by matching the particular demands of the equipment component with the materials best satisfying these demands. Material selection on this basis assumes the existence of several types of compatibility and physical properties data for these materials. For example, if a component is likely to be impacted but not likely to be in a high temperature environment, materials with a low impact sensitivity should be considered regardless of their ranking according to ignition temperature. This proce 'ire, apparently already used by NASA, is discussed in the report NASA, MSC-02681 (1972). The importance of equipment design, as discussed in other parts of this report, should not be ignored. For example, the introduction of slow opening valves and heat sinks, whenever possible, will reduce the probability of ignition by adiabatic compression.

in the second

TALK A BAY TON BANK ON

The following is a priority sequence of guidelines that should be followed when selecting materials for oxygen use in the presence of ignition sources. Of course any considerations must include the effects of possible contaminants in the system.

1. Eliminate ignition - select a mater al which is least likely to ignite under the operational conditions.

2. Prevent continued reaction - select a material which tends to quench the reaction after ignition.

3. Reduce the rate of reaction - select materials which react as slowly as possible after ignition to permit the control of the reaction.

These recommendations encompass those suggested by McKinley (1971) and recommended by NASA - Myers (1971). The first guideline is most likely satisfied by selecting the material with highest ignition temperature but is also affected by the presence of oxide coatings or the possibility of intermaterial reactions. For example, it has been reported and discussed by Key (1968), (1964), Ordin (1971), and Keeping (1971) that chlorofiuoro compounds may react strongly with aluminum under shear forces. This reaction may be sufficient to ignite aluminum in the presence of oxygen. Irca rust according to Keeping (1971) significantly lowers the ignition resistance of aluminum in oxygen. Materials with a high thermal diffusivity are better in dynamic systems since local energy impulses will result in less pronounced hot spots than with how diffusivity materials. In a static system high thermal conductivity materials are more desirable for essentially the same reason. Materials whose melting point is higher than the ignition temperature should be free of sharp edges. The presence of sharp edges may result in hot spots for ignition. If the ignition temperature is sufficiently above the melting point, sharp edges will probably be and hed by melting before ignition occurs. This has been reported to be the case for aluminum Ly Keeping (1971).

The second guideline, selecting a material which tends to quench itself, is influenced by several factors. The heat of combustion is the most important. If it is sufficiently low, the heat may be conducted away ra-idly enough to quench the burning. The reaction products may also interfere with continued oxidation. For example, slag buildup has been reported to have a quenching effect in iron.

The materials portion of the third guideline, select slow burning materials, is affected by essentially the same factors. However, one can also utilize good design to slow down the reaction. For example, one might insert a nickel-alloy pipe section in a predominantly stainless steel pipe. The nickel alloy section, having a lower reaction intensity, would either quench or slow a reaction propagating along the pipe. The shape and size of components at strategic points in a system can be significant in controlling a reaction. Thermal anchoring of potentially reactive components to a cold heat sink c in also be useful in curtailing a burn. A rapid operating system to shut down the oxygen supply upon detecting a malfunction may prevent extensive damage, unless the initial burn occurs with explosive violence. Limiting the oxygen availability by restricting oxygen flow where possible is desirable for control purposes.

Material ranking lists are most useful for design purposes if they are clearly identified as to the experimental tests who which they are based. McKinley (1971) has compiled ranking lists based upon individual past tests. These lists and the recommendations in NASA, MSC-02681 (1972) should be consulted for material relection. The results of various compatibility experiments along with physical property data, such as melting and vaporization temperatures, thermal conductivity, specific heat, and heat of combustion,' are sometimes combined to produce a weighted index of oxygen compatibility. Such an equation has been used by Linde Division of Union Carbide Corporation [Carlson (1971)]. The critical point of setting up such an equation is the choice of the weighting factor for each parameter in the

Ţ

equation. In our opinion, the importance of ignition temperatures can hardly be overstressed at high pressures and the prevention of ignition should be the principle goal. Next we will discuss tests which have been devised to characterize these properties and then summarize the data which have been obtained with these tests.

12

3

- " I thank to shake channel 1,1

ż

III. Material Compatibility Tests

A test to measure the compatibility of a material with oxygen basically consists of placing the material in oxygen in the presence of an ignition source and observing the sensitivity or intensity of the reaction. The tests may be conducted under different conditions, such as at different temperatures, pressures, or ignition energies, to determine any dependence on these variables. The kinds of tests possible are limited primarily by the number of possible ignition sources. However, most tests are quite realistic in simulating working conditions and common ignition cources. Somewhat arbitrarily, these tests are described below by the following ignition categories: impact, thermal, electric arc, abrasive, and fracture. Also discussed are environmental and configuration tests which involve various forms of ignition in simulation tests. There are also many experiments designed to measure specific thermodynamic properties, such as heat of combustion, thermal conductivity, specific heat, or melting point. Strictly speaking, these are not compatibility tests, but do provide a basis for understanding the results of compatibility tests. Most compatibility tests a concerned primarily with resistance to ignition (reaction sensitivity) but some also are designed to measure the burning rate or quenchant behavior (reaction intensity) after combustion is initiated.

One of the most probable ignition mechanisms is by impact in the presence of oxygen; be it by dropping a wrench in an oxygen spill (mechanical impact), by impinging a piece of weld slag on the bend of an oxygen pipeline (particle impact), or simply by rapidly opening or closing a high pressure valve (pneumatic impact). Each of these conditions are simulated by a particular impact compatibility test method.

The most common version of an impact test is the <u>Mechanical</u> <u>Impact Test</u> developed by Lucas and Riehl (1960). This test has been used extensively and has resulted in an enormous number of data, Key (1963), (1964), (1966), (1968), Jamison (1970), and NASA, MSC-02681 (1972). It

is one of only two ASTM standard tests for oxygen compatibility, ASTM (1970). The test is conducted by imparting a known amount of energy from a falling plummet to a striker pin which is in contact with the specimen in the presence of liquid or gaseous oxygen and any reaction is noted. The test is relatively simple and readily adapted to variable pressure and temperature. Compatibility by this ASTM test is defined as no reactions out of 20 impacts with the plummet impact energy adjusted to 70 ft-lbs. Key (1968) indicated that this go-no-go test has been remarkably successful in rejecting incompatible materials. However, the arguments described in the next paragraph suggest that the poor repeatability inherent in the test may lead to the rejection of some compatible as well as the incompatible materials. Blackstone and Ku (1971) have gone so far as to suggest that this test has also passed some unacceptable materials.

ŧ

۲

The mechanical impact test procedure has undergone extensive criticism by Blackstone (1970), Blackstone and Ku (1971), Blackstone, Baber, and Ku (1967), Burmeister, et al (1967), Reynales (1958), (1961), Staph et al (1962), and Jamison (1970). The citicism indicates essentially that the statistical procedure of the test is at fault rather than the test apparatus per se. Schwinghamer (1972) has refuted some of this criticism. A different statistical approach has been recommended by Jamison (1971) as a consequence of this criticism. Instead of accepting a material if it doesn't react in 20 tests at 70 ft-lbs, the test would be repeated 20 times at different energies to find the energy at which 50% reactions are obtained. This energy (determined from the drop height of the falling weight) is used to indicate the relative impact sensitivity of the material. This method is referred to as the Bruceton or "up-and-down" method of mechanical impact testing. According to Jamison (1971) the "up-and-down" method of impact testing, as an alternative to the go-no-go test, is both efficient and repeatable. That the Bruceton method is more repeatable than the go-no-go test is intuitively reasonable; however, the go-no-go test is less time consuming and therefore is considered useful

as a screening test if the occasional rejection of an acceptable material is permissible. Blackstone and Ku (1971) and Janison (1971) give historical accounts of the development from the first impact testor described by Lucas and Riehl (1960) to current models. As a result of recent attempts to improve the mechanical impact test it has been suggested that reaction intensity testing should also play a major role in material selection in conjunction with reaction sensitivity testing. Jamison (1971) has pointed out that the improved repeatability of the Bruceton method of implict sensitivity testing shows that materials are not significantly different in sensitivity. However, he indicates that these materials differ widely in intensity since some of them react violently and are totally consumed while others are only slightly charred. It appears that further statistical considerations may be in order here to take advantage of both techniques rather than to reject either totally.

Another form of impact test which has been used considerably is the <u>Pneumatic Impact Test</u>. The pneumatic impact test is designed to simulate the adiabatic compression resulting from a rapidly opening high pressure valve. It is usually performed in just that way with a small specimen containing test chamber suddenly opened to a high pressure reservoir. The adiabatic compression test uses the highest pressures of all the compatibility tests, except for a variation of this test using explosively generated shock staves.

「「「「「」」」、「」」、「」」、「」、「」、」、

A STATE AND A STAT

Adiabatic compression tests involve the study of material ignition in the compressively heated oxygen gas. The absolute temperature, T, of an id-al gas under adiabatic compression as a function of pressure, P, for ar. ideal gas is given by

$$T = T_o \frac{P}{P_o}^n$$

n _ 1

where T_0 and P_0 are initial temperature and pressure, respectively and n is the ratio of specific heat at constant pressure to specific heat at constant volume and is about 1.4 for oxygen. Nihart and Smith (1964) plotted values of T versus P for $T_0 = 273$ K and $P_0 = 14.7$ psia. At 10,000 psia T is 1900 K which is sufficiently high to ignite almost any structural material. Whether ignition actually occurs is determined by the temperature of the material and not just the temperature of the compressed gas. Thus the transient thermal characteristics of the system are important. The thermal diffusivity, heat capacity, and other factors such as the existence of sharp edges, determine the peak temperature of the material. For these reasons an adiabatic compression test is most meaningful if performed on a system rather than on a specimen of material.

s į

The Particle Impact Test is the least used of the impact tests; however, its importance should not be neglected especially in high pressure systems. This test is performed by impacting particles in a flowing oxygen stream with a test specimen and any resulting reaction is recorded. This test is conducted at various temperatures, pressures, flow rates (velocities), and particle size.

<u>Thermal tests</u> are those in which the ignition source is essentially the temperature of the specimen and its environment. In reality, all ignition sources are thermal in that a local bot spot must be created for ignition to occur. Classed as thermal ignition tests are bomb tests, promoted ignition tests, and hot wire tests. The <u>Oxygen Bomb Test</u>, described by Nihart and Smith (1964) and Guter (1967) is performed as follows: a specimen is placed in an oxygen filled bomb. The temperature of the contents of the bomb is gradually raised until ignition occurs, as indicated by a rapid rise in temperature, visible flash, or audible explosion. The temperature at which ignition occurs is called the self- or auto-ignition temperature. The pressure in the chamber during the controlled temperature rise may be either constant or allowed to rise with increasing temperature. In some cases the specimen

is exposed to oxygen only after equilibrium has been reached at each temperature and the specimen is changed after each such measurement. The Oxygen Bomb Test can be used to determine gaseous oxygen compatibility of metals or non-metals in the solid, liquid or gaseous states. The Pot Test described by Guter (1967) is similar to the Bomb Test except the Pot Test is done at standard pressure and with flowing oxygen. It frequently is intended to simulate actual conditions of use and with it one can assess flow effects.

Promoted Ignition Tests are performed by burning an ignition promoting material in the presence of a specimen. Many materials have been used for promoters, however, the best materials are those that do not significantly effect the composition of the specimen surface as the promoter is burned. Contamination of the surface of the specimen by the promoter can change the specimen's ignition characteristics and thus produce erroneous results. The amount of specimen consumed by the burning of a fixed amount and type of promoter or the amount of promoter required to consume the entire specimen is used as a measure of its resistance to combustion.

The <u>Hot Wire Test</u> is conducted by heating a metal wire in a gaseous oxygen atmosphere. An electrical current is passed through the wire, resulting in I^2R (or Joule) heating. The temperature is increased with increasing current, resulting eventually in the wire either igniting or melting. This test can only be used on metals below their melting temperatures and its only advantage is simplicity.

Probably the most tragic oxygen accidents have involved electrical ignition sources such as electrical arcing from associated electronic equipment. The <u>Flash and Fire Point Test</u>, used primarily on organic materials, is performed to simulate these conditions by using an electric arc to ignite a specimen in an oxygen filled chamber. The temperature of the chamber is raised and the electric spark is generated periodically near the specimen. The temperature at which a momentary ignition occurs is defined as the

flash point; the temperature at which sustained burning occurs is called the fire point. At high oxygen pressures the flash and fire points are coincident. The relationship of flash and fire points and auto-ignition temperatures (see oxygen bomb test) is not known specifically. Intuitively, one would expect that the auto-ignition temperature is equal to or greater than the flash and fire temperature; the experimental data presented later indicate that at high pressures there is little difference between these temperatures.

5.5

Gailing caused by two pieces of metal rubbing was projected as one of the possible causes of an oxygen tank truck accident and there have been a few <u>Abrasive Tests</u> to study such phenomena. Also the abrasive effect of fine particles in a flowing oxygen stream has been and is being studied.

A highly probable ver soldom observed accident source is <u>Fracture</u>. The exposure of a fresh clean surface of some metals to oxygen can cause a violent reaction. Various methods have been used from straight tensile tests to puncture by bullets or other projectiles, Jackson et al (1963). Even the effect of the projectile size and mate tial has been considered.

<u>Configurational</u> - The final test of oxygen compatibility for any material is whether it will ignite in its final configuration, complete with adjacent materials and possible contaminants. Because of our lack of understanding of the ignition and combustion of metals, roost critical applications also undergo an environmental test. Artificial ignition of wire harnesses or clothing, hyperbaric testing of breathing apparatus, and overloading liquid oxygen pumps are all examples of this category. These tests will always be indispensable, especially where safety is of prime concern.

In view of the controversies which exist regarding the value of various testing techniques, it is recommended that an independent group, such as NBS, study these methods and test results, using whatever expertise is necessary to establish standardized test procedures for liquid and gaseous oxygen compatibility testing. Any recommendations should be flexible enough to include new

methods or procedures as they are proven useful. As a consequence of the recent and thorough survey by Johnston (1970), it was concluded that there is considerable concern for better and improved materials selection and testing methods and safety criteria. This plea has been repeated often since 1957 with apparent little effect. Recent activity in test development and reanalysis by NASA-ASRDI may be a partial answer to these recommendations.

IV. Material Compatibility Data

. موجد ا

> A not insignificant portion of the materials compatibility data is unpublished. Some is difficult to obtain from the "unpublished" literature and it is especially hard to obtain corporate data. However, this is not to say that data are lacking for most technical materials. There are considerable data available, but, in some instances the inconsistencies produce a confusing picture. The principal sources containing information regarding the effect of pressure on oxygen compatibility are Attwood (1971), Baum (1962), Dean (1961), Guter (1967), Kimzey (1970), Kirschfeld (1961), (1965), (1967), (1968) and NASA MSC-02681 (1972). High pressure data from these and other sources are tabulated in Appendix I. One extensive set of unpublished data included in Appendix I is from John Austin, Marshall Space Flight Center (1972). An extensive tabulation of test data, contained in Appendix E of NASA MSC-02681, (1972), is reproduced for convenience as Appendix II. Appendix II contains the high pressure compatibility test data of both metals and non-metals, not just non-metals as indicated by the title of the source document. The document, NASA MSC-02681 (1972) is periodically updated to include the most recent NASA test data. Additional updated copies may be obtained from

> > Chief, Reliability Division Code NB NASA-Manned Spacecraft Center Houston, Texas 77058.

In several instances, data have been reported and conclusions have been drawn by the investigators which can not be neatly tabulated in Appendix I

or are difficult to summarize briefly. These data, often resulting from configuration and other non-standardized tests, are, however, very useful in assessing the oxygen compatibility of materials. To make some of these results more readily available, the summaries, conclusions, and recommendations of these papers are presented in Appendix III for the convenience of the reader. For additional detailed data, the reader is referred to the references. We are not including further summarization of these papers individually, see for example McKinley (1971); however, some of the generalizations which follow are based on the results of these papers.

The sources of oxygen compatibility information include considerable data below 3000 psia; these data are not tabulated in Appendix I unless they are useful for projections at higher pressures. The discussion of these data is separated into sections on (A) Metals and (B) Non-Metals. In Appendix I, metals are further separated into (1) Pure Metals and (2) Alloys. The nonmetals are divided into (1) Halogenated Compounds, (2) Non-Halogenated Plastics, (3) Sealants, Threading Compounds and Lubricants, (4) Elastomers, and (5) Miscellaneous. The format of the tables in Appendix I is chosen to be similar to the format of NASA MSC-02681 (1972).

Table 1 contains miscellaneous thermal data for pure metals and alloys as well as a few selected polymers. These data are useful in the selection of materials for high pressure oxygen service.

A. Metals

McKinley (1971) has done a complete and objective review of the literature on ignition and combustion of metals. He includes both low and high pressures and compiles metal ranking lists according to various experiments. These lists show that nickel and copper and their alloys are most suitable for oxygen service. They also suggest that neither aluminum nor iron alloys (including stainless steel) are highly desirable. Stainless steels, however, are generally more oxygen compatible than aluminum. The overall

Taile 1 - Miscellaneous Thermal Data on Metals and Alloys

3

ŝ

Material Reference(s)	Ignition Temp. (K)	Melting Temp. (K)	Thermal Conductivity at 300 K (W/cm K)	Thermal Diffusivity at 300 K (cm ² /sec)	Heat of Combustion (J/g)
Aluminum	1000	933 1360	2.24.0	0. 86 0. 28	31,000 2,400
Copper Gold	does not ignite	1336	3.1 0.8	0. 052	7,000
lron Nickel Silver	1200 1730 does not ignite	1730 1233	0.6 4.0	0. 035 0. 38	4 , 000 142
Brass	1273	1183	1.0	0.074	3, 600
inconel Hastelloy Monel	1620 1600 1520	1670 1640 1600	0. 11 0. 11 0. 25	0.008 0.008 0.016	4,700 5,000 3,400
Cr Steel	1423	1670	0.30	3. 02	7,700
sou and too Stainless Steels	1400-1670	1670	0.15	0.01	8,000
Carbon	1365	1780	0.80	0. 05	7,500*
Polyethylene	450	~400	0.004	0.002*	9, 000 7. 000
Nylon	475 700	~ 500	0.003 0.002	0,002*	1,100

.

.

•

* Approximated

*

1

<u>st</u>

· |

....

;

•

and the second

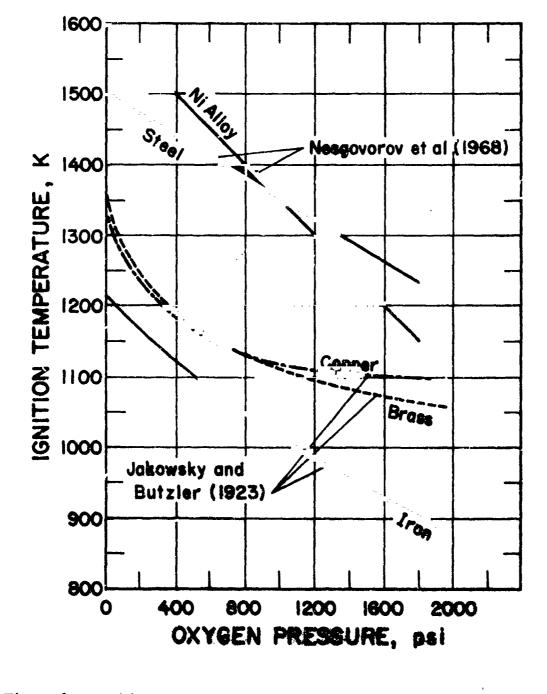
ranking suggested by Clark (1971) is in general agreement with these lists. Pelouch (1972) has also presented material ranking lists as a function of such parameters as strength, reaction intensity, volume, etc. and reaches essentially the same conclusions. Considering the lack of contradictory evidence at higher pressures, it is reasonable that these <u>rankings</u> would also be valid at high pressures.

·. 1

The existing compatibility data can be summarized as follows. The ignition temperatures of metals decrease with increasing pressure. However, there are insufficient data available to quantitatively define this pressure dependence for but a few metals over relatively small pressure ranges. Figure 1 illustrates the available ignition temperature data which approach the high pressure range. It is interesting to note that the nickel alloy curve crosses the steel curve, suggesting the possibility that steels may be better suited for high pressure service. The ignition temperature data presented by Nesgorov et al (1968) were normalized to unity at low pressure. To obtain the data attributed to Nesgorov presented in figure 1, we used the low pressure ignition temperature data exist above 2000 psia. There appears to be a definite need for a careful measurement of ignition temperature as a function of pressure up to at least 10,000 psia for some of the more technically important metals. The effect of specimen size and shape should also be investigated.

The burning rate of metals varies as the square root of pressure and inversely with cross-sectional area at low pressures; but at higher pressures burning rates decrease, Kirschfeld (1961), (1965), (1967), (1968). The nature of this reversal and the pressure at which it occurs are subjects for further study.

The oxygen compatibility of metals under mechanical impact has been extensively studied; however, the repeatability of the data are in question as previously discussed. Because of this lack of repeatability, it is difficult to be certain from the available data listed in Appendices I and II if metals are



Ł

ł

Figure 1 - Ignition temperature of metals as a function of pressure (Nesgovorov's relative data converted to absolute values by using low pressure data from Appendix I).

more or less sensitive to mechanical impact at higher pressures. The dependence on pressure, according to these data, is, at best, small. On the basis of the impact test data alone, it appears that any of the common metals and alloys, including aluminum and stainless steel, are acceptable for use. However, it is noted that the nickel and copper alloys are less sensitive to mechanical impact than aluminum and stainless steel, in particular. This can be seen in table 2, which summarizes the metals impact data of Austin (1972). This table gives the reaction frequency of each alloy class as a function of pressure. It appears that aluminum is especially impact sensitive at 100 psi. We note that the 50 psi rate is based on only 40 tests while at e. h of the other pressures several hundred tests were conducted. Thus the reaction frequency at 50 ps1 may not be statistically significant. Ignoring the data at this pressure, we see that if all metals are considered as a group, there is little pressure dependence up to 1500 psi. Table 2 also shows the lack of precision in impact testing mentioned earlier. The mechanical impact screening test was probably never intended to be subjected to such a statistical analysis; however, it is felt that the availability of a large sampling of data introduces a worthwhile degree of significance into the results of the analysis. It is recommended that all impact data listed in NASA MSC-02681 (1972) be subjected to a similar analysis. However, since other variables besides pressure are present, a statistical analysis is essentially a problem in multiple regression analysis. The analysis performed here is of course much simpler and is the reason why only Austin's data were used. In most of his data pressure was the only variable in successive tests for each material.

١

Other high pressure data such as ignition by electric arc, particle impact, and flash and fire point data are being determined by Stradling (1972) for both metals and non-metals. Some of these measurements will be at pressures to 10,000 psi and, therefore, will be very useful for material ranking.

In summary, it is recommended that all types of compatibility data be extended to 10,000 psia. The data compiled in NASA MSC-02681 (1972) are

Table 2 - Summary of OX Mechanical Impact Data of Austin (1972) for the Indicated Alloy Classes. Numbers in parenthesis after reaction frequency indicate number of tests.

-

PRESSURE, psi		REACTION FREQUENCY	DUENCY	-
	1. Aluminum	2. Steel 3	3. Nickel & Copper	All (1,2,& 3)
50	0(40)	ſ	0(40)	0(80)
100	0.22(167)	0(500)	0(200)	0.03(867)
500	0.04(348)	0(480)	0(200)	0.02(1028)
1000	0.05(212)	0.01(520)	0(200)	0.02(932)
1500	0.02(122)	0.06(440)	0.03(200)	0.05(762)
10,000	ı	ı	0(60)	C(60)

×

:

:

;

1

• • • • •

extensive; however, a statistical analysis of these along with other data is needed to obtain full benefit from this compilation.

B. Non-Metals

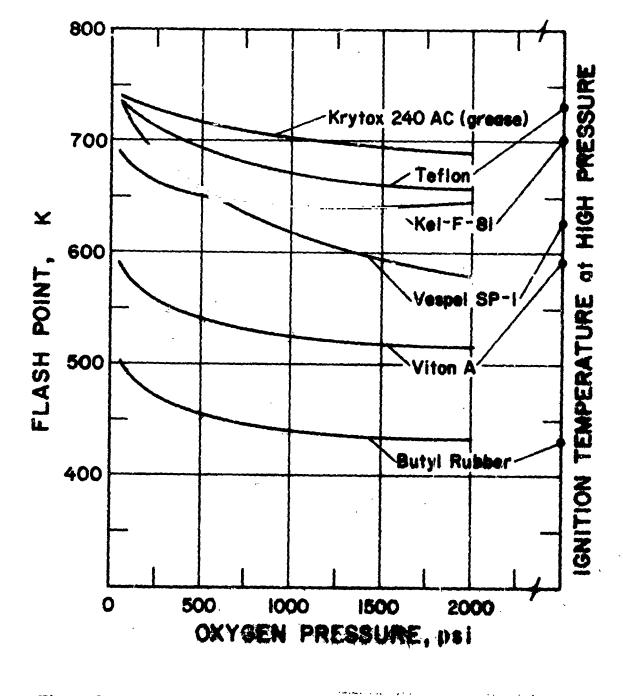
Compared to metals, most non-metals are highly combustible. Since some of the metals are considered incompatible for oxygen service, it follows that most non-metals are oxygen incompatible. Because of their unique physical properties some organics, such as the polymers polychlorotrifluoroethylene and polytetrafluoroethylene, have been used extensively in oxygen service. These are probably the most compatible of the organic materials because they are highly fluorinated with strong fluorine-hydrogen bonds. Generally, the more halogenated (particularly with fluorine) a hydrocarbon 's, the more compatible it is with oxygen. The reader should refer to Appendix III for specific criticism regarding the oxygen compatibility of other organic materials. Compatibility test data for non-metals are found in Appendices I, II and III. Some general observations are given below.

The ignition temperatures, as well as the related flash and fire point temperatures of non-metals, generally decrease with increasing pressure up to about 1500 psia. Above this pressure ignition temperatures tend to be independent of pressure. A few typical curves of flash temperature versus pressure are presented in figure 2. The reader should note the close correspondence between flash point and ignition temperature. This correspondence may be even closer than appears in figure 2 because of the following: the flash points reported by Pippen and Stradling (1971) were obtained with a low pressure apparatus and a high pressure apparatus. The transition was at 50 psi. In almost all cases the flash temperatures from the low pressure apparatus. The low pressure data are not shown in figure 2; however, they suggest that the flash points shown may be too low by as much as 100 K. Such an uncertainty would make high pressure

26

眷

t



Ł

アンに行いたい

Figure 2 - Flash point temperature as a function of pressure for some non-metals.

ignition temperature and flash points the same within experimental error. It is also observed that the flash points are nearly independent of pressure at 2000 psi, strengthening the conclusion of Nihart and Smith (1964) that the ignition temperature is independent of pressure from 2000 to 7500 psi.

Due to the imprecision of the mechanical impact data on non-metals it is difficult to readily detect a pressure dependence in sensitivity. To support this, the data of Austin (1972) were combined as shown in table 3. A similar analysis of all of the impact data is a very lengthy and complicated multiple regression problem which is not considered within the scope of this project. This however, is recommended as a project which needs to be done for both metals and non-metals.

The polymera, polychlorotrifluoroethylene and polytetrafluoroethylene, often used as valve seat materials, are oxygen compatible according to the mechanical impact data listed in Appendix I. Although more compatibility data exist for non-metals than metals, additional data at high pressures are needed to confirm the pressure dependence of ignition and impact characteristics. A more critical need, however, is the investigation of other non-metals to find those with the highest oxygen compatibility. Some areas which have probably not been fully explored are the ceramics and composites.

V. High Pressure Oxygen Equipment

Some effort has been directed toward the acquisition of information regarding the availability of high pressure oxygen service equipment. The equipment suppliers listed below have been contacted and all have sent information regarding their off-the-shelf items. This supplier list is not intended to be complete nor is it an endorsement of these companies but rather, it is a random selection of high pressure equipment suppliers intended only to illustrate the degree of availability of such equipment. In parenthesis after each of the listings we show a few of the more common products of each of these suppliers. From an assessment of this literature it appears that considerable equipment is readily available which is, or by

1, j

5.5

Table 3 - Summary of GOX Mechanical Impact Data of Austin (1972) for the Indicated Non-Metals Numbers in parenthesis after reaction frequency indicate number of tests.

こうです ちょうない ない ないの おおとうたい

.

N N

pei
RE.
ESSU
PRI

3. Everlube REACTION FREQUENCY 2. Electrofilm

	 Epoxy and Epoxy Fiberglass 	2. Electrofilm	3. Everlube Fluorolube Halocarbon Inlox Krytox	All (1, 2, & 3)
100	0.35(40)	0(140)	0(480)	0.1(660)
200	0.08(40)	0(140)	0(480)	0.006(660)
1000	0.17(40)	0.02(140)	0(480)	0.609(660)
1500	1.0(40)	0.12(140)	0.04(480)	0.07(660)

a the second sec

. .

and the second

, 14

specification can be made, compatible with high pressure oxygen. The manufacturers are aware of the problems with oxygen and are both willing and able to construct equipment using oxygen compatible materials. Their catalogs often do not specifically mention applications for oxygen, however, the materials lists and equipment design show that oxygen compatibility was considered. Manufacturers, of course, rely heavily on the user to assist in selecting oxygen compatible materials. Metals most commonly used in high pressure oxygen compatible equipment are 300 series stainless steels, and nickel alloys. Aluminum and 400 series steel alloys are used in fewer instances. The polymers Kel-F and Teflon are frequently used in valves and regulators. It has been recommended by Burmeister, Loser and Sneegas (1967) that these as well as other organics be replaced with metal parts whenever possible. It has been recommended that material ranking lists for various experimental tests be established. Such specifications will be necessary to remove the incompatible materials such as the organics in existing high pressure equipment.

\$

`. F

3

In specifying equipment for use at high pressures one should be particularly careful of adiabatic compression heating. For this reason, safeguards such as slow opening valves and heat sinks to absorb the energy from compression heating should be included whenever possible. In a high flow rate system, the sharpness of pipe bends should be limited, solid particles should be removed from the stream, sharp edges should be eliminated, and electric charge build-up should be avoided. Whenever possible, organic materials should be replaced by metal components, such as in valve seats and regulator parts. Since materials compatibility lists used by manufacturers may differ from lists established by NASA, the purchasing agency must bear the final responsibility of materials compatibility for specific applications.

Random Selection of High Pressure Equipment Suppliers Contacted for Oxygen Compatibility Information

 Airco Cryogenics Division, 1900 Main St., Irvine, Calif. 92664, Ph. 714-540-3010 (cryogenic pumps)

- 1

- AiResearch Manufacturing Division of the Garrett Corporation, 9851 Sepulveda Blvd. Los Angeles, Calif. 90009, Ph. 213-588-1153 (storage vessels).
- American Instrument Co., 8020 Georgia Ave. Silver Spring, Maryland, 20910, Ph. 301-589-1727 (pumps, valves)
- Autoclave Engineers, Inc., 2930 W. 22nd St., Erie, Pa., 16512, Ph. 814-838-2071 (storage and reactor vessels, valves, tubing, pumps, intensifiers, metal diaphragm compressors, flanges)
- 5. Bingham-Willamette Company, Div. of Guy F. Atkinson Company, 2800 N.W. Front Ave., Portland, Oregon 97210, Ph. 910-464-8031 (pumps)
- Cosmodyne Corp., 2920 Columbia St., Torrance, Calif., 90509,
 Ph. 213-320-5650 (pumps, vaporizers, tube trailers, storage vessels)
- 7. CVI Corp., P.O. Box 2138, Columbus, Ohio, 43216, Ph. 614-876-7381 (cryogenic piping, valves, vaporizers)
- Flodyne Controls, Inc., 48 Commerce Dr., Murray Hills, New Jersey, 07974, Ph. 201-464-6200 (valves)
- 9. Harwood Engineering Co., Walpole, Mass., 02081, Ph. 617-668-3600 (tubing, fittings, valves, pumps, compressors, intensifiers, gauges)
- High pressure Equipment Co., 1224 Linden Ave., Erie, Pa., 16505,
 Ph. 814-838-2128 (tubing, couplings, fittings, valves, pressure and reactor vessels, pumps, intensifiers, gauges)
- 11. Linde Company, Dov. of Union Carbide Corporation, Tonawanda, New York, Ph. 716-555-1212 (pumps)
- Ruska Instrument, 6123 Hillcraft Ave., Houston, Texas 77036, Ph.
 713-774-2533 (high pressure instrumentation)
- Ryan Industries Inc., 4800 Allmond Ave., Louisville, Ky. 40214,
 Ph. 502-368-1633 (pumps, vaporizers, tube trailers, storage vessels)

VI High Pressure Oxygen Facilities

1.

1.1

At the present time the bulk of the high pressure oxygen compatibility research is being done at NASA-MSFC (Marshall Space Flight Center) and NASA-WSTF (White Sands Test Facility). Existing high pressure programs at NASA-MSFC concentrate on impact and flammability testing. High pressure programs have been initiated at NASA-WSTF on ignition by abrasion and electric arc as well as high pressure GOX and LOX impact testing and flash and fire point testing. The impact apparatus at MSFC and WSTF, although not identical, are quite similar. Present information indicates that practically no oxygen compatibility research is being conducted at private laboratories in the 3,000 to 10,000 psi range. The use of very high pressure oxygen is presently nearly restricted to NASA. One exception is the use of high pressure breathing oxygen systems in the medical profession and aircraft industries. Most of the past highpressure research and experience stems from the development of such breathing systems as well as those used in NASA programs. Johnston (1970) has compiled characteristics of these high pressure systems, along with the failures experience of the metal and non-metals used. Rocketdyne is establishing a facility to conduct mechanical impact studies at pressures to 10,000 psia. The impact tester now being built is the same as the one used by NASA-MSFC.

The following list of facilities includes principally those that are presently doing research or engineering involving high pressure oxygen compatibility as well as a few that have considerable high pressure applications experience. Their testing capabilities and other pertinent facts are given in parentheses after each entry.

1. Battelle Memorial Institute

Columbus, Ohio

(past compatibility research from 2500 to 12,000 psi including effects of vibration. shock, adiabatic compression, flow, and temperature)

- British Oxygen Co., Ltd
 England
 (ignition temperature to 3790 psi)
- Kennedy Space Center, NASA Cocoa Beach, Florida (10,000 psi GOX usage)
- 4. Linde Company, Division of Union Carbide Corp.
 Tonawanda, New York
 (past: compatibility testing to 7500 psi, including adiabatic
 compression, galling, powder impact, promoted ignition, and
 mechanical impact; most not to high pressure. present: ignition
 and calorimetric bomb testing to 2000 psi)
- McDonnell-Douglas Aircraft Huntington Beach, California (high pressure O₂ applications)
- Manned Space Center, NASA
 Houston Texas
 (high pressure O₂ applications, no testing)
- Marshall Space Flight Center, NASA
 Huntsville, Alabama
 (extensive LOX and GOX testing to 10,000 psi mechanical
 impact, low pressure flammabil.ty testing)
- Naval Ship Research and Development Center
 Annapolis Laboratory
 Annapolis, Maryland
 (ignition temperature testing to 3000 psi)
 (also some lower pressure adiabatic compression and hot O₂ flow)

- Rocketdyne Division, North American-Rockwell Canoga Park, California (mechanical impact testing to 10,000 psi)
- 10. White Sands Test Facility, NASA
 White Sands, New Mexico
 (GOX and LOX compatibility testing to 10,000 psi mechanical impact, abrasive impact, pneumatic, flash and fire point).

VII. Recommendations

The extension of GOX and LOX applications to pressures above 3000 psia is reasonable based on the present data. However, in cases where extremely high reliability is demanded, such as in manned space flight, the extension is considered marginal without further compatibility testing. Considerable compatibility data exist at pressures up to 2000 psia; the sparse compatibility data up to 7500 psia suggest no additional problems will be encountered. However, to obtain high reliability, extensive materials compatibility testing to 10,000 psia will have to be done. Some of these data are now being obtained at NASA-MSFC and WSTF. Standardization of test procedures and materials is essential to reliability and interagency comparisons, and will also encourage involvement of indust. , in compatibility testing. New data need to be combined with existing data to be analyzed for proper interpretation. Old tests need to be studied for degree of validity. and new tests which better describe oxy (en compatibility are desirable. Design and applications guidelines will encourage safe use of oxygen and uniform practice throughout NASA. Data necessitated by future design applications must be anticipated. In support of these general recommendations, an excerpt from the Apollo 13 - High Pressure Oxygen Report (Johnston 1970) is given below:

Despite the many standards and specifications reviewed by this panel, it has become obvious that a void exists in several areas. One area of major concern is the apparent lack of sufficient detail on nonmetallic materials and their application for high pressure oxygen systems to enable a designer to select the proper material for his system.

The reason for this is that a comprehensive test program has yet to be defined and accomplished. Although some work has been started in this area, it appears that the required effort is a major one and should begin with developing a standard approach to the problem on the part of both Government and industry so that all data developed can ultimately be universally used without the requirements for interpolating test results from a many faceted approach.

The second area of concern is that no standards and/or specifications appear to exist on a total system which points out the hazards resulting from misapplication of a component which may serve its function well in some applications, but may be trigger mechanism of disaster in another application.

Based upon these generalities, the following specific recommendations are suggested:

1. Extend Measurements indicated below to high pressure (10,000 psi) for materials of immediate interest (Include effects of contamination).

- (a) Ignition temperature
- (b) Impact sensitivity
- (c) Flash and Fire temperatures
- (d) Pertinent configuration tests

2. Develop and Standardize Tests and Materials

(a) The <u>standardization of test procedures</u> is essential if meaningful results are to be obtained. This standardization is probably best coordinated by a group not directly involved in conducting the measurements. Involvement of ASTM would be very desirable and possibly NBS could assist in developing standard test methods, with the cooperation of test facilities.

(b) <u>Standard reference materials</u> for use in compatibility tests should be established. These materials, which can be stocked for distribution by the Office of Standard Reference Materials, National Bureau of Standards, are invaluable for the intercomparison of existing apparatus as well as the standardization of new apparatus. The establishment of standards should be done through a cooperative effort of NBS and testing facilities.

(c) The <u>development of new tests</u> more closely related to fundamental physical or mechanical properties of materials is desirable. Examples of existing tests which fall in this category are: ignition temperature and flash and fire temperature.

(d) An independent <u>statistical analysis of the repeatability of</u> <u>mechanical impact test data</u> is needed. Past studies have not been conclusive and the continuing controversy and wealth of data is justification for an in depth study.

3. Analyze Data to obtain best values.

(a) A <u>statistical analysis of all existing compatibility data</u> to determine dependence on pressure, in particular, but also on other factors affecting the reliability of the material. Multiple regression analysis would be necessary to extract this information from the existing data. The data to be analyzed are principally " ose listed in this report. This analysis is not a trivial task; however, the resulting increased worch of the data justifies the effort. The general validity and uncertainty estimates of material ranking da*a will be considerably improved as a result of this critical analysis.

(b) More universal agreement should be obtained on <u>material</u> <u>ranking lists</u>. This can be initiated by establishing such a list for each stands d test within NASA. Work should proceed to extend the acceptance of these lists by other government agencies and industry. Ultimately international acceptance is desirable. It cannot be overstressed that the test conditions are an integral part of any ranking list.

(c) A <u>compilation of thermodynamics data</u> relevant to material compatibility is essential to any effort to understand compatibility. Test methods, test results, ranking lists, etc. are all more meaningful when they can be related to fundamental properties. Such properties as ignition temperature, heat of combustion, thermal diffusivity, melting and vaporization temperatures of metals and their oxides should be considered.

4. <u>Adopt Guidelines</u> for design and procedures for oxygen systems. Participation of oxygen producers and equipment manufacturers is indispensable in this process.

(a) Oxygen system or components design can have many inherent safety features that can be spelled out for the design engineer. This should include the materials used, flow rates, valving rates, heat sinks, cleaning accessibility, filters, internal flow cross sections, temperature limits, and many others.

(b) <u>Cleanliness standards</u> and <u>procedural guidelines</u> that are NASA wide and even nation wide are essential to the safe operation of high pressure oxygen systems.

5. Fundamental Research should be pursued in all areas of ignition and combustion, because understanding always leads to better and safer applications. Two areas in particular stand out as areas of concern for high pressure oxygen:

(a) The mechanical properties of materials in the presence of high pressure oxygen has been virtually ignored. Oxygen embrittlement is small at low pressures but may be significant at 10,000 psi. Fatigue behavior and crack propagation rates in the presence of oxygen are not known for any pressures.

(b) The burning behavior at high oxygen pressure is in real doubt. Since the degree of damage is directly related to the burning rate, this should be known. The only study of burning rates versus pressure indicate possible dramatic changes around 2000 psi.

Some of the above recommendations are already being pursued by NASA. ASRDI is sponsoring some ignition research at White Sands and is establishing design and cleanliness guidelines at Lewis Research Center. MSFC is funding some lower pressure combustion studies at NBS. These should be considered an integral but initial part of NASA's pursuit of the safe applications of high pressure oxygen.

VIII. Summary

Based on the available data it appears that no fundamental problems would prevent the common use of high pressure GOX or LOX. There are dangers involved, of course, but with a reasonable set of rules and guidelines, these dangers can be reduced to a workable level. It appears that a large proportion of past accidents are caused by material incompatibility but an even larger proportion are caused by personal carelessness or equipment failure. With care, the added hazards due to high pressure will not increase accident rates significantly.

In high pressure systems the enhancement of existing ignition sources is more important than the decreased ignition temperature of materials. For example, in high pressure applications the effect of adiabatic compression becomes increasingly important, higher flow rates enhance the probability of ignition from friction, impact, static discharge, etc., and reaction intensities increase because of the increased density and availability of O_2 . The possibility of ignition due to mechanical failures is also greater.

There are little compatibility data on most materials above 3000 psia and much is needed. It is also desirable to have more quantitative fundamental data. This requires study of the physical phenomena involved and the design of experiments to develop parameters representing these phenomena. There is a strong need for more engineering compatibility characterization measurements, such as configuration and component tests by manufacturers.

From the available data the pressure dependence of ignition and burning are not well characterized. Metal burning rates are proportional to \sqrt{P} at lower pressures but at higher pressures burning rates decrease. Only a few ignition temperature versus pressure data are available. These data show the ignition temperature decreasing with increasing pressure. It would be unwise to extend these few data to other materials without further confirming measurements. Some impact test data as a function of pressure are available but considerably more are needed. These show, but not clearly, an increasing sensitivity with pressure. Flash and fire point data also show an increased sensitivity for non-metals at higher pressures.

Equipment for the handling and storage of high pressure oxygen, both liquid and gas, is readily available. In some instances it is necessary to specify the elimination of marginal materials. This presents a problem only if a better substitute material is not yet available. Equipment manufacturers are eager to cooperate in fabrication of more reliable components.

Present high pressure compatibility testing facilities are restricted nearly totally to NASA-WSTF and MSFC. Commercial laboratories have performed various compatibility tests in the past but generally not above about 3600 psi.

It is recommended that NASA extend specific experimental tests to higher pressures, establish standard tests and reference materials, perform statistical analyses of existing data, develop material ranking lists, and encourage new test methods and fundamental research.

IX References

Aerojet Nuclear Systems Co., Sacramento, Calif. <u>Materials</u> <u>Properties Data Handbook</u>, (Contract SNP-1, SNPO of NASA and AEC, Cleveland, Ohio, 1970). Available from National Technical Information Service, Springfield, Va.

ASTM Designation: D2512-70, Standard Method of Test for Compatibility of Materials with Liquid Oxygen (Impact Sensitivity Threshold Technique) Volume 18, p. 692 (1970).

ASTM Designation D 2863-70, Standard Method of Test for Flammability of Plastics Using the Oxygen Index Method, p. 719 (1970).

Attwood, H. C. and Allen, G. R., On the Spontaneous Ignition Temperature of Organic Materials in Oxygen, Ministry of Defense, London, England, C.P. No. 1172 (1971).

Austin, J., NASA-Marshall Space Flight Center, private communication (1972)

Bankaitis, H., and Schueller, C., ASRDI Oxygen Technology Survey: Cleaning Requirements, Procedures and Verification Techniques, To be published as a NASA Special Publication.

Bauer, H., Wegener, W., and Windgassen, K. F., Fire Tests on Centrifugal Pumps for Liquid Oxygen, Cryogenics 10, 241 (1970).

Baum, J. V., Goobich, G., and Trainer, T. M., An Evaluation of High-Pressure Oxygen Systems. Battelle Memorial Institute, Columbus, Ohio; Final Report AMRL-TDR-62-102, Centr. 33 (616)-8267, Air Force Systems Command, Wright-Patterson Air Force Base, Ohio. (1962).

Blackstone, W. R., Development of an Improved Gaseous Oxygen Impact Test System, Final Report by Southwest Research Institute, San Antonio, Texas, prepared for NASA MSC (July 1970).

Blackstone, W. R., Baber, B. B., and Ku, P. M., Development of New Test Techniques for Determining the Compatibility of Materials with LOX Under Impact, AFAPL TR. 67-41 USAF (Dec. 1967). Blackstone, W. R., and Ku, P. M., An Assessment of Impact Test Techniques for Determining the Fire or Explosion Hazards of Materials Exposed to LOX, ASTM-Materials Research and Standards, 30, 52 (1971).

Brooks, S. H., Oxygen-Oil Explosions. Preliminary Report III. Spontaneous Ignition of Oils in Oxygen Under Pressure, U. S. Bureau of Mines, Pittsburgh, Pa., (1923).

Burmeister, L. C., Loser, J. B., and Sneegas, F. C., Advanced Valve Technology, NASA SP-5019 (1967).

Carlson, R., Linde Division, Union Carbide Corporation, Tonawanda, New York, Private communication (1971).

Clark, A. F., The Compatibility of Structural Materials with Oxygen, Interim Report 275.05-71-2, Cryogenics Division, National Bureau of Standards: DOT order number DOT-AS-10059, (Oct. 1971).

Conrad, H., "The Cryogenic Properties of Metals," <u>High-Strength</u> Materials, John Wiley and Sons, New York, (1965).

Dean, L. E., and Thompson, W. R., Ignition Characteristics of Metals and Alloys, J. Am. Rocket Soc. <u>31</u>, No. 7, 917 (1961)

Grosse, A. V. and Conway, J. B., Combustion of Metals in Oxygen, Ind. Eng. Chem. 50, 663 (1958).

Guter, M. Ignition in High Pressure Oxygen, British Oxygen Co., Ltd., Rept. No. R/D-1312, MA S/T Memo 13/50 (1967).

Isaacs, J. L., The Oxygen Index Flammability Test, J. Fire and Flammability, 1, 36 (1970).

Jackson, J. D., Boyd, W. K., and Miller, P. D., Reactivity of Metals with Liquid and Gaseous Oxygen, DMIC memorandum 163, Jan. 15, 1963, (Battelle Memorial Institute, Columbus 1, Ohio).

Jamison, H. H., Development of a Gaseous Oxygen Impact Testing Method, Mat'ls. Res. and Stds. 11 22 (1971).

Jamison, H. H., Development of a Method for Qualifying Spacecraft Materials Used in Pure Oxygen, NASA Internal Note MSC-01553 (1970).

Johnston, R. S., Chairman of Panel 8, MSC Apollo 13 Investigation Team, NASA Final Report - High Pressure Oxygen Systems Survey, (May 1970).

5. E

Keeping, W. O., Compatibility of Materials with Oxygen, Compressed Gas Association, Oxygen Compressors and Pumps Symposium, Atlanta, Georgia, Nov. 9-11 (1971).

5

<u>ا</u> •

ì

11

Key, C. F., and Riehl, W. A., Compatibility of Materials with Liquid Oxygen, NASA TM X-98-5, MSFC (1964).

Key, C. F., and Riehl, W. A., Compatibility of Materials with Liquid Oxygen, MTP-P and VE-M-63-14 (1963).

Key, C. F., Compatibility of Materials with Liquid Oxygen II, NASA TM X-53052, MSFC (1964).

Key, C. F., Compatibility of Materials with Liquid Oxygen III, NASA TM X-535 33, MSFC (1966).

Key, C. F., Compatibility of Materials with Liquid Oxygen IV, NASA TM X-53773, MSFC (1968).

Kimzey, J. H., Review of Factors Affecting Ignition of Metals in High Pressure Oxygen Systems, NASA Div. Int. Note MSC 03461 (Oct., 1970).

Kirschfeld, L., Apparatus for Combustion Tests on Metals Under Oxygen Pressures Up to 200 Atm and the Combustibility of Iron Wire in High Pressure Oxygen, Arch. f. d. Eisenhuettenw. <u>36</u> No. 11, 823 (1965).

Kirschfeld, L., Combustibility of Steel and Cast Iron in Oxygen at Pressures of up to 150 atm, Trans. Archiv. f. d. Eisenhuettenw. <u>39</u>, 535 (1968).

Kirschfeld, L., Combustion Rate of Light Metal Wires in High Pressure Oxygen, Metall. 15, 873 (1961).

Kirschfeld, L., On the Burning Rate of Metals in Oxygen to 200 atm Pressure, Metall. 21, 98 (1967).

Linde Division, Union Carbide Corp., Study of Handling Standards and Safety Criteria for Liquid and Gaseous Oxygen Systems. NASA-Lewis Research Center, Cleveland, Ohio, Contr. NAS3-15082 (1971) (NASA ONLY)

Lucas, W. R., and Riehl, W. A., An Instrument for Determination of Impact Sensitivity of Materials in Contact with Liquid Oxygen, ASTM Bulletin 29-38 (1960).

Marzani, J. A., Private Communications, Spontaneous Ignition in a High Pressure Oxygen Environment (NSRDC) (July 2, 1969).

Marzani, J. A., Spontaneous Ignition of Solid Materials at Elevated Pressures, Eastern Section of Combustion Institute, University of Massachusetts, Amherct, Mass., Oct. 21-22 (1968a).

Marzani, J. A., Spontaneous Ignition of Valve Packing Materials in a High Pressure Oxygen Environment, NSRDC Report 2579 (1968b) (Naval Ship Research and Development Center, Annapolis, Md.)

McKinley, Experimental Ignition and Combustion of Metals, Compressed Gas Association, Oxygen Compressors and Pumps Symposium, Atlanta, Georgia, Nov. 9-11 (1971).

McQuaid, R. W. and Cole, E. L., A Survey of Compressed Gas System Casualties Due to Spontaneous Ignition During 1968 - 1971, Naval Ship Research and Development Center Report 28-148 Annapolis, Md. (1972).

McQuaid, R. W., Private communications (1972)

آيية.

Evaluation of Combustibility of a New High Temperature Resistant Polymer in a High Pressure Environment (Oct. 26, 1970).

Spontaneous Ignition of Four Rubber Compounds in a High Pressure Environment, Report 8-649 (Nov. 6, 1970).

Ignition temperatures of nonmetallic components of an oxygenregulator valve, Report 28-12 (Feb. 4, 1972).

Meyers, D. D., Flammability, Odor, and Offgassing Requirements and Test Procedures for Materials in Environments that Support Combustion, NASA-NHB 80 60.1 (1971).

NASA, MSC-02681, Non-metallic Materials Design Guidelines and Test Data Handbook, Revision C, (Feb. 1972).

NASA Panel 1, Apollo 13 Spacecraft Incident Investigation, N71-1995; NASA-TM-X-66934, Investigation of Crack Growth Threshold of Inconel 718 Exposed to High Pressure Oxygen, Vol. <u>3</u>, Sec. B. 63, page 401 (1970).

Nesgovorov, L. Y., Prozorov, U. A., and Cholin, V. G., Experimental Determining of Minimum Ignition Temperatures of Metallic Materials in the Presence of Gaseous Oxugen, LATV. Psr Zin. Anad. Vest., Fiz. UNTEHM. ZIN. 1, 70 (1968). Nihart, G. J., and Smith, C. P., Compatibility of Materials with 7500 psi Oxygen, Linde Division, Union Carbide Corp., Tonawanda, N. Y., Report No. AMRL-TDR-64-76, Contr. No. AF33(657)-11686, 80 pp., NASA N65 11897, (1964).

North Atlantic Treaty Organization (NATO), Advisory Group for Aeronautical Research and Development, <u>Materials Properties Handbook</u> (Technical Dept., Royal Aeronautical Coc., London, 1959), NASA-Washington, D. C. 20546

Olson, R. E., Safety Design Considerations for High Pressure Oxygen Systems, Martin Marietta Corr., Denver, Colo. Rept. M-67-29 (1967).

Ordin, P. Mishaps with Oxygen in NASA, Compressed Gas Association, Oxygen Compressors and Pumps Symposium, Atlanta, Ga., Nov. 9-11, 1971.

Pelouch, J. J., Jr., ASRDI Oxygen Technology Survey: Metals and Alloys, (To be published as NASA Special Publication, 1972).

Pippen, D. L., and Stradling, J. S., Techniques for Determination of Flash and Fire Points and Impact Sensitivity of Materials in GOX, ASTM-Mat. Res. and Stds., 35, 53 (1971).

Reynales, C. H., Selection of Lubricants and Thread Compounds for Oxygen Missle Systems, Adv. Cryo. Eng. 6, 117 (1961).

Reynales, C. H., Compatibility of Materials with Oxygen, Report No. D81-444, Douglas Aircraft Co., Inc., Long Beach, Calif. (1958).

Reynales, C. H., Safety Aspects in Design and Operation of Oxygen Systems, Paper No. 741, Chemical Clearing of Missile Launching Facilities and Components Symposium, Tulsa, Okla., (Jan., 1959).

Schmidt, H. W., Siewert, R. D., and Forney, D. E., ASRDI Oxygen Technology Survey: Centrifugal Pumps (to be published as a NASA Special Publication, 1972).

Schmidt, H. W., ASRDI Oxygen Technology Survey: Cleaning Requirements, Procedures and Verification Techniques (to be published as a NASA Special Publication, 1972).

Schwartzberg, F. R., (Martin-Marietta Co., Denver, Colo., <u>Cryogenic</u> <u>Materials Data Handbook</u>, Technical and Scientific Information Clearinghouse, Defense Document Center, ML-TR-64-280, 1968), previously R. P. Reed, (Cryogenics Div., Boulder, Office of Technical Services, PB171809, 1963). Schwinghamer, R. J., Impact Sensitivity of Materials in Contact with Liquid and Gaseous Oxygen at High Pressure, Compressed Gas Association, Safety Symposium, Atlanta, Ga., Nov. 9-11, 1971.

Stradling, J., Ignition by Abrasives, NASA TP-WSTF-193 (1971).

Van Dyke, B. H., Hazards of Cryogenic Systems, Proc. 1959 Safety Conf., (1959) p. 13.

Weiss, V., and Sessler, J. G., <u>Aerospace Structural Metals Handbook</u>, (Syracuse Univ. Press, DDC No. AD487355, ASD, WPAFB, Ohio, 1963, 1966). Avail. NTIS.

White, E. L. and Ward, J. J., Ignition of Metals in Oxygen, Defense Materials Information Center, Battelle Memorial Institute, Columbus, Ohio, DMIC Report 224, Feb., 1966.

Wigley, D. A., Mechanical Properties of Materials at Low Temperatures, (Plenum Press, New York, (1971) p. 275.

1

「ないたいろうとうないたち」

Ē

APPENDIX I - HIGH PRESSURE OXYGEN COMPATIBILITY DATA

i ť

ł

đ

Reference	Materials	Test Pressure (pai)	Ignition Temp. (K)	Test Temp. (K)	Mechanical Impact Energy Reaction (kg m) Rate	Pneumatic Impact Reaction Rate	Specimen Thickness (in)	Flach Point (K)	Fire Point (K)	Envi ronment
Jakowsky and Butzier (1923)	Copper	15 400 800 1200 1600 2000	1325 1180 11130 11100 11100 11100							× × × × × × × × ×
1	e J	15 400 800 1000 1200 2000	1210 1120 1050 1015 980 980 980 980							X X X X X X X X X X X X X X X X X X X
	• •									

. .

· ·• ·

1

•

• •

. • :

÷...

١,

2

Reference	Materiale	Teat Pressure (psi)	Ignition Temp. (K)	Test (K)	Mechanic Energy (kg m)	Mechanical Impact Energy Reaction (kg m) Rate	Praumatic Impact Reaction Rate	Specimen Thiskees (ia)	Flack Point (K)	Fire Point (K)	Environment
Anstis	Aluminun	100		8	2	3/7		. 032			TOX
(22.61)	6061-T6	100		06	01	16/20		. 032			XOT
		300		96	7.4	4/20		. 032			TOX
L	4	100		90	10	0/20		. 063			TOX
		100		96	10	0/20		. 063			TOX
		200	•	96	01	0/20		. 063			го х
		- 500		96	01	0/20		. 063			LOX
		1000		96	0	07/U		. 063			žõž
٠		1500		06	10	02/0		. 065			LOX
× 、		9 0		300	10	0/20		. 032			COX
		100		300	10	9/20		. 032			GOX
.,		100		300	10	0/20		. 032			GOX
· · · · · · · · · · · · · · · · · · ·		500		300	10	6/20		. 032			GOX
•		500		300	10	07/0		. 032			GOX
·-		50		300	10	9/0		. 032			GOX
		1000		300	10	0/20		. 032			GOX
:		1000		300	10	0/6		. 034			COX
Anatim	Alminim	2005		96	10	3/20		. 063			TOX
1261	2014-T6	1000		96	-	0/20		. 063			rox
	, 	1000		06	ŝ	0/20		. 063			TOX
, , ,		1400		96	ŝ	6/20		.063			rox
, '.		100		06	10	0/20		060 .			TOX
		<u>8</u>		0 6	10	0/20		060 .			TOX
	•	1400		90	ŝ	0/20		060.			rox
, , , , , , , , , , , , , , , , , , ,		250		300	10	0/20		. 063			GOX
	-	80		300	10	0/20		. 063			GOX
		200		300	ŝ	6/20		. 063			GOX
		20		300	10	0/20		. 063			X 03
		500		300	2	0/20		. 063			XOS
		500		90 0	10	0/20		. 0(3			GOX
		500		300	9	0/20		. 063			GOX
		500		300	2	2/20		063			COX
		1000		90e 0	10	2/3		. 063			GOX
		1000		300	ŝ	2/20		. 063			XON ROX
· · · · ·	• •										
	•••										

S.C.

ALLOYS

ALLOYS cont.

٩

ł

Austin Aluminum (1972) 2219-T87	Pressure (pst) 500 500 500 500 500 500 1000 1000 1400 14	Temp. (K)		Exergy Reaction (kg m) Rate 10 0/20 10 0/20 5.54 0/20 10 0/20 10 0/20 10 0/20 10 1/3 7.62 0/20 5.54 0/20 10 1/3 7.62 0/20 5.54 0/20 10 1/3 7.62 0/20 5.54 0/20 10 1/3 5 0/20	Ration R. 20 0/20 0/20 0/20 0/20 0/20 0/20 0/20 0	Impact Reaction Rate	Thickness (in) . 063 . 0663 . 065 . 0663 . 0063 . 0063.	Point (X)	Point (K)	88888888888888888888888888888888888888
	(pst) 50 1000 5000 5000 5000 5000 5000 10000 14000 14000 14000 14000	(x)	(K) 3033833865666666666666666666666666666666	(kg B) 10 10 10 10 10 10 10 10 10 10 10 10 10	Rate 0/20 0/20 0/20 0/20 0/20 0/20 0/20 0/2	Reaction Rate	(ai) 0.05	x	X	88888888888888888888888888888888888888
	200 200 200 200 200 200 200 200 200 200		\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	0/20 0/20 0/20 0/20 0/20 0/20 0/20 0/20		. 063 . 0663 . 0			2000 2000 2000 2000 2000 2000 2000 200
	100 500 500 500 500 500 1000 1000 1400 14		8 8 8 9 9 8 9 8 9 8 8 8 8 8 8 8 8 8 8 8	00 7 7 7 7 7 7 7 7 7 7 7 7 7	0/20 0/20 0/20 0/20 0/20 0/20 0/20 0/20		. 963 . 963 . 963 . 963 . 963 . 963 . 963 . 963 . 963 . 963			2000 2000 2000 2000 2000 2000 2000 200
	500 1000 500 500 500 1000 1400 1400 1400		8 8 8 8 8 8 8 4 8 8 8 8 8 8 8 8 8 8 8 8	0 7 7 7 7 7 7 7 7 7 7 7 7 7	1/2 0/20 0/20 0/20 0/20 0/20 0/20 0/20 0		. 963 . 063 . 0663 . 0663			00000000000000000000000000000000000000
	1000 1000 1000 1000 1000 1000 1000 100		8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		0/20 0/20 0/20 0/20 0/20 0/20 0/20 0/20		. 063 . 070 . 070 . 063 . 063 . 063 . 063 . 063 . 063			2000 2000 2000 2000 2000 2000 2000 200
	1000 500 500 500 1000 1400 1400 1400 140		30 30 30 30 4 4 6 4 6 4 6 4 6 6 6 6 6 6 6 6 6 6 6	7 2 2 2 2 2 2 2 2 2 2 2 2 2	0/20 0/20 0/20 0/20 0/20 0/20 0/20 0/20		. 063 . 070 . 070 . 063 . 063 . 063 . 063 . 063			80000000000000000000000000000000000000
	500 500 500 1400 1400 1400 1400 1400 140		40 30 30 30 30 30 30 30 30 30 30 30 30 30	5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0/20 0/20 0/20 0/20 0/20 0/20 0/20 0/20		. 970 . 990 . 063 . 063 . 063 . 063 . 063			80 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	800 800 1900 1900 1900 1900 1900 1900 19		30 30 30 30 30 30 30 30 30 30 30 30 30 30	10 5 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	0/20 0/20 0/20 0/20 0/20 0/20 0/20		. 090 . 063 . 063 . 063 . 063 . 063 . 063			X X X X X X X X X X X X X X X X X X X
	503 500 1000 1400 1400 1400 1400 1400 1400		300 300 300 300 300 300 300 300 300 300	0 0 0 0 0 0 0 0 0 0 0 0 0 0	0/20 0/20 0/20 0/20 0/20 0/20 0/20		. 063 . 063 . 063 . 063 . 063 . 063 . 063			X X X X X X X X X X X X X X X X X X X
	500 1000 1800 1400 1400 1400		300 300 300 300 300	5.54 10 5.54 5.55 9.02 9.02	0/20 0/20 0/20 0/20 0/20 0/20		. 063 . 063 . 063 . 063 . 063			8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
	1000 1000 1000 11400 1400 1400 1400 140		00 00 00 00 00 00 00 00 00 00 00 00 00	10 7.62 5.54 9.02	1/3 0/20 0/20 0/20 0/20 0/20		. 063 . 063 . 063 . 063 . 063			8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
	1000 1 800 1400 1400 1400		300 300 300	2,52 5,54 5,54 5,54 5,54 5,54 5,54 5,54	0/20 0/28 0/20 0/20 0/20		. 063 . 063 . 063 . 063			80 80 80 80 80 80 80 80 80 80 80 80 80 8
	1 800 1 800 1400 1400 1400		300 300	5.54 50 9.02	0/20 0/20 0/20 0/20		. 063 . 063 . 063 . 063			X X X X X X V V V V
	0001 1400 0141		300	5 10 9.02 1 22	0/20 0/20 0/20		. 063 . 063 . 063			X X X V V V V
	1400 1400 1400			10 9.02 • 43	1/2 0/20 0/20		. 063 . 063			X O U U
	1400 1400		300	9.02 57	0/20 0/20		. 063			Xou
	1400		300	67 1	0/20					
			300	1.06			. 063			COX
	1400		300	5°.54	0/20		. 063			GOX
			96	9	0/20		. 020			rox
	500		06	10	0/20		. 020			TOX
ŗ	1000		90	10	0/20		. 020			rox
	1500		96	10	0/20		. 020			TOX
F	100		96	10	0/20		. 050			rox
	500		5	10	0/20		. 050			rox
	1000		06	10	0/20		. 050			rox
•	1509		8	10	0/20		. 050			LOX
	100		300	10	0/20		. 020			GOX
	200		300	10	0/27		. 020			COX
	1000		306	10	2/20		. 020			NON COX
	1000		300	10	0/20		. 020			COX
· · · ·	1000	4	300	9.02	07,0		. 020			GOX
	1500		300	10	8/20		. 020			X OD
•	1500		300	9.02	4/20		. 020			GOX
	1500		300	9.34	0/20		. 020			X O X
	1500		300	7.62	0/20		. 020			COX

. . .

white the the second for

いたのです

, . , . , .

:**U**

1

5 3.

1 X :

Reference Materials Test (pai) Ignition (pai) Test (pai) Ignition (pai) Test (pai) Ignition (pai) Ferr (pai) <						ALLOY	ALLOYS cont.					
J04 Staintest 15 90 10 9//30 Steel 13 90 10 0/20 500 100 90 10 0/20 500 100 90 10 0/20 1000 90 10 0/20 500 100 0/20 0/20 11500 90 10 0/20 100 300 10 0/20 100 300 10 0/20 100 300 10 0/20 100 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 Steel 1000 90 10 0/20 1500 90 10 0/20 Steel 1000 90 10 0/20 1500 90 10 2/20 1500 90 10 2/20 1500 90 10 2/20	leferen ce	Materials	Test Pressure (psi)	lgnition Temp. (K)	Test Tetup. (K)	Mechanic Energy (kg m)	cal Impact Reaction Rate	Pneumatic Impact Reaction Rate	Specimen Thickness (in)	Flash Point (K)	Fire Point (K)	Environment
Steel 15 90 10 0/20 500 90 10 0/20 500 90 10 0/20 500 90 10 0/20 150 90 10 0/20 150 90 10 0/20 150 90 10 0/20 150 90 10 0/20 150 90 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 90 10 0/20 1500 90 10 0/20 1500 90 10 0/20 1500 90 10 0/20 1600 90 10 0/20 1600 90 10 <th>Austin</th> <th>304 Stainless</th> <th>15</th> <th></th> <th>90</th> <th>10</th> <th>0/30</th> <th></th> <th>. 063</th> <th></th> <th></th> <th>TOX</th>	Austin	304 Stainless	15		90	10	0/30		. 063			TOX
10 90 10 0/20 500 90 10 0/20 1500 90 10 0/20 1600 90 10 0/20 1600 90 10 0/20 500 500 300 10 0/20 500 500 300 10 0/20 500 300 10 0/20 0/20 1500 300 10 0/20 0/20 1500 300 10 0/20 0/20 1500 300 10 0/20 0/20 1500 300 10 0/20 0/20 1500 300 10 0/20 0/20 1500 90 10 0/20 0/20 1600 90 10 0/20 0/20 1600 90 10 0/20 0/20 1500 90 10 0/20 0/20 1500 90 10 0/20 0/20 1600 90 10 0/20 0/20 1600 90 10 0/20 0/20 1600 90 10 0/20 100 <td< td=""><td>12721</td><th>Steel</th><td>15</td><td></td><td>06</td><td>10</td><td>0/20</td><td></td><td>, 063</td><td></td><td></td><td>TOX</td></td<>	12721	Steel	15		06	10	0/20		, 063			TOX
500 92 10 0/20 150 90 10 0/20 150 90 10 0/20 100 300 10 0/20 100 300 10 0/20 100 300 10 0/20 100 300 10 0/20 100 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 90 10 0/20 1500 90 10 0/20 1500 90 10 0/20 1500 90 10 0/20 1500 90 10 0/20 1500 90 10 10 100 <td< td=""><td></td><th></th><td>100</td><td></td><td>06</td><td>10</td><td>0/20</td><td></td><td>.063</td><td></td><td></td><td>TOX</td></td<>			100		06	10	0/20		.063			TOX
1000 90 10 0/20 1500 90 10 0/20 1500 500 300 10 0/20 500 500 300 10 0/20 500 500 300 10 0/20 1500 300 10 0/20 0/20 1500 300 10 0/20 0/20 1500 300 10 0/20 0/20 1500 300 10 0/20 0/20 1500 300 10 0/20 0/20 1500 90 10 0/20 1/20 1500 90 10 0/20 1/20 1500 90 10 10 2/20 1500 90 10 10 2/20 1500 90 10 10 2/20 1500 90 10 10 1/20 1500 90 10 10			500		66	01	0/20		.063			TOX
1500 90 10 0/20 15 90 10 0/20 500 500 300 10 0/20 500 1000 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 90 10 0/20 1500 90 10 0/20 1600 90 10 3/20 1500 90 10 3/20 1600 90 10 3/20 1600 90 10 3/20 1600 90 10 3/20 1600 90 10 3/20 1600 90 10 3/20 1600 90 10 3/20 1600 90 10 3/20 1600 90 10 3/20 1600 90 10 10 1000 90 10 0/20 <td></td> <th></th> <td>1000</td> <td></td> <td>06</td> <td>10</td> <td>0/20</td> <td></td> <td>. 063</td> <td></td> <td></td> <td>TON</td>			1000		06	10	0/20		. 063			TON
15 90 10 0/20 100 500 300 10 0/20 500 500 300 10 0/20 500 300 10 0/20 300 10 0/20 5100 300 1500 300 10 0/20 2/20 1500 300 100 9.02 0/20 300 10 0/20 1500 300 9.02 0/20 300 9.02 0/20 3/20 Statules 500 90 10 0/20 9.02 0/20 3/20 Statules 500 90 10 9/20 9/20 9/20 9/20 Statules 500 90 10 9/20 9/20 9/20 9/20 1000 90 9/20 9/20 9/20 9/20 9/20 9/20 1500 90 9/20 9/20 9/20 9/20 9/20 9/20 1500 9/20 9/20 9/20 9/20 9/20 9/20 9/20 <td></td> <th></th> <td>1500</td> <td></td> <td>06</td> <td>10</td> <td>0/20</td> <td></td> <td>.063</td> <td></td> <td></td> <td>TOX</td>			1500		06	10	0/20		.063			TOX
100 300 10 0/20 500 1000 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 300 10 0/20 1500 90 10 0/20 1500 90 10 0/20 1500 90 10 0/20 1500 90 10 2/20 1500 90 10 2/20 1500 90 10 2/20 1500 90 10 2/20 1500 90 10 2/20 1500 90 10 2/20 1500 90 10 2/20 1500 90 10 2/20 1500 90 10 2/20 1500 90 10 2/20 1500 90 10 2/20 1500 90 10 2/20 1500 90 10 10 100 <t< td=""><td></td><th></th><td>15</td><td></td><td>06</td><td>10</td><td>0/20</td><td></td><td>. 090</td><td></td><td></td><td>GOX</td></t<>			15		06	10	0/20		. 090			GOX
50 50 300 10 0/20 1500 1500 300 10 0/20 1500 300 10 0/20 2/20 1500 300 10 0/20 2/20 1500 300 9.02 0/20 2/20 1500 300 9.02 0/20 2/20 1500 9.02 0/20 9.02 0/20 Stainless 500 90 10 0/20 Steel 1000 90 10 0/20 1000 90 10 0/20 10 1500 90 10 0/20 10 1500 90 10 2/20 10 1500 90 10 2/20 10 1500 90 10 2/20 10 1500 90 10 2/20 10 1600 90 10 2/20 10 1600 90 10 2/20 10 1000 90 10 10 <td></td> <th>•</th> <td>100</td> <td></td> <td>300</td> <td>10</td> <td>0/20</td> <td></td> <td>060</td> <td></td> <td></td> <td>GOX</td>		•	100		300	10	0/20		060			GOX
100030010 $0/20$ 1500150030010 $0/20$ 150030010 $2/20$ 150030010 $2/20$ 150030010 $0/20$ Stainteas5009010 $0/20$ Steel10009010 $0/20$ 15009010 $0/20$ $0/20$ Steel10009010 $0/20$ 15009010 $0/20$ $0/20$ 15009010 $0/20$ $0/20$ 15009010 $0/20$ $0/20$ 15009010 $0/20$ $0/20$ 15009010 $0/20$ $0/20$ 16009010 $0/20$ $0/20$ 16009010 $0/20$ $0/20$ 16009010 $0/20$ $0/20$ 16009010 $0/20$ $0/20$ 16009010 $0/20$ 16009010 $0/20$ 16009010 $0/20$ 16009010 $0/20$ 16009010 $0/20$ 16009010 $0/20$ 16009010 $0/20$ 16009010 $0/20$ 16009010 $0/20$ 1600909010160090901016009090101600909090160			500		300	01	0/20		060.			COX
1500 10 2/20 1500 100 2/20 1500 9.02 0/20 1500 9.02 0/20 1500 9.02 0/20 1500 9.02 0/20 Stainless 500 90 10 Steel 1000 90 10 3/20 1500 90 10 3/20 3/20 1500 90 10 3/20 3/20 1500 90 10 3/20 3/20 1500 90 10 3/20 3/20 1500 90 10 3/20 3/20 1500 90 10 3/20 3/20 1500 90 10 3/20 10 1500 90 10 2/20 10 1500 90 10 3/20 10 1600 90 10 3/20 10 1600 90 10 10 2/20 1600 90 10 10 2/20 1600 90 10 10 10 1600 90 10 0/20 10 100 90			1000		300	10	0/20		060.			COX
15003009.02 $0/20$ 15003009.02 $0/20$ 15003009.02 $0/20$ Staintest5019010 $0/20$ Steel10009010 $0/20$ 1000909.02 $0/20$ 1000909.02 $0/20$ 15009010 $5/20$ 15009010 $2/20$ 15009010 $2/20$ 15009010 $2/20$ 15009010 $2/20$ 15009010 $0/20$ 15009010 $0/20$ 15009010 $0/20$ 15009010 $0/20$ 15009010 $0/20$ 15009010 $0/20$ 10009010 $0/20$ 10009010 $0/20$ 10009010 $0/20$ 10009010 $0/20$ 10009010 $0/20$ 10009010 $0/20$ 10009010 $0/20$ 10009010 $0/20$ 10009010 $0/20$ 10009010 $0/20$ 10009010 $0/20$ 10009010 $0/20$ 10009010 $0/20$ 10009010 $0/20$ 10009010 $0/20$ 1009010 $0/2$			1500		300	10	2/20		060.			NOD
I500 3.34 $0/20$ PH 15-7100 90 10 $0/20$ Stainless 50° 90 10 $0/20$ Stainless 50° 90 10 $0/20$ Steel1000 90 10 $3/20$ Steel1000 90 10 $3/20$ 1000 90 10° $3/20$ 1000 90 10° $3/20$ 1500 90 10° $3/20$ 1500 90 10° $3/20$ 1000 90° 10° $3/20$ 1000 90° 10° $3/20^{\circ}$ 1000 90° 10° $0/20^{\circ}$ 1000° 90° 10° 100°			1500		300	9.02	0/20		060.			GOX
FH 15-7 100 90 10 0/20 Stainless 501 90 10 0/20 Steel 1000 90 10 0/20 1500 90 10 5/20 90 2/20 1500 90 10 90 10 5/20 1500 90 10 2/20 9/20 10 2/20 1600 90 10 2/20 9/20 2/20 2/20 1000 90 10 2/20 9/20 2/20 2/20 1600 90 10 2/20 9/20 2/20 2/20 2/20 1000 90 10 2/20 9/20 2/20 2/20 2/20 1000 90 10 2/20 9/20 2/20 2/20 </td <td></td> <th></th> <td>1500</td> <td></td> <td>300</td> <td>8.34</td> <td>0/20</td> <td></td> <td>060.</td> <td></td> <td></td> <td>COX</td>			1500		300	8.34	0/20		060.			COX
Stainless 50' 90 10 0/20 Steel 1000 90 10 3/20 Steel 1000 90 10 3/20 Iono 90 10 5/20 Iono 90 10 0/20 Iono 90 10 10	astia	FH 15-7	100		06	01	0/20		. 030			TOX
Steel 1000 90 10 3/20 1000 90 9 0.2 0/20 1000 90 10 5/20 9 2 1500 9 0.2 0/20 9 2 2 1500 9 0.2 0/20 9 2 2 2 1500 9 0.2 0/20 9 10 3 2	(226)	Stainless	50n		06	10	0/20		. 030			TOX
90 9.02 0/20 90 8.34 0/20 90 10 5/20 90 9.02 0/20 90 10 5/20 90 10 3/20 90 10 3/20 90 10 2/20 90 10 2/20 90 10 2/20 90 10 2/20 90 10 2/20 90 10 0/20 90 10 0/20 90 10 0/20 90 10 0/20 90 10 0/20 90 10 0/20	•	Steel	0001		06	10	3/20		030			TUX
90 8. 34 0/20 90 10 5/20 90 10 5/20 90 10 3/20 90 10 3/20 90 10 3/20 90 10 3/20 90 10 3/20 90 10 3/20 90 10 3/20 90 10 3/20 90 10 3/20 90 10 0/20 90 10 0/20 90 10 0/20			1000		06	9.02	0/20		. 030			TOX
90 10 5/20 90 9.02 0/20 90 10 3/20 90 10 3/20 90 10 3/20 90 10 3/20 90 10 3/20 90 10 3/20 90 10 3/20 90 10 3/20 90 10 3/20 90 10 0/20 90 10 0/20 90 10 0/20			1000		06	8.34	0/20		. 030			TOX
90 9.02 0/20 90 10 3/4 0/20 90 10 3/20 9/20 90 10 2/20 9/20 90 10 2/20 9/20 90 10 3/20 9/20 90 9 02 0/20 90 8.34 0/20 90 10 0/20 90 10 0/20 90 10 0/20	,		1500		96	10	5/20		. 030			TOX
90 8. 34 0/20 90 10 3/20 90 10 2/20 90 10 2/20 90 10 3/20 90 10 3/20 90 10 0/20 90 10 0/20 90 10 0/20			1500		06	9.02	0/20		, 030			rox
90 16 $3/20$ 90 10 $2/20$ 90 10 $2/40$ 90 9 02 $3/20$ 90 8.34 $0/20$ 90 10 $0/20$ 90 10 $0/20$ 90 10 $0/20$			1500		06	8.34	0/20		.030			LOX
90 1.3 0/20 90 10 2/40 90 10 3/20 90 9 02 0/20 90 8 34 0/20 90 10 0/20 90 10 0/20 90 10 0/20 90 10 0/20			100		06	16	07/0		. 050			LOX
90 10 2/20 90 10 3/20 90 9 02 0/20 90 8.34 0/20 90 10 0/20 90 10 0/20 90 10 0/20			500		06	10	0/20		.050			гох
90 10 3/20 90 9 02 0/20 90 8.34 0/20 90 10 0/20 90 10 0/20			1000		06	10	2/20		.050			LOX
90 9 02 0/20 90 8.34 0/20 90 10 0/20 90 10 0/20 90 10 0/20			1500		06	10	3/20		.050			YO.1
90 8.34 0/20 90 10 0/20 90 10 0/20 90 10 0/20			1500		06		0/20		, 050			XC I
90 10 0/20 90 10 0/20 90 10 0/20			1500		06	8.34	0/20		000.			rox
90 10 0/20 90 10 0/20			100		06	10	0/20		060.			гох
90 10 0/20	,		500		06	10	0/20		060			TOX
			1000		06	10	0/20		0. -			тох

-

53

Į

ł

					ALLOY	ALLOYS cont.					
Reference	Materials	Test Pressure (psi)	Ignition Temp. (K)	Test Temp. (K)	Mechanica Energy (\g m)	Mcchanical Impact Energy Reaction (\v g m) Rate	Pneumatic Impact Reaction Rate	Specimen Thickness (111)	Flash Point (K)	Fire Point (K)	Environment
Anstin	Hd 1-71	15		06	10	2/20		. 030			TOX
(22.61)	Stainless Steel	15		06	. 01	0720		. 030			T)X
		1500		96	10	0/20		. 030			LUX
		100		06	10	0/20		. 063			LOX
		500		06	10	0/20		. 063			rox
		1000		96	10	0/20		. 063			LOX
		1500		06	10	0/20		. 063			LOX
		15		06	01	0/20		. 070			TOX
		100		90	10	0/20		. 070			rox
		500		06	10	0/20		. 070			хот
		1000		96	10	0/20		. 070			хол
		1500		60	01	0/20		. 070			LOX
		100		300	2	0/20		. 030			COX
		500		300	10	0/20		. 030			GOX
		1000		300	10	0/20		0:0.			GOX
		100		30:0	0	07/0		. 063			20X
		006		0.05	10	0720		. 063			COX
Austin	Stainless Steel	100		96	10	0/20		. 030			XO'I
(1976)	21141-6Cr-9Min	500		96	10	0/20		. 030			TOX
•		1000		06	10	0720		020.			TOX
		1500		06	10	02/0		. 020			TOX
		100		06	10	07/20		. 063			TOX
		500		06	10	02/0		. 063			I,OX
		1000		06	10	0/20		. 063			rox
		1500		90	ũ	0/20		. 063			TOX
		100		60	10	07/20		. 085			TOX
		500		96	10	0/20		. 085			TOX
		1000		96	10	0/20		. 085			TOX
		1500		96	10	07/0		. 085			TOX
κ.		100		300	10	0/20		. 031			GOX
		500		300	10	0/20		. 031			COX
		1000		300	01	0/20		. 031			GOX
		1500	•	300	10	0/20		. 031			COX
Austin	Stainless Steel	100		90	01	0/20		. 050			ТОХ
(1972)	22Ni-13Cr-5Ma	500		06	10	0/20		. 050			TOX
		1000		6	10	0/20		. 050			TOX
		1500		Οó	10	0/20		. 050			TOX
		100		300	10	0/20		.050			GOX
		500		300	10	0/20		. 010			GUX
		0001	ŧ	300	10	0/20		. ሮ50			GOX
		1500		300	<u>8</u>	0/20		. '150			GOX

. . .

ţ

The second s

ALLOYS cont.

, , ,

:

Service and the service of the servi

• '¥54€'-

No. of Lot of Lo

Sec.

1

Reference	Materials	Test	Ignition	Test	Mechanic	Mechanical Impact	Pneumatic	Specinian	Flash	Ftre	1, nviron ment
		Pressure	Temp.	Temp.	Energy	Energy Reaction	Impact	Thickress	Point	Peint	
		(psi)	(K)	(K)	(kg m)	Rate	Reaction Rate	(r.i)	(K)	(K)	
Austin	Haynes allov	100		96	10	0/20		. 063			LOX
11977	185	500		90	10	0/20		. 063			LON
		1000		06	01	0/20		. 063			TOX
		1500		90	10	0/70		. 063			TCX
		100		90	10	0/20		060.			XCJ
		500		90	10	0/20		060.			LOX
		1000		06	10	07/0		060.			TOX
		1500		06	10	0/20		060.			IJOX
		100		300	10	0/20		. 063			GOX
		500		300	10	0/20		. 063			GCX
		1000		300	10	0/20		.063			COX
		1500		300	10	0/20		. 063			GOX
		100		300	10	0770		060.			GOX
		500		300	10	0/20		060.			GOX
		1000		300	10	0/20		060.			GOX
		1500		300	10	0720		060.			GOX
Austin	301 Stainless	100		90	10	0/20		. 125			TOX
(272)	Steel	500		06	10	0/20		. 125			XC1
		1000		06	10	0/20		. 125			LOX
		1500		06	10	n/20		.125			LOX
		100		300	10	0/20		. 125			gox
		500		300	10	0/20		.125			GOX
		1000		015	10	0720		. 125			GOX
		1500		300	01	0/20		. 125			COX
Austiz	Inconel 600	15		0 6	01	0/20		.031			rox
(2261)		15		90	01	0/211		. 631			гох
		15		90	10	67/0		060.			гох
		100		300	10	02/0		031			XOD
		500		300	10	o. /0		. 031			GOX
		1000		300	10	(2/6		. 031			xco
		1500		300	10	0/21		. 031			GOX
		100		300	10	07,50		. 063			GOX
		500		300	10	0720		. 063			GOX
		1000		300	10	0/20		. 063			GOX
		1500		300	10	0/20		. 063			xon
		100		300	10	c /20		. 093			COX
		500		300	10	0/20		. 093			GOX
	-	1000		300	10	0/20		. 093			GOX
		1500		300	10	11/20		٤60.			GOX

:

;

J.

- * - *

> ي بر .

					107171	ALLUTS CONU.					
Reference	Materials	Test	Ignition	Test	Mechanic	Mechanical Impuct	Pneumatic	Specimen	Fla.h	Fire	Environment
		(psi)	(K)	(X)	(kg m)	Energy Neacum (kg m) Rate	Reaction Rate	(in)	(K)	(K)	
Austin	Inconel 718	50		07	10	0/20		. 125			гох
(1972)		100		90	10	0720		. 125			rox
		500		06	10	07/0		. 125			rox
		1070		06	0	0/20		. 125			гох
		1500		90	01	0/20		. 125			rux
		005 2		0.05	2 9	07/0		. 063			COX
		'nç		005	2	02/0		221.			
	-	FOD FOD				07/0		. 160			
				000		02/0		221.			
		1500				n2/0		. 125			
		10000			2 2	0/20		. 012			x or
A	Inconel 760	100		00	Ģ	06/0		747			
1072)	NC I LOUGDER			06	2	02/0		. 002			rox Fox
(1)(1)					2 2	07/0		. 005			
		1500		06	2	0/20		- 202 - 0.62			
		100		300	0	0/20		062			
		500		300	10	0/20		. 062			
		1000		300	10	0/20		.062			COX
		1500		300	10	0/20		. 062			COX
Austin	Monel 400	15		90	10	0/20		160.			1.0X
(2261)		15		06	10	0/20		063			LOX
		100		300	10	0/20		160.			XOD
		500		300	10	0/20		160.			COX
		000		300	10	0/20		. 031			COX
		1500		300	10	2/20		. 031			GOX
		1500		300	a, 02	07/0		. 031			COX
		1500		300	9.02	07/20		. 031			COX
		1500		300	8.34	0/20		. 031			GOX
		1500		300	8, 34	07/0		. 031			COX
		100		000	2 :	07/0		200			GOX
				005	01	07/0		290.			COX
		1500		000	0	07/0		707.			X OD
		1500			10 0 67	02/0		, UOC			
		1500		100	•	0/20		- 200 -			
		100		300		0/20		060.			XOD
Austin	Inconel 625	10000		120	01	0/20		05			
(2261)				1	1			-			500
	K-Monel	10000		300	0	0/20		. 05			GOX
=	Inconel 718	10000		300	01	0/20		, 05			GOX
:	Nickobeste allou										-
	10 370 100 1011	(a)									

ALLOYS cont.

11

1

:

÷

2 ž

• 1 -

ĩ

÷.

X

۲

:

Las i rooment	
1 m i	
Ford Point (K)	
Flash Point (K)	
Spreamen T'hickness (m)	
Pneumatic Impact Reaction Kate	
Mechanical Impact Energy Reaction (kg m) Rate	
Test Temp. (K)	
Igaition Temp. (K)	0501 0601 0101 0101 0101
Test Pressure (psi)	15 800 1600 2000 2000
Materials	R F F F F F F F F F F F F F F F F F F F
Reference	Jakowsky and Butzler(1923)

L

.

يەر بەر مەردە مەردە مەردە مەردەر مەردەردە مەردەردە مەردەردە مەردەر مەردەر مەردەر مەردەر مەردەر مەردەر مەردەر م

the second states of the

j.

•

and the second se

ł

1

Metric Teri <					наі	OGENATE	HALOGENATED COMPOUNDS	NDS	:			
Mutual Instant Instant Instant Functi (16) 5 201 2.1 2.1 2.1 2.1 2.1 Instant Instant 3 5 5 7 5 7 5 Instant 3 5 5 5 5 7 5 Instant 2 1 1 1 5	Reference	Materials	Test Pressure (psi)	Ignition Temp. (K)	Test Temp. (K)	Mechani Ënergy (kg m)	ical Impact Reaction Rate	Pneumatic Impact Reaction Rate	Specimen Phickness (in)	Flash Point (K)	Fire Point (K)	Eavircament
and Florest 5 None 100 1000	Jamiaon (1970)	Fluorel 1059	2000		297	2.8	0/12					COX
n 573 50 50 50 50 50 50 50 50 50 50 50 50 50	Pippen and	Fluorel	120 u C							668	None	COX
50 50 500 500 500 500 500 500 1000 1000 1100 1000 11100 1000 11100 1000 11100 1000 11100 1000 11100 1000 11100 1000 11100 1000 11100 1000 11100 1000 11100 1010 11100 1010 11100 1010 11100 1010 11100 1010 11100 1010 11100 1010 11100 1010 11100 1010 11100 1010 11100 1010 11100 1010 11100 1010 11100 1010 11100 1010 11100 1010 111100 1010 111100 1010 111100 1010 111100 1010 111100 1010 111100 1010 111100 1010 111100 1010 111100 <td>1971)</td> <td></td> <td>50 J</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>645</td> <td>90L</td> <td>COX COX</td>	1971)		50 J							645	90L	COX COX
100 500 500 101 Folymone 500 500 10 Folymone 600 500 11 Folymone 600 500 10 Folymone 600 700 11 Starssock 200 299 1.4 0/18 11 25 1.4 0/18 1.4 0/18 11 25 1.4 0/18 1.4 1.1 11 25 1.4 0/18 1.4 1.1 250 250 250 251 1.4 1.4 11000 665 1.4 0/18 1.4 1.4 1.4 11 1100 1.4 1.1 1.4 1.4 1.4 1100 <t< td=""><td></td><td></td><td>50</td><td></td><td></td><td></td><td></td><td></td><td></td><td>58:</td><td>581</td><td>COX</td></t<>			50							58:	581	COX
1 FolyoMater 500 50			100							548	548	COX
1 Polychlore- it filmer- (CTFE) 505 505 1 Polychlore- (CTFE) 400 700 1 titlmer- (CTFE) 400 700 1 titlmer- (CTFE) 400 700 1 titlmer- (CTFE) 200 29 1.4 0/18 1 1 5 74 None 1 2 200 29 1.4 0/18 1 2 50 50 53 724 1 2 1.4 0/18 74 100 1 2 200 29 1.4 0/18 1 2 2 2 2 24 1 2 2 2 1.4 1.4 1 2 2 2 2 2 1 2 2 2 2 2 1 2 2 2 2 2 1 2 2 2 2 2 1 2 2 2 2 2 1 2 2 2 2 2 1 2 2 2 2 1 2 2 <td></td> <td></td> <td>0001</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>506 506</td> <td>506</td> <td>X0X COX</td>			0001							506 506	506	X0X COX
N Polyrithor- ettriant Polyrithor- ettriant n titylane 400 700 n titylane 400 700 n KEL-F 200 299 1.4 0/18 n KEL-F 2 299 1.4 0/18 nu KEL-F-81 5 5 5 sud KEL-F-81 5 5 5 1 2 29 1.4 0/18 74 None sud KEL-F-81 5 </td <td></td> <td></td> <td>1500 2100</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>505 494</td> <td>505 494</td> <td>COX</td>			1500 2100							505 494	505 494	COX
ditivities 400 700 KELL-F 200 299 1.4 0/18 Bar Stock 200 693 724 None 25 500 693 724 None 25 500 663 724 None 250 500 663 643 643 1000 665 643 643 643 2000 665 643 643 643 1000 665 74 043 643 1000 665 74 643 643 1000 665 74 643 643 1000 665 74 643 643 1000 665 74 643 643 1000 665 <	Karzani 19682)	Polychloro- trifluor-										XOO
M KEL-F 200 299 1,4 0/18 Bar Stock 200 299 1,4 0/18 Bar Stock 200 299 1,4 0/18 Jag 25 26 29 1,4 0/18 Jag 25 26 29 1,4 0/18 Jag 25 26 269 200 Jag 1000 1000 1000 691 647 Jag 2100 663 647 647 647 Jag 2100 663 643 643 643 Jag 2130 663 643 643 643 643 Jag 2130 663 100 643 643 643 643 Jag 210 226 2.8 0/21 1.4 0/21 <td< td=""><td>[d896]</td><td>sthylone</td><td>4000</td><td>700</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>XOX</td></td<>	[d896]	sthylone	4000	700								XOX
MEL-F XEL-F Bar Stock 200 29 1.4 0/18 745 None Md KEL-F-81 5 5 693 703 724 Md KEL-F-81 5 693 726 693 633 643 643 643 643 643		(dire)										20X COX
and KEL-F-81 5 74: None ng 25 69: 724 None 50 500 500 633 633 724 50 500 500 633 643 724 1000 1000 685 643 643 643 643 11 2000 685 500 643 643 643 643 11 2000 685 563 643 643 643 643 12 2000 685 563 563 643 <	amison 1970)	KEL-F Bar Stock	2000		299	1.4	0/18					XO()
Alg 25 69 None 50 50 633 633 724 500 1000 637 647 647 1500 2000 685 647 643 64 7.24 643 647 647 1500 685 647 647 647 1 2000 685 647 647 1 Folyhetra- 643 647 647 1 Folyhetra- 135 735 642 1 fuoro 135 735 642 1 17: 2000 2.8 0/21 1 17: 2000 289 2.8 0/21 1 17: 2000 289 2.8 0/21 1 17: 2000 280 1.4 0/21 1 17: 2000 286 1.4 0/21	Pippen and	KEL-F-81	ŝ							745	None	COX
id CTFE 3800 685 639 639 639 id CTFE 3800 685 647 647 647 in Polytetra- 500 685 643 643 in Folytetra- 1500 685 643 643 in Folytetra- 1500 685 643 643 in Folytetra- 1500 685 643 643 in Folytetra- 135 135 643 643 inoro- ethylene 135 135 135 642 643 inoro- ethylene 1.4 0/21 1.4 0/21 inbing 2000 286 1.4 0/21 1.4 0/21	trading 10711		25 ED							698 202	None	XOS
id CTFE 3800 665 647 647 647 647 647 647 647 647 647 647	17(1)		500							639 639	630 630	X05
Id CTFE 3800 685 647 647 647 647 647 647 647 647 647 647	,		1000							647	647	XOD
id CTFE 3800 685 if CTFE 3800 685 if Polypetra- fluoro- ethylene (Tellon)(TFE) 4025 735 in TFE 2000 289 2.8 0/21 TFE 2000 289 2.8 0/21 it 0/21 it 0/21		•	1500							643	643	XOD
id CTFE 3800 685 ui Polytetra- iiuoro- fiuoro- ethylena (Teflon)(TFE) 4025 TFE 2000		-	2000							647	647	Xon
ui Polytetra- i fiuoro- ethyleue (Teflon)(TFE) 4025 735 m TFE 2000 289 2.8 0/21 TFE 2000 286 1.4 0/21 tubing	1972)	CIFE	3800	685								COX
(Teflon)(TFE) 4025 735 m TFE 2000 2.8 0/21 TFE 2000 289 2.8 0/21 tubing 2000 286 1.4 0/21	larzaní 1968a)	10										
m TFE 2000 289 2.8 0/21 TFE 2000 286 1.4 0/21 tubing		(Teflon)(TFE)	4025	735								GOX
TFE 2000 2R6 1.4 0/21 tubing	arrúson 10201	TFE	2000		289	2.8	0/21					COX
	14.10)	TFE tubing	2000		286	1.4	0/21					GOX
	·			-								

ATED COMPOUNDS

45

:

}

	11. 11. 11. 11. 11. 11. 11. 11. 11. 11.
41	and the states of the second
いたまま	こうちょうしていたいというないないないないできょうないできょうないできょうとうないないできょうないできょう
* -	ていたからとないまでしいがあ
" `` .	สมร์ลหร
1.	
- 1	
· · ·	

₽,

Ū,

HALOGENATED COMPOUNDS cont.

Reference	Materials	Test Pressure (psi)	Ignition Temp. (K)	Test Temp. (K)	Muchanical Impact Energy ¹ Reaction (kg m) ₁ Rate	aact Pneumatic itn Impact e Reaction Rate	•	Specini e n Thickness (in)	Flash Poirt (K)	Fire Point (K)	Environment
Pippen and Stradling (1971)	Glass Filled Teflon	500 1000 2500			1.4 1/2 1.4 1/1	0/4					00 X X X 20 X 20 X 20 X 20 X 20 X 20 X
:	Tellon	5 25 50 50 200 200 200 1000							Noure 741 754 735 735 733 707 645 645 637 660	Nune Nune Nune 7 35 7 33 7 33 645 645 660	X X X X X X X X X X X X X X X X X X X
×	Virgin Teflon Sheet	4000 4500 5000			4	0/4 4/4					00X 00X 00X 00X 00X 00X
Jamison (1970)	T -EMS372 (J. L. Dore)	2000		289	1.4 0/21						COX

.

..

1 . • :

•

•

-

¢

+ . • .

194.7

Temp.Temp.Temp.Larergy ReactionImpact9011.4 $0/20$ 9011.4 $0/20$ 9011.4 $0/20$ 9011.4 $0/20$ 9011.4 $0/20$ 9011.4 $0/20$ 9011.4 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 90011.1 $0/20$ 9011.4 $0/20$ 90011.1 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 90011.4 $0/20$ 9011.4 $0/20$ 900<	Reference Materials	Test	Ignition	Test	Mcchanie	Mechanical Impact	Pneuratic	Spe cinien	Flash	Fire	Environ nent
Electrofin 100 90 1.4 2306 500 90 1.4 1000 300 1.4 1000 300 1.4 1000 300 1.4 1000 300 1.4 1000 300 1.4 1000 300 1.4 1000 300 1.4 1000 300 1.4 1000 300 1.4 1000 300 1.4 1900 300 1.4 1900 300 1.4 1900 300 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 900 1.4 1900 900 1.4 1900 900 1.4 1900 900 1.4 1900 900 90 <th></th> <th>Fressure (psi)</th> <th>Temp. (K)</th> <th>Temp. (K)</th> <th>Energy (kg m)</th> <th>Reaction Rate</th> <th>Implict Reaction Rate</th> <th>Thickness (in)</th> <th>Point (K)</th> <th>Point (K)</th> <th></th>		Fressure (psi)	Temp. (K)	Temp. (K)	Energy (kg m)	Reaction Rate	Implict Reaction Rate	Thickness (in)	Point (K)	Point (K)	
2306 500 90 14 1500 1000 90 14 1500 900 14 90 14 1000 300 14 90 14 1000 300 14 90 14 1000 300 14 90 14 1000 300 14 90 14 1550 900 90 14 90 1550 90 90 14 90 14 1550 90 90 14 90 14 1500 90 90 14 90 14 1500 90 90 14 90 14 1500 900 90 14 90 14 1500 900 90 14 90 14 1500 900 90 14 90 14 1500 900 90 90 14		100		06	1.4	0/20					TOX
1000 90 1.4 1500 90 1.4 1000 90 1.4 1000 90 1.4 1000 90 1.4 1000 90 1.4 1500 90 1.4 1500 90 1.4 1500 90 1.4 1500 90 1.4 1500 90 1.4 1500 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1.4 1900 90 1		500		06	l.4	0/20					TOX
1500 90 14 1000 900 14 1000 900 14 1000 900 14 1500 900 14 1500 900 14 1500 900 14 1500 900 14 1500 900 14 1500 900 14 1500 900 14 1500 900 14 1900 900 14 1900 900 14 1900 900 14 1900 900 14 1900 900 14 1900 900 14 1900 900 14 1900 900 14 1900 900 14 1900 900 14 1900 900 14 1900 900 14 1900 900 14 1900 900 14 1900 900 1		1000		06	1.4	0/20					TOX
100 300 114 500 1000 300 114 1000 300 114 300 114 1500 300 114 300 114 1500 300 114 300 114 1500 300 114 300 114 1500 300 114 300 114 1500 300 114 300 114 1500 300 114 300 114 1600 90 90 114 90 1000 900 90 90 114 1000 900 90 90 114 1000 900 90 90 114 1000 900 900 90 114 1000 900 900 90 114 1000 900 900 90 114 1000 900 900 90 114 1000 900 900 90 114 1000 <		1500		96	1.4	0/20					тох
500 300 1.4 1000 300 1.1 1000 300 1.1 1500 300 1.1 1500 300 1.1 1500 300 1.1 1500 300 1.1 1500 300 1.1 1500 300 1.1 1500 90 1.1 500 90 1.1 500 90 1.1 500 90 1.1 1000 90 1.1 1000 90 1.1 1000 90 1.1 1000 90 1.1 1000 90 1.1 1000 90 1.1 1000 90 1.1 1500 90 90 1500 90 1.1 1500 90 90 1500 90 90 1500 90 90 1500 90 90 1500 90 9		001		300	1.4	0/20					COX
Iono 300 1.4 Iono 300 1.2 Iono 300 1.1 Iono 90 1.1 Iono 900 90 Iono 900 1.1 Iono 900 90 Iono 90 90 Iono 90		500		300	1.4	0/20					COX
1000 300 11 1500 1500 300 11 1500 300 11 300 11 1500 300 11 300 11 1500 300 11 300 11 2396 100 90 11 90 11 1600 900 90 90 11 90 11 17500 900 90 90 11 11 90 11 11 90 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 <t< td=""><td></td><td>1000</td><td></td><td>300</td><td>1.4</td><td>0/20</td><td></td><td></td><td></td><td></td><td>COX</td></t<>		1000		300	1.4	0/20					COX
Icore 300 114 I 500 90 114 I 100 900 114 I 500 900 900 I 500 900 900		1000		300	1.2	0/20					COX
I500 300 1.4 I500 1500 300 1.1 I500 300 1.1 300 1.1 Z396 500 90 1.4 90 1.4 S000 900 90 1.4 90 1.4 S000 900 90 1.4 90 1.4 S000 900 90 1.4 90 1.4 I000 900 1.4 90 1.4 90 1.4 I000 1000 900 1.4 90 1.4 90 1.4 I000 1000 900 1.4 90 1.4		1000		300	1.1	0/20					COX
I500 300 1.1 I500 300 1.1 Z396 100 90 1.4 500 90 1.4 500 90 1.4 500 90 1.4 500 90 1.4 500 90 1.4 1500 90 1.4 1500 90 1.4 1500 90 1.4 1500 1000 90 1.4 1500 1000 90 1.4 1500 100 300 1.4 1600 300 1.4 1.4 1600 300 1.4 1.4 1600 300 1.4 1.4 1600 1000 300 1.4 1600 160 300 1.4 1600 1000 300 1.4 1600 1000 300 1.4 1600 100 900 1.4 1600 900 900 1.4 1000 <td></td> <td>1500</td> <td></td> <td>300</td> <td>1.4</td> <td>4/20</td> <td></td> <td></td> <td></td> <td></td> <td>COX</td>		1500		300	1.4	4/20					COX
I500 10 1.1 Z396 100 90 1.4 500 90 1.4 500 90 1.4 500 90 1.4 1000 90 1.4 1000 90 1.4 1000 90 1.4 1000 90 1.4 1000 1000 90 1.4 1000 1000 90 1.4 1100 100 90 1.4 1200 100 90 1.4 1200 100 90 1.4 1200 100 300 1.4 1900 100 300 1.4 1900 1900 300 1.4 1900 1900 300 1.4 1900 1900 90 1.4 1900 1900 90 1.4 1900 1900 90 1.4 1900 1000 90 1.4 1900 900 90 1.4		1500		300	1.2	0/20					COX
Electrotiin 100 90 1.4 Z396 100 90 1.4 500 90 1.4 500 90 1.4 500 90 1.4 1000 90 1.4 1000 90 1.4 1000 90 1.4 1500 100 90 1.4 1500 100 90 1.4 1500 100 90 1.4 1500 100 90 1.4 1000 100 900 1.4 1000 100 300 1.4 1000 100 300 1.4 1000 1900 300 1.4 1900 1900 300 1.4 1900 1900 90 1.4 1900 1900 90 1.4 1900 1900 90 1.4 1900 100 90 1.4 1900 900 90 1.4 1900 90 <td></td> <td>1500</td> <td></td> <td>300</td> <td>1.1</td> <td>0/20</td> <td></td> <td></td> <td></td> <td></td> <td>COX</td>		1500		300	1.1	0/20					COX
Z396 100 90 1.4 500 500 90 1.4 500 1000 90 1.4 1500 1500 90 1.4 1500 1000 90 1.4 1600 1000 300 1.4 1700 1000 90 1.4 1700 1000 90 1.4 1700 1000 1.2 1700 1.2 1700 1.2 1700 1.2 1700 1.4 1700 1.2 1700 1.4 1700 1.2 1700 1.4 1700 1.		100		06	1.4	0/20					TOX
500 90 1.4 500 90 1.4 500 90 1.4 1000 90 1.4 1000 90 1.4 1000 90 1.4 1000 90 1.4 1000 100 90 1.4 1000 100 90 1.4 1000 100 900 1.4 1000 100 900 1.4 1000 1000 900 1.4 1000 1000 900 1.4 1500 1000 90 1.4 1000 900 1.4 1.4 1000 900 1.4 1.4 1500 900 1.4 1.4 1500 900 1.4 1.4 1600 900 1.4 1.4 1600 900 1.4 1.4 1600 900 1.4 1.4 1600 900 1.4 1.4 1600 900 1.4 <td>2396</td> <td>100</td> <td></td> <td>06</td> <td>1.4</td> <td>0,20</td> <td></td> <td></td> <td></td> <td></td> <td>XOT</td>	2396	100		06	1.4	0,20					XOT
500 1000 1500 1500 1500 1500 1500 1500 1500 100 1	_	500		06	1.4	0/20					X01
1000 90 1.4 1500 90 1.4 1500 90 1.4 100 300 1.4 100 300 1.4 100 300 1.4 100 300 1.4 100 300 1.4 100 300 1.4 100 300 1.4 1000 300 1.4 1000 300 1.4 1000 1.4 1.4 1000 1.4 1.4 1000 1.4 1.4 1000 1.4 1.4 1500 1.4 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90		500		96	1.4	0/20	-				TOX
1000 90 1.4 1500 90 1.4 1500 90 1.4 100 500 300 1.4 100 300 1.4 1.4 100 300 1.4 1.4 100 100 300 1.4 100 100 300 1.4 100 1500 300 1.4 1500 160 300 1.4 1500 1500 300 1.4 1500 300 1.4 1.4 1500 1.00 300 1.4 1500 300 1.4 1.4 1500 300 1.4 1.4 1500 300 1.4 1.4 1500 300 1.4 1.4 1500 300 1.4 1.4 1500 1.4 90 1.4 1000 90 90 1.4 1000 90 90 1.4 1000 90 90 1.4	· · · · ·	1000		ე6	1.4	0/20					1.0X
1500 90 1.4 1500 100 90 1.4 100 500 300 1.4 100 300 1.4 1.4 100 300 1.4 1.4 100 300 1.4 1.4 100 300 1.4 1.4 1000 300 1.4 1.4 1500 300 1.4 1.4 1500 1500 300 1.4 1500 160 90 1.4 1600 90 1.4 1.4 1500 100 90 1.4 1600 90 1.4 1.4 1600 90 1.4 1.4 1600 90 1.4 1.4 1600 90 1.4 1.4 1600 90 1.4 1.4 1600 90 1.4 1.4 1600 90 1.4 1.4 1600 90 1.4 1.4 1600 1.4	•	1000		90	1.4	0/20					TOX
1500 90 1.4 100 300 1.4 500 300 1.4 500 300 1.4 1000 300 1.4 1000 300 1.4 1000 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 1.6 300 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1600 90 1.4 1700 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 174 90 1.4 160 90 1.4 160 90 1.4 160 90 1.4 160 90		1500		96	1.4	0/20					XOT
100 300 1.4 500 300 1.4 500 300 1.4 500 300 1.4 1000 300 1.4 1200 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 160 1.4	-	1500		06	1.4	0/20					rox
100 300 1.4 500 500 300 1.4 500 300 1.4 300 1.4 1500 300 1.4 300 1.4 1500 300 1.4 300 1.4 1500 300 1.4 300 1.4 1500 300 1.4 300 1.4 1500 300 1.4 300 1.4 1500 300 1.4 300 1.4 1500 300 1.4 300 1.4 1500 300 1.4 300 1.4 1000 90 1.4 90 1.4 1000 90 1.4 90 1.4 1000 90 90 1.4 1.4 1000 90 90 1.4 1.4 1000 90 90 1.4 1.4 1000 900 900 1.4 1.4 1000 900 900 1.4 1.4 1000		100		300	1.4	0/20					GOX
500 300 1.4 500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 1600 90 1.4 174 90 1.4 160 90 1.4 174 90 1.4 160 90 1.4 160 1.4	-	100		300	1.4	0/20					GOX
500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 90 1.4 1600 90 1.4 1000 90 1.4 1000 90 1.4 1000 90 1.4 1000 90 1.4 1000 90 1.4 1000 900 1.4 1000 900 1.4 1000 900 1.4 1000 900 1.4 1000 1.4 1.4 1000 1.4 1.4 1000 1.4 1.4 1000 1.4 1.4 1000 1		500		300	1 +	0/20					20X
1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 90 1.4 1000 90 1.4 1000 90 1.4 1000 90 1.4 1000 90 1.4 1000 90 1.4 1000 900 1.4 1000 900 1.4 1000 900 1.4 1000 900 1.4 1000 900 1.4 1000 900 1.4		500		300	4	0/20					XOD
1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 300 1.4 1500 90 1.4 1500 90 1.4 1500 90 1.4 1600 90 1.4 1000 90 1.4 1000 90 1.4 1000 90 1.4 1000 300 1.4 1000 300 1.4 1000 300 1.4 1000 300 1.4 1000 300 1.4		0001		005	1.4	07/0					00X
Electrofilm 100 300 1.4 2406 300 300 1.2 2406 1000 90 1.4 1500 90 1.4 1500 90 1.4 1500 1.4 1500 1.4 1500 1.4	,	1500			+ · -	0/20					×00
1500 300 1.2 Electrofilm 100 90 1.4 2406 500 90 1.4 2700 90 90 1.4 1500 90 1.4 90 1.4 1500 90 90 1.4 1500 90 90 1.4 1500 100 900 1.4 1500 100 300 1.4 1500 100 300 1.4		1500		300	1.4	6/20					
Electrofilm 100 90 1.4 2406 500 90 1.4 1500 90 1.4 1500 90 1.4 1000 90 1.4 1500 90 1.4 1500 90 1.4 1500 90 1.4 1500 300 1.4 1500 300 1.4		1500		300	1.2	5/20					XOD
500 90 1.4 1000 90 1.4 1500 90 1.4 100 300 1.4 100 300 1.4 100 300 1.4 1000 300 1.4 1000 300 1.4 1000 1.4 1.4	۶	100		`06	1.4	0/20					
90 1.4 90 1.4 300 1.4 300 1.4 300 1.4	2406	500		90	1.4	0/20				-	TOX
90 1.4 300 1.4 300 1.4 300 1.4		1000		06	1.4	0/20					TOX
300 1.4 300 1.4 300 1.4 300 1.4		1500		06	1.4	0/20					TUX
300 1.4 300 1.4 300 1.4	1	100		300	1.4	0/20					COX
300 1.4 300 1.4		500		300	1.4	0/20					COX
300 1.4		1000		300	1.4	0/20					COX
		1500		300	L.4	0/20					COX
•											

•••••

ŧ,

14 1 1

Metral, State Tert. (st) Tert	act Mate-lit Test grittion Grition Grittion Grit					NU-NON	I UNIZOOTI	NON-HALOUENVILLU PLASTICS CON	102 CO!!!.				
Terme Terme <th< th=""><th>Tanke Tanke <t< th=""><th>Reference</th><th>Mater.als</th><th>Test</th><th>Ignition</th><th>Test</th><th>Mechanic</th><th>al Impact:</th><th>Pneumatic</th><th>Specimen</th><th>Flash</th><th>Fire</th><th>Environment</th></t<></th></th<>	Tanke Tanke <t< th=""><th>Reference</th><th>Mater.als</th><th>Test</th><th>Ignition</th><th>Test</th><th>Mechanic</th><th>al Impact:</th><th>Pneumatic</th><th>Specimen</th><th>Flash</th><th>Fire</th><th>Environment</th></t<>	Reference	Mater.als	Test	Ignition	Test	Mechanic	al Impact:	Pneumatic	Specimen	Flash	Fire	Environment
Table Shows 13 Table Shows 13 20/10	(3) Epery (1) (2)/0 (1) (2)/0 Floregias (1) (2)/0 (1) (2)/0 (1) (1) (1) (1) (2)/0 (1) (1)/0 (1) (1) (1) (1)/0 (1)/0 (1)/0 (1) (1) (1) (1)/0 (1)/0 (1)/0 (1) (1) (1)/0 (1)/0 (1)/0 (1)/0 (1) (1) (1)/0 (1)/0 (1)/0 (1)/0 (1) (1) (1)/0 (1)/0 (1)/0 (1)/0 (1) (1)/0 (1)/0 (1)/0 (1)/0 (1)/0 (1) (1)/0 (1)/0 (1)/0 (1)/0 (1)/0 (1) (1)/0 (1)/0 (1)/0 (1)/0 (1)/0 (1) (1)/0 (1)/0 (1)/0 (1)/0 (1)/0 (1) (1)/0 (1)/0 (1)/0 (1)/0 (1)/0 (1) (1)/0 (1)/0 (1)/0 (1)/0 (1)/0 (1) (1)/0 (1)/0 (1)/0 (1)/0 (1)/0 (1) (1)/0 (1)/0 (1)/1 (1)/0 (1) (1)/0 (1)/	:		Pressure (isi)	Temp. (K)	Temp. (K)	Energy (kg m)	Rcaction Rate	Impact Reaction Rate	lhickness (in)	Point (K)	Point (K)	
Fiberglase 13 90 1.11 20/00 000 1 1 9 1.11 20/00 000 1 1 9 1.11 20/00 000 1 1 9 1.11 20/00 000 1 1 1 2 2 0 0 1 1 1 2 2 0 0 0 1 1 2 2 1 2 0	Fiberglas 13 00 1.1 20/0 0000 1 1 1 1 20/0 0000	Austin(1972)	Epoxy	15		06		20/20		. 050			TOX
13 90 0.16 27/20 000 14 10 11 1/20 000 15 90 0.14 27/20 000 10 10 11 1/20 000 10 11 1/20 000 000 11 1/20 11 1/20 000 100 11 1/20 000 000 11 1/20 11 1/20 000 11 1/20 100 0.05 000 100 0.01 400 0.01 000 100 0.01 400 0.1 1/3 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 11 0/1 0/1	13 0 0.16 22/20 000 14 1 1 1 1 15 0 0.16 27/20 000 16 1 1 1 1 17 100 1 1 1 0 16 100 1 1 1 0 100 100 0.67 5/20 0.05 100 0.06 0.07 5/20 0.09 100 0.06 0.07 2/20 0.09 100 0.06 0.07 2/20 0.09 100 0.06 0.07 2/20 0.09 11 100 0.07 2/20 0.09 11 11 11 11 11 100 0.06 0.07 2/20 0.09 100 0.06 0.07 2/20 0.09 101 100 0.00 0.07 2/20 11 1/1 1/1 1/1 1/1 11 1/1 1/1 1/1 1/1 11 1/1 1/1 1/1 1/1 11 1/1 1/1 1/1 1/1 11	,	Fiberglass	15		96	1.1	20/20		, 050			LOX
15 90 0.44 27/20 000 16 90 0.44 27/20 000 16 90 0.44 27/20 000 100 90 0.44 27/20 000 100 90 0.47 27/20 000 100 90 0.47 27/20 000 100 90 0.47 27/20 000 90 0.47 27/20 000 90 0.47 27/20 000 90 0.40 900 0.47 27/20 90 0.40 900 0.47 27/20 000 90 0.47 27/20 900 0.47 27/20 90 0.40 900 0.47 1/1 90 90 0.400 1.4 1/1 90 90 11 173 90 0.41 1/1 90 11 173 90 0.41 1/1 90 11 173 90 0.72 1/1 90 11 173 90 0.74 90 11 173 90 0.74 90 11 173	1 1 20,20 0.14 20,20 000 1 1 20 0.14 20,20 000 1 1 20 0.14 20,20 000 1 10 11 20,20 000 000 000 000 1 100 00 0.11 20,20 000 <td></td> <th></th> <td>15</td> <td></td> <td>06</td> <td>0.76</td> <td>20/20</td> <td></td> <td>.050</td> <td></td> <td></td> <td>LOX</td>			15		06	0.76	20/20		.050			LOX
15 90 0.13 4/20 900 100 300 1.4 15/20 900 100 300 0.57 2/20 900 100 300 0.57 2/20 900 100 300 0.57 2/20 900 100 300 0.57 2/20 900 100 300 0.57 2/20 900 100 300 0.57 1/1 900 100 300 0.57 1/1 900 100 300 0.57 1/1 900 100 300 0.57 1/1 900 100 300 0.57 1/1 900 100 100 0.57 1/1 1/3 100 11.4 1/3 0/1 100 200 0.57 1/1 11 1/3 0/1 1/4 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 12 11.4 0/1 0/1 130 200 200	1 1 1 1 1 1 1 1 1 <td></td> <th></th> <td>15</td> <td></td> <td>96</td> <td>0.48</td> <td>20/20</td> <td></td> <td>. 050</td> <td></td> <td></td> <td>rox</td>			15		96	0.48	20/20		. 050			rox
15 90 6.094 7/20 900 6.094 7/20 900 100 900 1.1 27/20 900 1.1 27/20 900 100 900 0.67 2/20 900 0.67 2/20 900 100 900 0.67 2/20 900 0.67 2/20 900 100 900 0.67 2/20 900 0.67 2/20 900 100 900 0.67 2/20 900 0.67 2/20 900 100 900 0.67 2/20 900 0.67 2/20 900 1100 900 0.67 1/4 0/4 9/4 9/4 1100 1.1 1/3 0/1 0/1 0.05 11100 200 0.67 2/2 0.05 0.05 11100 200 0.71 1/3 0/1 0/1 11100 200 201 1.1 0/4 0/4 11100 200 201 201 0.05 0.05 11100 200 201 201 0.05 0.05 11100 200 201 2/3 0/1	15 90 0.094 7/20 900 100 900 0.07 7/20 900 100 900 0.07 7/20 900 100 900 0.07 7/20 900 100 900 0.07 7/20 900 100 900 0.07 7/20 900 100 900 0.07 7/20 900 100 900 0.07 7/20 900 100 900 0.07 7/20 900 100 900 0.07 7/20 900 100 900 0.07 7/20 900 100 900 0.07 7/20 900 101 400 1.4 0/4 9/4 101 101 1/3 0/1 101 101 1/3 0/1 101 101 1/4 0/4 101 101 1/3 0/1 101 101 1/4 0/4 102 114 0/4 103 114 0/4 104 114 0/4 105 114 0/4 104 114			15	,	96	0.19	4/20		. 050			rox
100 300 1.4 15/20 000 100 300 1.4 15/20 000 100 300 0.57 2/20 000 100 300 0.57 2/20 000 100 300 0.57 2/20 000 100 300 0.57 2/20 000 100 300 0.57 1/1 0/2 100 300 0.07 2/2 0.00 100 300 0.07 1/1 0/2 100 300 0.07 1/1 0/3 11 1/1 1/1 0/4 0.04 101 11.4 0/4 0/4 101 11.4 0/4 0.04 101 11.4 0/4 0/4 101 11.4 0/4 0/4 101 200 201 1/1 111 1/1 0/4 0/4 111 1/1 0/4 111 1/1 0/4 111 1/1 0/4 111 1/1 0/4 111 1/1 0/4 111 1/1 0/4 111	100 1.1 17/20 000 1.4 17/20 000 100 0.0 0.7 7/20 0.00 0.7 0/20 0.00 100 0.0 0.0 0.7 0/20 0.00 0.00 0.00 100 0.0 0.0 0.0 0.7 0/20 0.00 100 0.0 0.0 0.7 0/20 0.00 100 0.0 0.0 0.7 0/20 0.00 100 0.0 0.0 0.7 0/20 0.00 100 0.0 0.0 0.7 0/20 0.00 100 0.0 0.0 0.7 0/20 0.00 100 0.00 0.7 0/20 0.00 101 100 0.0 0.7 0/20 101 100 0.0 0.7 0/2 101 100 0.0 0.7 0/4 101 100 200 223 2.8 0/2 102 200 200 223 2.8 0/2 112 114 0/4 0/4 1/4 112 120 200 233 2.8 113			15		06	C. 094	5/20		. 050			rox
100 100 11 27/20 055 100 100 11 27/20 055 100 100 11 27/20 055 100 100 100 11 27/20 055 100 100 100 0.67 27/20 055 100 100 0.67 27/20 050 100 100 0.67 27/2 0.75 100 100 0.67 77/3 0.25 0.05 100 100 0.67 1/1 0/1 0.05 100 0.05 1/1 1/3 0/1 0.05 11 1/3 0/1 0.05 0.05 11 1/3 0/1 0.05 0.05 11 1/3 0/1 0.05 0.05 11 1/3 0/1 0.05 0.05 11 1/3 0/1 0.05 0.05 11 1/3 0/1 0.05 0.05 11 1/3 0/1 0.05 0.05 11 1/3 0/1 0.05 0.05 11 1/3 0/1 0.05 11 1/4 <td< td=""><td>100 100 11 21/20 100 100 11 21/20 100 100 11 21/20 100 100 11 21/20 100 100 11 21/20 100 1500 100 100 100 1500 100 100 11 11 11 11/3 11 11 11/3 0/4 11 11/4 11/4 1/3 11 11/4 1/3 0/4 11 11/4 1/3 0/4 11 11/4 1/3 0/1 11 11/4 1/3 0/1 11 11/4 1/3 0/1 11 11/4 1/3 0/1 11 11/4 1/3 0/1 11 11/4 1/3 0/1 11 11/4 1/3 0/1 11 11/3 0/1 0/1 11 11/3 0/1 0/1 11 11/3 0/1 0/1 11 11/3 0/1 0/1 11 11/3 0/1 0/1 11 11/3 <t< td=""><td></td><th></th><td>100</td><td></td><td>300</td><td>1.4</td><td>15/20</td><td></td><td>.050</td><td></td><td></td><td>GOX</td></t<></td></td<>	100 100 11 21/20 100 100 11 21/20 100 100 11 21/20 100 100 11 21/20 100 100 11 21/20 100 1500 100 100 100 1500 100 100 11 11 11 11/3 11 11 11/3 0/4 11 11/4 11/4 1/3 11 11/4 1/3 0/4 11 11/4 1/3 0/4 11 11/4 1/3 0/1 11 11/4 1/3 0/1 11 11/4 1/3 0/1 11 11/4 1/3 0/1 11 11/4 1/3 0/1 11 11/4 1/3 0/1 11 11/4 1/3 0/1 11 11/3 0/1 0/1 11 11/3 0/1 0/1 11 11/3 0/1 0/1 11 11/3 0/1 0/1 11 11/3 0/1 0/1 11 11/3 <t< td=""><td></td><th></th><td>100</td><td></td><td>300</td><td>1.4</td><td>15/20</td><td></td><td>.050</td><td></td><td></td><td>GOX</td></t<>			100		300	1.4	15/20		.050			GOX
100 300 0.75 5/20 000 100 300 0.67 5/20 000 100 300 0.67 2/20 000 100 300 0.67 2/20 000 100 300 0.67 2/20 000 100 300 0.67 2/20 000 100 300 0.67 2/20 000 100 300 0.67 1/1 0/2 100 300 0.67 1/1 0/3 100 300 0.67 1/1 0/4 101 400 1.4 0/4 0/4 101 101 100 0.75 1/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 11 1/3 0/1 0/1 <tr< td=""><td>100 000 0.75 7/20 000 100 000 0.77 7/20 000 100 000 0.77 7/20 000 100 000 0.77 7/20 000 100 000 0.77 7/20 000 100 000 0.77 7/20 000 100 000 0.77 7/20 000 100 000 0.77 7/20 000 100 0.00 0.77 0/20 000 101 101 0.01 1.4 0/4 101 101 1.4 0/4 0.04 101 101 1.4 0/4 0.04 101 101 200 2.91 0.01 101 101 200 0.72 0.01 101 101 200 2.91 0.04 102 103 200 2.92 0.01 102 103 200 2.92 0.01 103 200 2.93 0.01 104 730 2.91 0.04 105 104 0.04 0.04 105 2.91 0.02<td></td><th></th><td>100</td><td></td><td>300</td><td>1.1</td><td>20/20</td><td></td><td>. 05C</td><td></td><td></td><td>GOX</td></td></tr<>	100 000 0.75 7/20 000 100 000 0.77 7/20 000 100 000 0.77 7/20 000 100 000 0.77 7/20 000 100 000 0.77 7/20 000 100 000 0.77 7/20 000 100 000 0.77 7/20 000 100 000 0.77 7/20 000 100 0.00 0.77 0/20 000 101 101 0.01 1.4 0/4 101 101 1.4 0/4 0.04 101 101 1.4 0/4 0.04 101 101 200 2.91 0.01 101 101 200 0.72 0.01 101 101 200 2.91 0.04 102 103 200 2.92 0.01 102 103 200 2.92 0.01 103 200 2.93 0.01 104 730 2.91 0.04 105 104 0.04 0.04 105 2.91 0.02 <td></td> <th></th> <td>100</td> <td></td> <td>300</td> <td>1.1</td> <td>20/20</td> <td></td> <td>. 05C</td> <td></td> <td></td> <td>GOX</td>			100		300	1.1	20/20		. 05C			GOX
100 300 0.57 2/20 0.65 100 300 0.57 2/20 0.65 100 300 0.57 2/20 0.65 100 300 0.57 1/5 0.55 0.65 100 300 0.57 1/5 0.55 0.65 100 300 0.57 1/5 0.55 0.05 100 300 0.57 1/5 0.55 0.05 11 1 1 1 0/4 0.64 101 200 0.57 1/5 0.05 101 200 0.57 1/5 0.05 101 200 0.57 1/5 0.05 101 200 0.57 1/5 0.05 101 200 0.57 1/5 0.05 101 200 223 0.1 0.05 101 200 201 1.1 0/4 101 200 201 202 0.05 101 200 201 202 0.05 102 200 201 202 0.05 103 200 201 202 2.05 104 <	100 100 100 100 100 100 0.67 7.20 0.05 100 100 0.67 7.20 0.05 100 100 0.67 7.20 0.05 100 100 0.67 7.20 0.05 100 100 0.67 7.20 0.05 100 100 0.67 7.20 0.05 100 0.01 1.4 0/4 0/4 11 1 1 0 11 1 1 0/4 11 1 0/4 0/4 11 1 0/4 0/4 11 1 0/4 11 1 0/4 11 1 0/4 11 1 0/4 11 1 0/4 11 1 0/4 11 1 0/4 11 1 0/4 11 1 0/4 11 1 0/4 11 1 0/4 11 1 0/4 12 1 0/4 13 1 0/4 13 1			100		300	0.76	5/20		. 050			COX
100 300 0.57 0/20 000 500 300 0.57 1/2 0/2 500 0.67 1/2 0/2 000 100 300 0.57 1/2 0/2 100 300 0.57 1/2 0/2 100 300 0.57 1/2 0/2 100 300 0.57 1/2 0/2 100 300 0.57 1/2 0/3 50 50 1.4 0/4 0/4 50 51d Black 30 0.57 0/1 67 730 62 1.4 0/4 67 730 62 1.4 0/4 67 500 52 1.4 0/4 67 500 52 2.8 0/2 600 200 201 202 2.65 700 200 201 2.6 0.6 61 14 0/4 0/4 700 200 201 2.6 800 201 2.6 0.6 700 200 2.6 2.6 700 2.0 2.6 2.6 700	100 300 0.457 7/20 000 500 300 0.457 7/2 000 100 100 0.67 1/1 0.67 100 100 0.67 1/1 0.67 0.72 100 100 0.67 1/1 0.67 0.67 100 0.67 1/1 0.67 0.67 0.65 100 0.67 1/1 0/4 0.69 101 100 0.57 1/1 0.69 101 100 0.57 1/1 0.61 101 100 0.57 1/1 0/4 101 100 0.57 1/1 0/4 101 101 1/1 1/3 0/1 101 101 1/1 1/3 0/1 101 101 1/1 1/3 0/1 102 11.4 0/4 1/3 0/1 103 11.4 0/4 1/3 0/1 103 11.4 0/4 0/4 104 103 001 1/3 105 11.4 0/4 0/4 105 11.4 0/4 104 1/3 <td< td=""><td></td><th></th><td>100</td><td></td><td>300</td><td>0.67</td><td>2/20</td><td></td><td>, 050</td><td></td><td></td><td>GOX</td></td<>			100		300	0.67	2/20		, 050			GOX
4 Carnon 3010 000 0.46 9/20 0.00 1500 0.00 0.57 1/1 0/2 000 1500 0.67 0/2 0.00 0.67 0/2 1500 0.00 0.67 0/2 0.00 1500 0.00 0.67 0/2 0.00 1500 0.00 0.67 0/4 0/4 11.4 1/3 0/1 0.00 10.1 1.4 0/4 0/4 10.1 1.1 1/3 0/1 11.4 1/3 0/1 0.00 12.1 1.1 0/4 0/4 13.1 173 0.1 0.1 14 1/3 0/1 0.0 15.0 538 0/2 0.0 16.1 173 0.1 0.4 17.1 173 0/1 0.0 18.1 173 0/2 0.1 19.0 200 201 2.1 0.4 19.1 175 0.2 0.2 19.1 175 0.1 0.4 19.1 175 0.1 0.4 19.1 176 0.4 0.4 <tr< td=""><td>4 German 3010 0.01 0.72 0.02 1500 0.57 1/5 0.20 0.65 1500 0.57 1/5 0.00 1500 0.57 1/5 0.00 1500 0.57 1/5 0.00 1500 0.57 1/5 0.00 1500 0.57 1/5 0.00 1500 0.57 1/5 0.01 1500 1.1 1/3 0/1 1500 1.1 1/3 0/1 1500 1.1 0/4 0/4 1510 1.1 0/1 0/1 1510 1.1 0/1 0/1 1510 1.1 0/2 0/1 1510 200 201 201 1510 1.1 0/1 0/1 1510 200 201 202 1511 200 201 201 1511 200 201 201 1511 200 201 201 1511 201 202 203 1511 201 201 201 1511 201 201 201 1511 201 201<!--</td--><td></td><th></th><td>100</td><td></td><td>300</td><td>0.57</td><td>0/20</td><td></td><td>. 050</td><td></td><td></td><td>GOX</td></td></tr<>	4 German 3010 0.01 0.72 0.02 1500 0.57 1/5 0.20 0.65 1500 0.57 1/5 0.00 1500 0.57 1/5 0.00 1500 0.57 1/5 0.00 1500 0.57 1/5 0.00 1500 0.57 1/5 0.00 1500 0.57 1/5 0.01 1500 1.1 1/3 0/1 1500 1.1 1/3 0/1 1500 1.1 0/4 0/4 1510 1.1 0/1 0/1 1510 1.1 0/1 0/1 1510 1.1 0/2 0/1 1510 200 201 201 1510 1.1 0/1 0/1 1510 200 201 202 1511 200 201 201 1511 200 201 201 1511 200 201 201 1511 201 202 203 1511 201 201 201 1511 201 201 201 1511 201 201 </td <td></td> <th></th> <td>100</td> <td></td> <td>300</td> <td>0.57</td> <td>0/20</td> <td></td> <td>. 050</td> <td></td> <td></td> <td>GOX</td>			100		300	0.57	0/20		. 050			GOX
500 500 570 570 570 1000 1000 0.57 1/5 1/1 000 1000 0.57 1/5 1/1 0.50 000 1000 0.57 1/5 0/1 000 1000 0.57 1/5 0/1 000 1000 0.57 1/5 0/1 000 11 1/3 0/1 0<1	500 500 <td></td> <th></th> <td>100</td> <td></td> <td>200</td> <td>0.48</td> <td>0/20</td> <td></td> <td>. 050</td> <td></td> <td></td> <td>COX</td>			100		200	0.48	0/20		. 050			COX
1000 1000 0.57 1/6 0.00 1100 100 0.57 1/1 0/1 1100 100 0.57 1/1 0/1 1110 100 0.57 1/1 0/1 111 1/3 0/1 0/1 1110 200 0.57 1/1 0/2 1110 200 201 201 0/1 1110 200 201 201 0/1 11100 200 201 201 0/1 11100 200 201 201 201 11100 200 201 201 201 11100 200 201 201 201 11100 200 201 201 201 11100 200 201 201 201 11100 200 201 201 201 11100 200 201 201 201 11100 200 201 201 201 11100 200 201 201 201 11100 200 201 201 201 11100 200 201 201 201 11100 <td>4 Cerrora 300 0.57 1/6 000 100 100 0.57 1/1 0/4 100 0.57 1/1 0/4 0/4 Polymidat 100 0.57 1/1 0/4 100 501 1.4 0/4 0/4 11 730 0.57 1/1 0/4 1301 Cerrora Bura 13 0/1 0/1 14 130 200 237 0/1 1501 Solid Black 700 0/1 0/1 16 14 0/4 0/4 100 200 237 2.8 0/1 17 100 200 297 2.8 0/1 100 200 297 2.8 0/2 100 200 291 2.8 0/2 100 200 291 2.8 0/2 100 320 292 2.8 0/2 1100 200 292 2.8 0/2 1100 200 292 2.8 0/2 1100 320 202 2.8 0/2 1100 320 202 2.8 0/2</td> <td></td> <th></th> <td></td> <td></td> <td>200</td> <td>0.67</td> <td>2/2 02/0</td> <td></td> <td>, 050</td> <td></td> <td></td> <td>COX COX</td>	4 Cerrora 300 0.57 1/6 000 100 100 0.57 1/1 0/4 100 0.57 1/1 0/4 0/4 Polymidat 100 0.57 1/1 0/4 100 501 1.4 0/4 0/4 11 730 0.57 1/1 0/4 1301 Cerrora Bura 13 0/1 0/1 14 130 200 237 0/1 1501 Solid Black 700 0/1 0/1 16 14 0/4 0/4 100 200 237 2.8 0/1 17 100 200 297 2.8 0/1 100 200 297 2.8 0/2 100 200 291 2.8 0/2 100 200 291 2.8 0/2 100 320 292 2.8 0/2 1100 200 292 2.8 0/2 1100 200 292 2.8 0/2 1100 320 202 2.8 0/2 1100 320 202 2.8 0/2					200	0.67	2/2 02/0		, 050			COX COX
1500 300 0.57 1/1 0/4 ad German 3010 4000 1.4 0/4 0/4 jaminate 15 737 1.1 1/3 0/1 67 622 1.4 0/4 0/4 0/6 1 730 538 1.4 0/4 0/4 67 622 1.4 0/4 0/1 67 622 1.4 0/4 67 500 291 2.8 0/21 1 2000 291 2.8 0/21 1 750 622 1.4 0/4 1 100 200 291 2.8 0/21 1 100 200 291 2.8 0/21 1 1500 522 461 1 1500 522 461 1 1 1500 522 461 1 1 1500 522 461 1 1 1500 523 461 1 1 1500 523 461 1 1 1500 523 461 1 1 1500 501 501 501	1500 300 0.57 1/1 0.50 26 Polymiate 400 1.4 0/4 0.4 27 1.3 300 0.57 1/1 0.50 1 730 500 1.4 0/4 0/4 20 538 1.4 0/4 0/4 301 600 297 2.8 0/1 302 600 297 2.8 0/2 404 730 200 297 2.8 3014 516 500 52 404 100 200 297 2.8 170 200 297 2.8 0/22 170 200 297 2.9 0/1 170 200 297 2.8 0/22 170 200 291 2.1 0/1 170 200 201 292 6/1 170 200 201 201 6/1 170 200 201 291 6/1 180/year/beak 5 6/2 6/1 190 200 291 6/1 6/1 100 200 291 6/1 100			1000		300	0.57	1/6		050			
ad Cernon 3010 Polymistic 400 1.4 0/4 0/4 Folyminatic 300 588 1.4 0/3 0/1 67) Germa Buas 13 737 1.4 0/4 67) Germa Buas 13 237 1.4 0/4 67) Germa Buas 13 001 1.4 0/4 67) Germa Buas 13 001 1.4 0/4 61 Gras Fabric 500 521 2.8 0/21 1 170 200 293 2.8 0/21 Nyton 750 601 293 2.8 0/21 1500 2000 293 2.8 0/21 665 1500 201 293 2.8 0/21 665 1500 201 293 2.8 0/21 665 1500 252 461 664 664 664 1081 500 500 510 <td>ad Germon 3010 400 1.4 0/4 0/4 Folymide 4500 1.4 1/3 0/1 Folymide 15 737 1.4 0/4 Folymide 15 737 0.1 0/4 Folymide 15 737 598 0/1 Glass Fabric 500 227 2.8 0/22 Lazar 1100 2000 297 2.8 0/21 Polycarboare 1500 203 2.1 6/2 Polycarboare 1500 201 2.2 0/1 Nyton 750 601 293 2.1 Polycarboare 402 1.4 0/4 Sidd Black 522 2.8 0/21 Polycarboare 401 750 522 Polycarboare 402 402 Sidd Black 5 558 Polycarboare 5 558 Polycarboare 5 550 Sidd<</td> <td></td> <th></th> <td>1500</td> <td></td> <td>300</td> <td>0.57</td> <td>1/1</td> <td></td> <td>. 050</td> <td></td> <td></td> <td>cox COX</td>	ad Germon 3010 400 1.4 0/4 0/4 Folymide 4500 1.4 1/3 0/1 Folymide 15 737 1.4 0/4 Folymide 15 737 0.1 0/4 Folymide 15 737 598 0/1 Glass Fabric 500 227 2.8 0/22 Lazar 1100 2000 297 2.8 0/21 Polycarboare 1500 203 2.1 6/2 Polycarboare 1500 201 2.2 0/1 Nyton 750 601 293 2.1 Polycarboare 402 1.4 0/4 Sidd Black 522 2.8 0/21 Polycarboare 401 750 522 Polycarboare 402 402 Sidd Black 5 558 Polycarboare 5 558 Polycarboare 5 550 Sidd<			1500		300	0.57	1/1		. 050			cox COX
Folymide 4500 1.4 1/3 0/1 Jaminate 15 737 1.4 1/3 0/1 67) German Bluax 15 737 1.4 0/3 0/1 730 Solid Black 300 588 1.4 0/4 1.4 0/4 67) Guas Fabric 500 1.4 0/4 1.4 0/4 67) Jack 2.97 2.8 0/22 1.4 0/6 100 2000 2.97 2.8 0/21 1.4 0/6 Nylon 1500 200 2.99 2.8 0/21 1.6 Nylon 1550 522 461 1.6 1.6 666 1500 522 461 1.6 1.6 1.6 666 666 1500 522 461 1.7 1.6 1.6 666 666 666 666 666 666 666 666 666 666 <t< td=""><td>Folymide 4500 1.4 1/3 0/1 Jaminase 1 73 1.4 1/3 0/1 Solid Black 300 588 337 1.4 0/3 0/1 Garas Fabric 500 622 1.4 0/4 1.4 0/4 Lexan 100 200 297 2.8 0/21 1.4 0/4 Klobycarbonako Nylon 750 601 299 2.8 0/21 Nylon 750 601 299 2.8 0/21 665 None 1900 522 401 299 2.8 0/21 665 0/3 1900 522 401 750 661 666 665 0/3 252 401 7 671 665 0/3 677 665 666 100 500 500 510 570 570 570 570 570 570 570 570 570 <</td><td>Pippen and</td><th>Gemon 3010</th><td>4000</td><td></td><td></td><td>1.4</td><td>0/4</td><td>0/4</td><td></td><td></td><td></td><td>GOX</td></t<>	Folymide 4500 1.4 1/3 0/1 Jaminase 1 73 1.4 1/3 0/1 Solid Black 300 588 337 1.4 0/3 0/1 Garas Fabric 500 622 1.4 0/4 1.4 0/4 Lexan 100 200 297 2.8 0/21 1.4 0/4 Klobycarbonako Nylon 750 601 299 2.8 0/21 Nylon 750 601 299 2.8 0/21 665 None 1900 522 401 299 2.8 0/21 665 0/3 1900 522 401 750 661 666 665 0/3 252 401 7 671 665 0/3 677 665 666 100 500 500 510 570 570 570 570 570 570 570 570 570 <	Pippen and	Gemon 3010	4000			1.4	0/4	0/4				GOX
57 German Buna 15 737 14 750 528 201 520 528 14 750 523 15 500 297 2.8 0/22 1500 2000 297 2.8 0/22 1500 2000 297 2.8 0/21 1500 2000 299 2.8 0/21 1500 520 501 1.4 0/4 1500 2000 299 2.8 0/21 1500 522 461 661 664 1500 522 601 522 601 1500 525 461 664 664 50 501 52 664 664 50 500 501 570 570 500 500 501 570 570 500 500 548 570 570 500 500 548 570 570 500 500 548 570 570	57 German Buna 15 737 14 750 528 15 750 622 16 750 622 17 1.4 0/4 Lexan 1100 2000 297 2.8 0/22 1700 2000 297 2.8 0/22 1900 2000 299 2.8 0/21 1900 2000 299 2.8 0/21 1750 601 299 2.8 0/21 191 1500 522 611 664 100 522 461 61 665 100 522 611 61 665 101 500 522 616 664 101 500 526 664 664 500 501 510 510 510 500 501 510 510 510 500 500 510 510 510 500 500 510 510 510 <td< td=""><td>Stradling (1971)</td><th>Polymide laminate</th><td>4500</td><td></td><td></td><td>L.4</td><td>1/3</td><td>1/0</td><td></td><td></td><td></td><td>COX.</td></td<>	Stradling (1971)	Polymide laminate	4500			L.4	1/3	1/0				COX.
67) German Buna 15 737 11 700 528 12 790 528 11 700 528 11 1.4 0/4 Laxan 100 200 297 2.8 0/22 (Polycarbonate) 200 297 2.8 0/22 Nylon 750 601 299 2.8 0/21 1500 522 203 2.99 2.8 0/21 1500 522 461 1.50 5.22 671 684 1500 522 461 7.1 7.1 7.1 7.1 1500 522 4.61 7.2 6.7 6.4 6.65 1500 522 4.61 7.2 6.64 6.65 6.64 6.65 107 50 5.0 5.0 5.0 5.0 5.0 5.0 1087 500 501 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 <	67) German Bura 15 737 1 50id Black 300 588 50id Black 300 588 1 750 588 1 1.4 0/4 Lexan 1100 2000 297 2.8 0/22 (Polycarbonate) 200 297 2.8 0/21 Nylon 750 601 299 2.8 0/21 1500 202 299 2.8 0/21 1500 522 461 664 664 1500 522 461 664 664 1500 52 461 664 664 100 100 50 50 50 50 100 50 50 50 50 50 1087 50 507 507 507 500 500 507 507 507 500 500 507 507 507 500 507 507 507 507 500 500<												
Id 750 622 Class Fabric 500 1.4 0/4 Lexan 1100 2000 297 2.8 0/22 (Polycarbonate) 290 2.97 2.8 0/22 Nyton 2000 297 2.8 0/21 S0 200 292 2.8 0/21 Nyton 750 601 222 222 S150 922 461 646 664 Nyton Sheet 5 50 500 500 S00 100 50 507 507 507 S00 500 507 507 507 507	Id 750 6.22 Class Fabric 500 1.4 0/4 Lexan 1100 2000 297 2.8 0/22 Nylon 750 601 293 2.8 0/21 Nylon 750 522 661 664 664 Nylon Sheet 5 522 677 684 664 1087 50 500 501 501 501 501 500 500 501 507 507 507 507 507 610 500 501 507 507 507 507 507 500 500 507 507 507 507 507 507 507 500 507 507	Gater(1967)	German Buna Solid Black	15 300	737 588								XOX
Glass Fabric 500 1.4 0/4 Lexan 1100 2000 297 2.8 0/22 (Polycarbonate) 200 299 2.8 0/21 Nylon 750 601 292 2.8 0/21 57 461 1500 5.22 461 664 1500 5.22 461 7.50 664 664 750 5.2 461 7.5 664 664 8 Nyton Sheet 5 5.6 664 664 500 100 500 548 570 507 507 1067 1067 500 507 507 507 507 507 1087 1087 507 507 507 507 507 507	Glass Fabric 500 1.4 0/4 Lexan 100 2000 297 2.8 0/22 (Polycarbonate) 2000 297 2.8 0/21 Nyion 750 601 292 2.8 0/21 S7 1500 522 461 750 661 S7 992 2.8 0/21 665 664 Myon Sheet 5 461 7 665 664 S0 100 507 665 664 664 S0 100 507 570 570 570 S0 507 507 507 507 507 S00 507 507 507 </td <td>Pippen and</td> <th></th> <td>750</td> <td>622</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>GOX</td>	Pippen and		750	622								GOX
Lexan 100 200 297 2.8 0/22 (Polycarbonate) 2000 299 2.8 0/21 Nylon 750 601 299 2.8 0/21 67) 1500 5.22 461 661 664 664 1500 5.2 441 1 665 None 664 570	Lexan 1/00 200 291 2.8 0/22 (Polycarbonate) 200 299 2.8 0/21 Nylon 750 601 299 2.8 0/21 67 661 522 461 677 684 8 Nylon 515 461 677 684 9 3750 492 892 864 664 100 100 50 570 570 570 1087 1087 500 570 571 571	Stradling	Glass Fabric	5000			1.4	0/4					GOX
Nyion 200 299 2.8 0/21 Nyion 750 601 522 522 1500 522 461 601 601 3750 461 601 601 601 3750 492 664 664 664 25 50 50 570 570 570 100 100 500 549 548 548 548 500 500 500 570 570 570 570 570 500 500 500 500 500 501 501 501 500 500 500 501 501 501 501 501 500 500 500 501 501 501 501	Nylon 200 29 2.8 0/21 Nylon 750 601 5.2 1500 5.2 Nylon 550 5.2 461 160 175 160 Nylon 510 52 664 </td <td>Jamison (1970) (1970)</td> <th>Lexan 1100 (Polycarbonate)</th> <td>2000</td> <td></td> <td>297</td> <td>2.8</td> <td>0/22</td> <td></td> <td></td> <td></td> <td></td> <td>COX</td>	Jamison (1970) (1970)	Lexan 1100 (Polycarbonate)	2000		297	2.8	0/22					COX
Nylon 750 601 1500 522 461 2625 461 3750 3750 492 664 50 664 664 50 50 570 500 500 570 500 500 570 500 500 548 500 500 548 500 500 548 500 500 507 500 507 507 507 507 507 507 507 507	Nylon 750 601 1500 5.2 461 2655 461 3750 3750 492 667 7 Mylan Sheet 5 665 5 5 664 50 50 570 50 50 570 50 50 570 500 500 570 500 507 507 500 507 507 500 507 507 500 507 507 500 507 507	.	Nylon	2000		562	2.8	12/0					COX
1500 522 2625 461 2625 461 3750 492 3750 492 Nylon Sheet 5 50 664 677 684 678 664 50 50 50 50 500 500 500 500 500 500 500 500 500 501 500 507 500 507 501 507	1500 5.22 2625 461 2625 461 3750 492 Nylon Sheet 5 677 684 677 684 50 50 50 50 50 50 50 50 50 50 50 50 50 500 500 570 500 570 500 570 500 570 500 507 507 507 507 507 507 507 507 507	Guter(1967)	Nylon	750	109								200
2525 401 3750 492 3750 492 664 664 50 50 50 510 50 548 50 548 50 548 50 548 50 548 50 548 50 548 50 548 50 548 501 548 502 548 548 548 548 548 548 548 548 548 548 548 548 548 548 548 548 548 549 548	2525 401 3750 492 3750 492 667 664 50 50 50 50 50 510 50 510 50 510 50 510 50 510 50 510 50 510 510 510			1500	522								COX
od Nylon Sheet 5 Kone 25 677 684 50 677 684 50 676 664 50 570 570 50 570 570 500 500 548 500 548 548 500 500 548 500 500 507 500 507 507 500 507 507 500 507 507	bd Nylon Sheet 5 665 None 25 65 664 664 664 50 50 664 664 664 50 100 570 570 570 50 1087 500 548 548 500 1087 494 494			3750	492								X 00 0 0
25 677 684 50 50 570 570 50 548 570 570 500 548 548 548 500 548 548 548 500 548 548 548 500 548 548 548 500 507 507 507 1087 494 494 494	25 677 684 50 50 517 684 50 510 570 570 500 548 548 548 500 507 507 507 1087 1087 494 494	Pippen and	Nylon Sheet	ŝ							665	eac N	XCC
50 664 664 50 570 570 50 548 548 500 507 507 500 507 507 1087 494	50 664 664 664 50 570 570 50 548 548 50 507 507 500 500 494 494	Stradling		25							677	684	XOD
50 570 570 570 570 570 570 570 570 570 5	50 570 570 100 548 548 500 507 507 500 507 507 1087 494 494	(1671)		50							664	664	XOC
548 548 548 548 548 548 548 548 548 548	548 548 548 548 548 548 548 548 548 548			50							570	570	COX
	507 507 507 507 507 507 507 507	-		001							548	548	GOX
	474 974	· · ,		1087							507	507	COX
											474	494	COX

ŝ.

ŗ,

McCuard(1972) Writen '6', 'Varian Sari, 'Varian Varian Varian 'Varian Varian Varian 'Varian Varian 'Varian 'Varian Varian 'Varian 'Varian 'Varian Varian 'Varian Varian Varian 'Varian Varian 'Varian Varian Varian 'Varian Varian Varian Varian 'Varian Varian Varian Varian Varian 'Varian Varian Varian Varian 'Varian Varian Varian Varian Varian Varian Varian Varian Varian	Thickness Point (in) (K)	Point (K)
Mylan (6) 200 575 1967) Perpex Block 750 552 and Shavinge 2625 457 2625 457 457 2625 457 457 2626 459 452 2626 459 452 2626 459 452 2350 457 5 2350 479 479 2350 479 5 2350 479 5 2350 479 5 2350 470 5 2350 471 5 2350 470 5 2350 470 5 2350 470 5 250 7100 5 250 7100 5 250 750 470 250 750 50 250 100 50 15% 670 50 250 100 50 16% 3350 50 10		COD
(967) Parpax Block 750 553 and Shavings 1200 493 2350 449 449 2350 449 449 2350 457.5 5 2350 457.5 5 2350 457.5 5 2351 500 569 2352 556 569 2350 457.5 5 2351 457.5 5 2352 500 569 155 556 569 155 556 500 155 550 500 155 500 500 155 500 414 155 500 414 156 500 414 1500 500 414 250		COX
11 Polynethylane 2623 464 3750 497 3750 497 3750 497 2350 493 2350 493 2350 493 2350 493 2350 493 2350 493 2350 493 2350 493 2350 493 2350 493 2350 493 2350 493 2350 494 2350 494 2350 494 2350 494 2350 498 451 1000 1354 618 1355 620 1900 618 1900 620 1900 620 1900 620 1900 414 265 414 265 414 265 414 265 414 265 414 265 414 265 414 265 414 265 414 265 414 265 414 <		XOD
I Polynethylane 2350 445 7350 449 449 7350 457 5 7350 457 5 7355 457 5 7355 457 5 7355 457 5 7355 457 5 756 503 55 7400 5 5 250 >609 5 7400 5 5 2510 55 5 2510 55 5 2510 55 5 2510 55 5 2510 55 5 2511 55 5 2511 55 5 2511 55 5 2511 55 5 2511 55 5 2511 55 5 2511 55 5 2501 5 5		XOD
2400 449 7350 449 7350 457 325 457 325 457 250 >699 250 >699 250 >699 250 >699 251 2350 252 2350 250 >699 251 2350 252 2350 253 2350 264 3350 264 3350 261 3375 262 444 263 500 264 3375 262 444 263 446 264 446 260 446 260 500 260 446 262 444 263 446 263 446 264 446 265 446 265 446 265 446 265 446 265 446 265 446		COX
750 457 5 325 457 5 325 457 5 325 457 5 325 457 5 250 740 5 250 740 5 250 740 5 250 740 5 250 740 5 250 740 5 254 70 618 355 619 58 356 618 355 40a 3350 618 15% 618 3350 15% 610 618 15% 700 618 1000 500 500 500 500 500 500 414 2000 418 2000 416 3000 416		XOD XOD
325 457.5 325 457.5 250 >699 250 >699 250 >699 250 >699 250 >699 251 50 30% Fiber 30% Fiber 30% Fiber 30% Fiber 30% Fiber 310 618 15% Graphite 3350 618 15% 50 100 50 100 50 4(1972) Folymide 3350 620 4(1972) Folymide 3350 620 4(1972) Folymide 3350 620 4(1972) Folymaide 3350 620 444 2605 490 1500 490 476 400 476		COX
250 > 740.5 250 > 699 T7% Flort- 2350 458 T7% Flort- 2350 458 20% Flort- 2350 458 20% Flort- 2350 458 20% Flort- 2350 458 20% Flort- 2350 618 25% Craphite 3350 618 15% Graphite 3350 620 160 200 200 200 200 474 2000 476 476		XOU
250 > 699 T7% Poly- ethytese aug Fiber- 158 20% Fiber- 2350 158 20% Fiber- 2350 158 20% Fiber- 2350 158 20% Polymide 3350 618 15% Graphite 3350 618 15% Graphite 3350 620 100 100 500 31 900 620 2000 508 2000 508 2000 508 2000 508 2000 414 2000 414		COX
77% Poly- arktytene 15% Graphite 15% Graphite 350 arktytene 100 art art <td></td> <td>COX</td>		COX
77% Poly- athylese 30% Fiber- 2350 glass 25% Graphite 15% Graphite 100 100 100 100 11 200 201 201 202 4(1)72) Polymide 3350 2000 41 2000 475 2000 475		
30% Fiber- 2350 458 20% Fiber- 2350 458 20% Fiber- 2350 458 25% Folymide 3350 618 15% Graphite 3350 618 15% Graphite 3350 620 1900 1000 620 41972) Folymide 3375 622 41972) Folymide 3375 622 1900 476 750 508 1900 476 750 508 2000 476 776 508		
4144 2350 458 15% Folymide 3350 618 15% Graphite 3350 618 15% Graphite 3350 620 15% Graphite 3350 620 1000 500 1000 500 1000 500 11 Polymide 3375 622 41(1)72) Polymide 3375 622 1900 A14 1500 478 2625 444 262 444 2605 478 2625 444		
15% Polymide 3350 618 15% Graphite 3350 618 pamer Polymide 350 500 1000 500 500 501 1000 500 11 Polymide 3375 620 14(1972) Polymide 3375 622 1967) Polytheme 750 508 1967) Polytheme 750 474 2625 444 476 2625 444 3000 476		COX
 def, Polymide 3350 618 15% Graphite 3350 618 15% Graphite 3350 500 500 1000 500 1000 400 1000 400 1000 400 476 3000 476 414 3000 476 		
15% Graphie 1 100 50 100 500 500 500 500 1000 501 1000 502 500 11 Polymide 3350 620 14 1972) Polymide 3375 1500 474 2605 444 2605 444 2000 476		XOD
up amer Polymide 3 50 500 500 500 1000 1000 1000 11 Polymide 3375 620 14(1972) Polychane 750 508 1500 475 208 414 2625 414 476 2625 414 476		
ui Polymide 3350 620 14(1972) Polymide 3375 622 1967) Polytheme 750 508 1500 478 2625 444 3000 476		XOD
1000 1000 101 3350 620 101 3375 622 119(1) Folythene 750 508 11967) Folythene 750 508 11967) Folythene 1500 478 2625 444 476 476 30000 476 476 476		X OS
kul kul kul kul kul kul kul kul		COX
al (1972) Polymidia 3375 4(1967) Polythene 750 2625 3000 2625		COX
11961) Folythme 750 2625 3000 2625		COX
15000		COX
3000		COX
		XOD
	•	
	and the second se	
	-	•

÷

.

•- --

NON-HALOGENATED PLASTICS cont.

;

~****

.

NON-HALOGENATED PLASTICS cont.

いいまたい、たいとうないたちます。

No. Contraction

ì

Reference	Materials	Test Pressure (psi)	Ignition Temp. (K)	Test Temp. (K)	Mechanical Impact Energy Reaction (kg m) Rate	Pneumatic Impact Reaction Rute	Specimen Thickness (11)	Flash Point (K)	Fire Point (E)	l- avironment
Marzani (1968a)	Polyvinylıden e Fluoride	2975	500							NOD .
Ξ	Polyurethane	2725	560							GON
F .	Poiyurethane Foam, Renti- culated	2650	491							GOX
:	Polyurethane Foam Renti- culatı d. Fire Retardant	2450	471							GOX
McQuaid (1972)	Polyurethane Foam, Renti- culated	2725	522							GOX
Marzani (1968a)	Polyurethane Foam. Fire Retardant	2450	471							COX
Gater(1967)	Polyvinyl Alcohol (with H ₃ PO ₄)	750 1500 3375	695 728 593							X X X 0 0 0 0 0 0
ی این کار ترکیم کار ترکیم کار ترکیم کار ترکیم	Polyvinyl Chloride (unplasticized)	15 750 1500 2625 3375	717 518 477 433 434							200 200 200 200 200 200 200 200 200 200
							-			
· · · · · · · · · · · · · · · · · · ·	۹ 						-			

:

:

The second secon

ę

1. Statistic of the second second

Genet(104) Roymony Cultures 541 141 541 141 541 141 Table 140 140 141 141 Table 140 140 141 141 Table 140 140 141 141 Table 1400 141 141 141 Table 1400 141 141 141 Table 1400 141 141 141 Table 141 1 141 141 141 Table 141 1 1<1 141 141 Table 141 1 1<1 141 141 Table 141 1 1<1 141 141 Table 141 1<1 1<1 141 141 Table 141 1<1 1<1 1<1 1<1 Table 141 1<1 1<1 1<1 1<1 1<1 Table 141 1 1 </th <th>Reference</th> <th>Materials</th> <th>Test Pressure (psi)</th> <th>Ignition Temp. (K)</th> <th>Test Temp. (K)</th> <th>Mechanical Impact Energy Reaction (kg m) Rate</th> <th>Pneumatic Inipact Reaction Rate</th> <th>Specimen Thickness (in)</th> <th>Flash Point (K)</th> <th>Fire Point (K)</th> <th>Environment</th>	Reference	Materials	Test Pressure (psi)	Ignition Temp. (K)	Test Temp. (K)	Mechanical Impact Energy Reaction (kg m) Rate	Pneumatic Inipact Reaction Rate	Specimen Thickness (in)	Flash Point (K)	Fire Point (K)	Environment
Tathol Tathol 700 564 Tarryin 2200 264 441 200 723 441 700 <t< td=""><td>Gater(1967)</td><td>Polyvinyl Chloi (plasticized)</td><td>ride 750 1500 3375</td><td>547 517 464</td><td></td><td></td><td></td><td></td><td></td><td></td><td>COX COX COX</td></t<>	Gater(1967)	Polyvinyl Chloi (plasticized)	ride 750 1500 3375	547 517 464							COX COX COX
Tantian Varget 200 27 2.8 2/38 Papers and Structure Conversion 200 27 2.8 2/38 Papers and Structure Conversion 200 277 1.11 0/42 Papers and Structure Varget SP-L1 5 7 1.11 0/42 Paper Structure Varget SP-L1 50 7 200 275 Paper Structure Varget SP-L1 50 7 1.11 0/42 Paper Structure Varget SP-L1 50 7 1.11 0/42 Paper Structure Varget SP-L1 50 50 50 50 Paper Structure Varget SP-L1	1	Tufnol	750 1500 2625	56 4 521 444							COX COX COX
Figure and (191) Vapal SP-1 5 None (191) 2 <	Jamison (1970)		2000 2000		297 297						COX
100 100 100 100 100 100 100 200 100 200 100 200 100 200 100 200 100 200 100 200 100 200 100 200 1000 200 <	Pippen and Stradling (:971)	Vespel SP-1	2.5 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5						None 722 722	None None None	20X 20X 20X
Verpal SP-21 5 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 500 50			50 100 1500 1500 2000						755 724 658 588 588 582	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	X X X X X X X X X X X X X X X X X X X
50 50 50 1000 1000 1500 1500 1500 1500	F	Vespel SP-21	5 25						569 784	None	X OD
100 100 1000 1000 1000 1000 1000 1000		Ţ	202						548 778	None 774	
1000 1000 1000 1000 1000 1000 1000 100		,	100						766	766 718	
Vergel SP-1 Total Vergel SP-1 Polymide 325 621 621		-	1000 1500 2000						660 620 627	660 620	X OD X OD
(1968) Polytimide 325 621	Marcani	Vespel SP-1	0007						609	605	COX
		Polyimide	2325	621							GOX
			. *								
			·								
•											
	- - - - -	·						٠			

ivist

S

Ş

SEALANTS, THREAD, COMPOUNDS, AND LUBRICANTS

. . .

.

、 うちちち こうち にほしたからる

e. V

resultidates

の一般のないのないのないのない

1

n S

ş

Reference	Materials	Test	Ingition	Test	Mechan	Mechanical Impact	Pneumatic	Specimen	Flash	Pire	Environment
		Pressure (psi)	Temp. (K)	Temp (K)	Energy (kg m)	Energy Reaction (kg m) Rate	Impact Reaction Rate	Thickness (10)	Point (K)	Point (K)	
Guter(1967)	Arrcraft Lu- bricating Oil DE 2472 B/O	15 300 756 1500 2625	582 513 498 483 475								200 200 200 200 200 200 200 200 200 200
Jamison(1970) Nihart and "mith(1914)	Jamison(1970) Andox C Oil Nibart and Aroclor 1254 Smith(1944)	3750 2000 2500	480 649 628	667	1.4	0/21					20X 20X 20X 20X 20X
.	Burnil Brand Microplates	2000 7500	5773 5775								GOX
2 -	Dixon's Flake Graphite No. 1	2000 7500	> 773 ~773								COX COX
Jamison(1970)) Dow Corning 33 Grease	2000		297	1.4	0/20					GOX
Pippen and Stradling (1971)	Drilube 822	5 50 50 100 1500 1500 2000							/21 648 668 561 576 525 511 473 473	None 677 608 561 561 516 511 511 893	X X X X X X X X X X X X X X X X X X X
Nilhart and Smith(1964)	Everlube No. 811	2000 7500	4 49 523								GOX GOX
Austin(1972)	Everlube No. 811	100 500 1500		8 8 8 8 8 8 8 8	01000	0/20 0/20 0/20		. 030 . 030 . 030 . 030			гох гох гох
· · · · · · · · · · · · · · · · · · ·	•	100 500		300 300	01	0/20		. 030 . 030			XOD
		1500		300	2 0	0/20		. 030			COX
•••	•.										

••.

A

こうしょう 御書 ちょうもう

Same and an end of the second

ŧ.

...

SEALANTS, THREAD, COMPUUNDS, AND LUBRICANTS cont.

Reference	Materials	Test	Ignition	Test	Mechanic	cal Impact	Pneumatíc	Specimen	Flash	1	Farrian
ł		Pressure	Temp.	Temp.	Energy	Energy Reaction	Impact	l'hickness	Point	Doint	
	-	(psi)	(K)	(K)	(kg m)	Rate	Reaction Rate	(in)	(K)	(x)	
Austin(1972)	Everlube	100		90	10	0/20		. 030			гох
	No. RII B-2	500		96	10	0/20		. 030			TOX
		1000		06	10	0/20		. 030			TOX
		1500		06	10	2/20		0 0 0 .			TOX
		1500		90	6	0/20		. 030			TOX
		1500		06	8.3	0/20		. 030			TOX
		100		300	10	0/20		. 030			COX
		500		300	10	c-/0		. 030			COX
		1000		300	10	0/20		. 030			COX
		1500		300	10	0/20		. 030			GOX
:	Everlabe	100		90	10	0/20		. 030			TOX
	No. 812	500		90	10	0/20		. 030			TOX
		1000		06	10	0/20		. 030			TOX
		1500		90	10	0/20		. 030			TOX
•		100		300	10	0/20		. 030			GOX
·		500		300	10	0/20		. 030			GOX
	-	1000		305	10	0720		. 030			GOX
,		1500		309	10	0/20		030			GOX
Nibrart and	Fluorinated	50				0					GOX
Smith(1964)	Pydrocarbon	100				20 %					COX
		500				50 %					GOX
, •		1000				66.6%					GOX
Austin(1972)	Fluorolube	100		06	10	0/20		. 630			XOT
	GR 290	500		06	10	0/20		. 030			TOX
		1000		90	10	0/20		. 030			ТОХ
		1500		06	10	0/20		. 030			TOX
		100		300	10	0/20		. 030			GOX
•		500		300	10	0/20		. 030			GOX
		1000		300	10	0/20		. 030			GOX
		1500		300	10	8/20		. 030			GOX
•,•		1500		300	6	5/20	•	. 030			GOX
		1500		300	8.3	0/20		. 030			GOX
		1500		300	7.6	0/20		. 030			GOX

۰.

ŧ į

よいにいいてき

بر الأيد الجار والمستعد المالية

1

1

1

•

ł

*****-:

بە ئۇرى

+

ŝ

<u>;</u>.

1.

, AND LUBRICANTS cont.
S, THREAD, COMPOUNDS,
THREAD,
SEALANTS,

Reference	Materials	Test	_	Test	Mechanic	Mechanical Impact	Pneumatic	Specimen	Fla-h	Fire	Euvironment
		Fressure (psi)	Temp. (K)	Temp. (K)	Energy (kg m)	Reaction Rate	Impact Reaction Rate	Thickness' (11)	Pennt (K)	Point (K)	
Austin(1972)	Halocarbon 4-11ES	100 500		06 06	01	0/20 0/20		. 030			TOX LOX
		1000		06	01 01	G/20		. 030			LOX
		100		300	01	0/20		. 030			COX COX
		500		300	10	0/20		.030			GOX
		1500		300	10	0/20		. 030			COX COX
11	Halocarbon	100		30	10	0/20		. 030			LOX
	10-25E	500		90	10	0/20		. 030			TOX
		1000		06	10	0/20		.030			ТОХ
		1500		06 001	01	0/20		. 030			LOX LOX
		100		005		07/0		. 050			602
		1000		300	2 2	0/20		. 030			GOX
		1500		300	10	12/20		. 030			GOX
		1500		300	8.3	2/20		. 030			GOX
		1500		300	7.6	07/0		. 030			GOX
		1500		300	7.0	0/20		. 030			GOX
:	Halocarbon	100		06	10	0/20		. 030			гох
	14 -25	500		06	10	0/20		. 030			LOX
		1000		06	10	0/20		. 030			ТОХ
		1500		06 06	0	0/20		. 030			TOX
				005	01	0/20		. 030			COX
		1000		300	2 2	0/20		030			
		1500		300	10	2/20		. 030			COX
		1500		300	6	0/20		. 030			GOX
		1500		300	8.3	0/20		030			GOX
F	Halocarbon	100		06	10	0/20		. 030			ТОХ
	14-25ES	500		06	10	0/20		. 030			TOX
		1000		- 3 0	õ	0/20		. 030			rox
		1500		. 9.	10	07/20		. 030			тох
		100		300	10	0/20		. 030			GOX
		500		300	01	0/20		030			GOX
		1500		905 500	2 9	0/20		. 030			COX COX
				0		01 = 10		000.			202

.

ł

ist

ţ;

).

;

			SEALANTS.		, COMPOU	NDS, AND	THREAD, COMPOUNDS, AND LUBRICANTS cont	ont			
. Reference	Materials	Trat	Ingition	Test	Mechanical Impact	al Impact	Pneumatic	Specimen	Flash	1°1 r.c	Environment
		Pressure (psi)	Temp. (K)	Temp. (%)	Energy ¹ (kg m)	Reaction Rate	Impact Reaction Rate	Thickness (in)	Point (K)	Point (K)	
Austin(1972)	Halocarbon	100		06	10	0/20		. 030			TOX
	11-14E	500		06	10	0/20		. 030			TOX
		1000		06	10	0/20		.030			TOX
		1500		06	10	0/20		.030			гох
		100		300	10	0770		. 030			хот
		500		300	10	0/20		. 030			GOX
		1000		300	10	07/0		030			GOX
		1500		300	10	0/20		. 030			GOX
=	Halocarton	001		06	10	0/20		. 030			rox
	11-21E	100		06	10	0/20		.030			TOX
		500		06	10	07/20		. 030			гох
		1500		06	10	0/20		. 030			гох
		001		300	10	0/20		. 030			GOX
		500		300	10	0/20		. 030			GOX
		1000		300	01	07:0		. 030			GOX
		1500		300	10	0/20		. 030			GOX
52	Halocarbon	100		06	10	0/20		. 030			тох
	11-21ES	500		06	10	0720		. 030			LOX
		1000		06	10	0/20		. 030			roy
		1500		60	10	u7/0		. 030			TOX
		100		300	10	07/0		. 030			GOX
		500		300	10	0/20		. 030			GOX
		1000		300	10	0/20		. 030			GOX
		1500		00£	10	0/20		. C30			GOX
1	Halocarbon	100		06	10	0/20		. 030			rox
	13-21ES	500		90	10	0/20		. 030			гох
		1000		90	10	0/20		. 030			TOX
		1500		06	10	0/20		. 030			гох
		100		300 3	10	0/20		. 030			GOX
×		500		300	10	0/20		. 030			GOX
		1000		300	10	0/20		. 030			GOX
•		1500		300	10	0/20		. 030			GOX
Mitaurt wad Semithellobel	Halocarbon Grease Series										
	25-10	2000, 7500	704								
	Halocarbon Oil										GOX
-	Series 15-21	2000, 7500	708								XUD

SUNIDAMOD SEALANTS. THREAD.

į

ţ

	Materiais Test Pressure	SEALANTS. Ignition Temp.	THREAD. Test Terap.	J	یہ بشا ا	AND LUBRICANTS cont act Pneumatic 51 on Impact [h	cont Specimen Thicknes :	Flash Point	Fire Point	Environment
Nihart and High Purity	ity 2000 2500			611 B 1						GOX
	0007		00	01	0/20		030			ΓΟΥ
LL XOIUT (7) AI MUNSHV	500		06	•	0/20		. 030			LOV
	1000	Ţ	06 7	01	0/20 0/20		. 030 030			LOY LOY
	100		300	2 9	0/20		.030			XOU XOU
	500 1000		300 300	0 0	0/20		. 030			x OU
	1500		300	io	0/20	:	050.			GOX
Jamison(1970) Invelco 33F Grease	16e 2000		294	01	0/20					GOX
Nihart and KEL-F Smith/1964) 90 Grease	2000 2500	708 708								COX GOX
_			06	10	0/20		030			XO,1
	500		06 06	10	n :/o		. 030			TOX
	1000		06	10	0/70		. 030			LOX
	1500		06 06	10	0/20		. 030			LOX LOX
	500		2005		02/0		050.			
	1000		300	0	07/0		. 030			XOD XOD
		:		01	02/0		050.			rux n
Pippen and Krytox 240 AC				· · · · ·				129	None	GOX
Stradling(1971) Grease	25				1			429	None	COX COX
	0.5				,			None	NON	
						-		1.87	721	
	500							375	775	XOD XOD
	0001							689	689	XOU
	1500							703	203	COX
	2000							689	689	COX
" Krytox 240 J.C	40 /.C									
Grease	5000		300	l.4	0/4	0/4				GOX
Jamisou(1970) Krytox 240 AC										
Grease	2000		297	1.4	0/20					GOX

× • •

Ì!

			SEALANTS,		COMPOUN	NDS. AND	THREAD, COMPOUNDS, AND LUBRICANTS COM	ont			
Reference	Materials	Test Prossure (psi)	Ignition Temp. (K)	Test Temp. (K)	Mechanica Energy F (kg m)	Mechanical Impa, t Energy Reaction (kg in) Rate	Pneumatic Impact Reaction P ite	Spreumen Thickness (in)	Flash Point (K)	Fire Point (F.)	Unversion
Nı! art and Smith(1964)	Linde Green Pipe Joint Compound	2000 7500	629 635								אסט
-	50-50 Soft Su lder	2000 2000	>773 >773								COX XCD
'srooks(1923)	Linsced Oil	0-3200	394								GUX
Pippen and Stradling (1971)	L9/3T Grease	5 0 5 0				-			641 671 685	Nore 674 685	X 0 0 0 0 0 0 0 0
		50 100 560							588 551 515 515	588 551 518 712	X X X X X X X X X X X X X X X X X X X
		1500							506 515	506 515	COX COX
Nihart and Smith(1964)	Mano Pipe and Joint Compound	2000 1 7500	633 695								COX
=	MolyKote Z	2000, 7500	550								COX
2	Oxweld Anti- Friction Com- Found No. 54	2000 7500	510 503								20X COX
=	Oxweld Anti- Friction Corn- pound No. 64	2000, 7500	683								ĊŎX
=	Oxylube No. 703	200U 7500	511 463								Ciox Ciox
=	Rectorsez] No. 15	2000 7500	647 628			¢					CiOX CiOX
Guter(1967)	Silicone D. C. Fluid 200 CSTICS 100	750 3750	561 474								XOS XOS

l X

:

Ť

بر •

ないまで

ŗ

.1

0⁷

5,5

+ : *

~ ~

A STATE OF COMPANY

Road Billion Barry

Reference Pippin and	Lingerials										
Pippin and		Test Pressurc (psi)	lgritun Temp. (K)	Tent Temp. (K)	Mechanical Impact Energy Reaction (kg m) 1 Rate	fechanical Impact Energy Reaction (kg m) ₁ Rate	Pneumatic Impact Reaction Rate	Speci men Thickness (n)	Flash Point (K)	Fore Point (K)	Eury roament
Stradlung (1971)	Burma-N Rubber	5000 1500 2000		300 300 300	0.34 0.34 0.34	0/4 0/4 0/:	0/4 2/4 4/4				NOD NOD
-	Butber Rubber	ی 50 500 100 1500 1500 1500							650 619 617 603 494 453 453 453 154	None 519 617 617 494 453 453 431	
Nihart and	Duroid 5600	7500	742								SC D
Senter (1904)	Duroid 5650	7500	725								COX
	Duroid 5870	1500	730								COX
	Duroid 5813	7500 2000	736 701					¢			COX
McQuaid (1972)	Sthylene Prop- ylene Rubber	2475	456.5								XOD D
Marsani (1968)	Ethylene Prop- ylene Rubber	2500	457								COX
T	Ebonite	750	455	-							COX
	-	1500	430								COX
•		3750	419								00X 00X
Jamison (1970)	Ethylene - Fropylene Rubber-EMS	-									
``````````````````````````````````````	388 (EPR)	2000		294	1.4	8/9					CON
Pippen and Stradling	Fluorosilicone Elastomer	2500 3000		300	4	6/0	•/0				COX
(1161)		3500		300		2/2	1/2				NOS NOS
		4000		300	1,4	2/0	1/2				X OU
		5000		300	l.4	0/8	4/4				× 20 00 00

Reference	Materials	Test Pressure (psi)	Ignition Temp. (K)	Test Temp. (K)	Mcchanical Impact Energy Reaction (kg m) Rate		Pheumatic Impact Reaction Rate	Specimen Phickness (in)	Flush Point (K)	l'are Point (K)	1
Schwinghamer (1971)	Fluorinated Silicone	50 500 1000			50% 50% 100%	5, rd ro re					00 00 00 00 00 00 00 00
Pippen and Stradling (1971)	Fluorosilicone L-449-6	5 56 50 1000 1000 1500 2000			· · · ·				0 4 0 2 4 0 4 4 0 4 4 0 4 4 0 4 4 0 4 0 3 4 0 0 0 3 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<ul> <li>5.5</li> <li>5.5</li> <li>5.44</li> <li>5.24</li> <li>4.65</li> <li>8.65</li> <li>8.65</li> </ul>	X X X X X X X X X X X X X X X X X X X
Cater (1967) "	Hycar Lining Tube I. C. I. Standard	750 1500 2625 3750 750 1500	643 646 433 433 598 598 598 598								00X 00X 00X 00X
	L.O. I Standard Rubber	2620 750 1500 2625 3750	400 400 400 403								
f Nihart and Smith (1964)	KEL-F 81 KEL-F Elas- tomer 3700 KEL-F Elas- tomer 5500	7500 7500 7500	701 610 620				1/1				20X 20X 20X
Guber (1967)	Natural Rubber Hose	750 1500 2625	584 451 406								COX COX COX

N

Materials         Test         Legition         Test         Mechanic         Spectment         Spectment<											
Noopress         Noopress           Displatingen)         2300         454           Displatingen)         2300         454           Neopress         1000         390         0,3           Above         300         300         0,3           Neopress         1000         300         0,3           Neopress         300         0,34         0/4           1500         330         0,34         0/4           1500         355         318         230           1500         559         316         233           1500         559         418         4/4           1500         559         418         4/4           1500         1000         0,34         0/4           1500         300         0,34         0/4           1500         300         0,34         0/4           1500         300         0,34         0/4           1500         300         0,34         0/4           1600         1000         1/2         0/4           1600         1000         1/2         0/4           1600         1/2         0/4	Reference	Materials	Test Pressure (psi)	lgnition Temp (K)	Test Temp. (K)	Mechanical Impact Energy! Reaction (kg m) / Rate	. ² neumatic Impact Reaction Rate	Specimen Thickness (in)	Flash Point (K)	Fire Point (K)	Envi ronment
Notyrense         100         30         0.34         0/4           4500         500         539         200         253           4500         539         500         539         253           5000         539         539         300         253           5255         518         300         539         253           750         538         318         255         318           750         538         318         255         318           750         538         318         265         318           750         538         318         265         318           750         538         318         265         318           750         538         318         265         318           750         538         300         0.34         0/4           750         500         300         0.34         0/4           750         500         300         0.34         0/4           750         500         300         0.34         0/4           750         500         300         0.34         0/4           750         448	McQuaid (1972)	Neoprene (Valve Diaphragm)	2300	454					Ì		
Necprese         579         0.01         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04         0.04		Neoprene	1000		001						COX
4500         530         533         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0.34         0		•	1500				0/4				GOX
Nocpress         500         30         0.34         0/4           Nocpress         730         538         513         0/4           Nocpress         3150         518         518         518         518           Noopress         3150         418         916         611         611           Noopress         2         5         5         6         611         611           Noopress         2         50         418         916         611         611           Noopress         2         5         6         6         6         6         6           Noopress         2         50         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6         6		-	4500		300		5/2 5/2				GOX
Necprese         750         579           Neoprese         3/50         478           Neoprese         3/50         478           Neoprese         3/50         478           Neoprese         5         55           265         59         50           265         50         50           265         50         50           260         200         50           260         200         50           260         200         200           260         200         200           260         200         200           260         200         200           260         200         200           260         200         200           260         300         0.34           260         300         0.44           260         468         200           260         474         200           260         468         200           260         468         200           260         468         474           260         468         474           260         468	-		5000		300		4/4				COX
1500         58           752         518           750         478           750         478           750         478           750         478           750         78           750         78           750         78           750         78           750         70           700         100           100         100           100         100           1500         500           500         500           500         500           500         500           500         500           500         500           500         500           500         500           500         500           500         500           500         500           500         500           500         500           500         500           500         500           500         500           500         500           500         500           500         500           500	Guter (1967)	Necprene	750	579							GOX
2625         518           Neopreas         5           25         5           26         50           20         50           50         50           50         50           50         50           50         50           50         100           100         100           110         100           110         100           110         100           110         100           1100         100           1100         100           1100         100           1100         100           1100         100           1100         100           1100         100           1100         114           1100         11/2           1100         11/2           1100         11/2           1100         11/2           1100         11/2           1100         11/2           1100         11/2           1100         11/2           1100         11/2           1100         11/2			1500	558							COX
Noprene         3/50         478           Noprene         5         5           55         55         5           50         50         600           50         500         500           500         1500         500           500         300         0.34         0/4           500         300         0.34         0/4           500         300         0.34         0/4           500         300         1/2         1           500         300         0.34         0/4           500         300         1/2         1           500         300         1/2         1           500         300         1/2         1           500         300         1/2         1           500         300         1/2         1           500         300         1/2         1           500         300         1/2         1           500         1/2         1         1           500         1/2         1         1           500         1/2         1         1           500			2625	518							COX
Neoprene         5           25         25           20         20           50         50           50         50           50         50           50         50           50         50           50         50           50         50           50         50           50         500           500         2000           500         2000           500         300           500         300           500         300           500         300           500         300           500         300           500         300           500         300           500         300           500         300           500         300           500         300           500         300           500         300           500         300           500         300           500         300           500         300           500         300           500         317 </td <td></td> <td>~</td> <td>3150</td> <td>478</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>COX</td>		~	3150	478							COX
25     26       50     50       50     50       500     100       1500     1500       1500     1500       1500     1500       1500     300       1500     300       1600     300       172     172       500     300       172     172       500     300       172     172       172     172       173     90       174     172       175     648       172     300       172     172       173     172       174     172       175     648       172     172       173     172       174     172       175     448       174     172       175     448       172     172       173     172       174     172       175     448       175     448       172     172       172     172       174     172       175     448       175     448       175     448       175     4	Pippen and	Neoprene	ý								20:00
50         50         50           1000         1000         500         500           1000         1000         1000         500           1000         1000         1000         1500           1000         1500         300         0.34         0/4           1500         300         0.34         0/4         466           172         2000         300         1/2         4/4           18et         1500         300         0/4         4/4           18et         1500         300         1/2         4/4           18et         1500         483         300         1/2           18et         1500         483         300         1/2           1806         1500         483         300         1/2           1806         483         3750         483         4/4           1500         483         3750         486         486           2550         3750         483         3750         418           2625         483         3750         418         468           2100         250         546         546         546	Stracling		25						119	None	Xru
50         50           100         100           100         100           100         100           100         100           100         100           100         100           100         100           100         100           100         200           200         300           200         300           200         300           200         300           200         300           200         300           200         1/2           200         300           1/2         200           200         1/2           200         1/2           200         1/2           200         1/2           200         1/2           200         1/2           300         1/2           300         1/2           260         46           3750         46           3750         46           265         46           265         46           265         46           265	(1261)		50						000	602	xor
If 0     10       500     500       1800     1800       1800     1800       1800     1800       2000     200       Sheet     500       2000     300       2000     300       2000     300       2000     300       2000     300       2000     300       2000     300       2000     300       2000     300       2000     300       2000     300       2000     300       2500     300       2500     300       2500     300       2500     300       2625     468       800     4/4       800     4/2       800     4/3       2625     483       2625     468       800     408       750     448       750     448       750     448       750     448       750     448       750     448       750     448       750     448       750     448       750     448       750     448			20						649 603	649 ros	x cox
500         500           1500         1500           1500         1500           1500         1500           2000         300           2000         300           2000         300           2000         300           2000         300           2000         300           2000         300           2000         300           2000         300           2500         300           300         1/2           2500         300           300         1/2           2500         300           300         1/2           2500         300           300         1/2           2500         4/4           1500         485           Block         1500           485         483           3750         483           2625         485           Shavinge         1500           3750         448           270         535           2625         465           Shavinge         1500           3750         448			100						105	200	COX
1500         1500         496           2000         2000         300         0.34         0/4           Sheet         1500         300         0.34         0/4           Sheet         1500         300         0.34         0/4           Sheet         1500         300         0/4         465           Sheet         1500         300         0/4         465           Sheet         1500         300         0/4         4/4           Sheet         150         448         1/2         1/2           Shock         150         443         1/2         4/4           Block         150         443         4/4         4/4           Shovinge         150         448         4/4         4/4           Shovinge         <		, -	000						496	496	× 000
Red Filer         2000         300         0.34         0/4         465           Sheet         1500         300         0.34         0/4         465           Sheet         1500         300         0.34         0/4         465           Sheet         1500         300         0.34         0/4         465           Red Vulcan-         15         648         1/2         1/2         1/2           Block         15         648         1/2         300         1/2         1/2           Stad Filer         750         545         300         1/2         1/2         1/2           Block         155         648         1/2         1/2         1/2         1/2           Stad Filer         750         483         1/2         1/2         1/2         1/2           Stad Filer         1500         4/8         4/4         1/2         1/2         1/2           Stad Filer         1500         4/8         1/2         1/2         1/2         1/2           Stad Filer         150         4/8         1/2         1/2         1/2         1/2           Stad Filer         150         4/6 <td< td=""><td></td><td></td><td>1500</td><td></td><td></td><td></td><td></td><td></td><td>496</td><td>496</td><td></td></td<>			1500						496	496	
Red Fiber         500         310         0.34         0/4           Sheet         1500         300         0/4         0/4           Sheet         1500         300         0/4         0/4           Z500         300         1/2         2         0/4           Z500         300         1/2         0/4         0/4           Z500         300         1/2         0/4         0/4           Red Vulcan-         15         648         1/2         1/2           Block         1500         485         483         4/4           Stock         15         625         485         546           Block         15         625         485         546           Shavinge         1500         486         462         546           Shavinge         1500         486         546         546           Shavinge         1500         418         556         442           Z1500         418         750         546         546           Shavinge         1500         418         750         546           Plaphragma         1500         410         70         70 </td <td></td> <td></td> <td>2000</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>460</td> <td>4 60</td> <td>XOD</td>			2000						460	4 60	XOD
Sheet     1500     500     0.34       Red Vulcan-     15     648     300       1zed Fiber     750     300     300       Block     15     648     300       Block     150     493     300       Shavings     15     648     485       Shavings     150     483     483       Shavings     15     625     483       Shavings     1500     493     462       Shavings     1500     483     462       Plaphragms     1500     448       Plaphragms     1500     448       Plaphragms     1500     448		Red Fiber	5000						465	465	COX
2500     500       2500     300       2500     300       2500     300       300     300       1sed Vulcan-     15       1sed Fiber     750       2625     483       3750     485       8ed Vulcan-     15       15     648       3750     485       8ed Vulcan-     15       1500     485       8raviage     1500       3750     483       746     483       8rubber     750       750     448       750     448       750     448       750     448       750     448       750     448       750     448       750     448       750     448		Sheet	1500		300						XOD
2500       2500       300         Red Vulcan-       15       648         ized Fiber       750       545         Block       1500       493         Z625       483       3750         Red Vulcan-       15       648         Shavings       1500       493         Shavings       15       625         Ired Fiber       750       483         Shavings       1500       483         Shavings       1500       448         Shavings       1500       448         Z625       442       462         Shavings       1500       448         Z625       442       462         Piaphragma       1500       448         Z625       452       462         S150       418       3750         S1500       418       503         S1500       410       418	~		2000		005	0/4					COX
3000     300     300       Red Vulcan-     15     648       ized Fiber     750     545       Block     1500     493       2625     483       3750     485       Red Vulcan-     15     625       Ired Fiber     750     483       Shavinge     1500     483       Shavinge     1500     483       Zolo     418       Fubber     750     418       Piaphragma     1500     448       3750     418       Rubber     750     418			2500		300	2/1					GOX
Red Vulcan-       15       648         ized Fiber       750       545         Block       1500       493         Z625       483       3750         Red Vulcan-       15       625         Ired Fiber       750       483         Shavinge       1500       483         Shavinge       150       483         Shavinge       1500       483         Diaphragma       1500       448         Piaphragma       1500       448	-		3000		300	4/4					COX
Ized Fiber         750         545           Block         1500         493           2625         483         2625           Red Vulcan-         15         625           Ired Fiber         750         483           Shavinge         1500         486           Shavinge         1500         483           Pavinge         1500         483           Diaphragma         1500         483           Pubber         750         418           Piaphragma         1500         448	Guter (1967)	Red Vulcan-	15	648							COX
Block         1500         493           2625         483           2625         483           2625         485           Red Vulcan-         15         625           ired Fiber         750         546           Shavinge         1500         483           Shavinge         1500         483           Shavinge         1500         483           Diaphragma         1500         448           Piaphragma         1500         448	,	ized Fiber	750	- 545							
2625 483 2750 485 3750 485 Ired Fiber 750 546 Shavinge 1500 483 2625 462 2625 462 3750 418 Fubber 750 418 Diaphragma 1500 448	1	Block	1500	493							
3750       485         Red Vulcan-       15       625         ired Fiber       750       546         Shavinge       1500       483         Shavinge       1500       483         Shavinge       1500       483         Shavinge       1500       483         Zbiaphragma       1500       418         Piaphragma       1500       448			2625	483							
Red Vulcan-         15         625           ired Fiber         750         546           Shavinge         1500         483           Shavinge         1500         483           Z625         462         462           3750         418         418           Fubber         750         448           Diaphragma         1500         448			3750	485							
ired Fiber 750 546 Shavinge 1500 483 2625 462 750 418 Fubber 750 418 Diaphragma 1500 448 3750 410	Cuter (1967)	<b>Red Vulcan-</b>	15	625							
Shavinge 1500 483 2625 462 2625 462 3750 418 Fubber 750 418 Diaphragma 1500 418 3750 418		ired Fiber	750	545							
2625 462 3750 418 Fubber 750 503 Diaphragma 1500 448 3750 410	•	Shavinge	1500	483							
3750 418 Fubber 750 503 Diaphragma 1500 448 3750 410	1		2625	462							
Fubber 750 503 Diaphragma 1500 448 3750 410	~		3750	418							
1500 448 3750 410		Rubber	750 '	EA3							
3750 410		Diaphragma	1500	448							COX
			3750	410		1					COX

COX

H

. . . . . .

					ELASTOMERS cont.	ERS cont.					
Reference	Materials	Test Pressure (psi)	lgnitton Temp. (K)	Test Temp. (K)	Mechanic Energy (kg m)	Mechanical Impact Energy Rvaction (kg m) Rate	Pheumatic Impact Reaction Rate	Specimen Thickness (in)	Flash Point (K)	Fire Point (K)	Er vi ronment
Nihart and Swith (1504)	Bulon A Rulon B Rulon C	7500 7500 7500	737 736 735								00X 20X 20X
Jamíson (1970)	Si Elastomer SE-342	2000		294	1,4	4/20					GOX
-	Si Elastomer	2000		262	1.4	5/9					GOX
Pippen and Stradling	Silícone Elastome r	1000 1500 2000		300 300 300	 4 + 4	0/4 1/2 8/4					X 00 2 0 0 2 0 0
(1) (1)	•	30C0 3500 4500 5000		300 300 300	0.34 0.34	0/4	0/4 4/4				X 00 2 00 2 00 2 00 2 00 2 00 2 00 2 00
	Silicone C -Ring	5 25 50 100 1000 1500 2000							N one 684 688 610 656 527 503 503	None 702 688 610 656 527 503 503	X X X X X X X X X X X X X X X X X X X
Jamison 10701	Silicone Rubber	2000		299	1.4	12/0					COX
(n) 41	Primer A-4094	2000		297	1.4	3/6					GOX
Schwinghamer (1971)	r Silicone	50 100 1100			•	50% 100% 100%					00X 00X 00X 00X
Jamison (1970)	Silicone 5537	20 100 2000		, 296. 5 299. 5 296. 5	2.8	0/21 3/9 7/16					00 X 00 X 00 X
Guter (1967)	Silicone Rubber	750-3750	59 <b>8</b>								GUX
				,							

.

;

...

. . . .

. .....

ł

					ELASTON	ELASTOMERS cont.					
Reference	Materials	Test Pressure (psi)	Ignition Temp. (K)	Test Temp. (K)	Mechanic Energy ⁽ F (kg m)	Mechanical Impact Energy (Reaction (kg m)   Rate	Pneumatic Impact Reaction Rate	Specimen Thickness (in)	Flash Point (K)	Fire Point (K)	Environment
Nihart and Smith (1964)	Teflon (virgin) Teflon (100 x)	7500 7500	740 688				1/1				GOX GOX
:	Viton A (virgin) Viton B (virgin)	7500 7500	578 593				2/2				COX GOX
Jamison (1970)	Viton V-EMS~338	2000		299	<b>I.</b> 4	0/20					GON
2	Viton A-HS-757A	2000		299	1.4	0/20					GON
2	Viten B	2000		200	1.4	0/21					CO.X
Pippen and Stradling (1971)	Viton Rubber	35C0 4000 5000		300 300	.34 .34	0/1 0/4	0/4 1/3				00 X X X X X X X X X X X X X X X X X X
•	Viton A	25 50 500 1000 1500 1500	,		~			٦	621 650 583 515 515 515	None 590 540 518 513 515	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
									and the second		

.....

; ;

÷

-27

r.

p#

۱

5 :...

おう とうしょう しょう しまいましょう とうています してきをまたる たまま たままた たままた たままた たままた しょう

Reference       Materials       Ters         j-mison(1970)       Armstrong A-2       2000         j-mison(1970)       Armstrong A-2       2000         Marzani       Asbestos       2000         Marzani       Asbestos       2000         Marzani       Asbestos       2000         I       Asbestos       2200         I       Asbestos       2000         I       Asbestos       2000         I       Carbon       2200         I       Carbon       2200         I       Carbon       2000         I       Carbon       200 <th>Test Fressure (psi) 2000 100</th> <th>Ignition Temp.</th> <th>Test Temp.</th> <th>Mechanical Impact</th> <th>-ul Impact</th> <th></th> <th></th> <th>Flash</th> <th>Fire</th> <th>Environment</th>	Test Fressure (psi) 2000 100	Ignition Temp.	Test Temp.	Mechanical Impact	-ul Impact			Flash	Fire	Environment
1970) Armatrong A-2 Activator A Asbeatos Asbeatos Cloth TFE Phenolic Resin Asbeatos Cloth Graphite, Phenolic Resin Phenolic Resin Carbon Graphite-Copper Carbon Graphite-Silver Carbon Graphite-Babbit Graphite-Babbit	000 100	(K)	(K)	Energy (kg m)	Energy Reaction (kg m) Rate	Preumatic Impact Reaction Rate	Specimen Thickness (in)	Point (K)	Poiní (K)	
Asbestos TFE, MOS2 Fhenolic Resin Asbestos Cloth TFE Phenolic Resin Asbestos Cloth Graphite, Phenolic Resin Carbon Graphite-Copper Carbon Graphite-Silver Carbon Graphite-Babbit Fpibond 70-1768			294 294	1.4 1.4	<b>€/</b> 20 0/22					COX COX
Asbestos Cloth TFE Phenolic Resin Asbestos Cloth Graphite, Phenolic Resin Graphite-Copper Carbon Graphite-Silver Carbon Graphite-Babbit Graphite-Babbit	2250	<b>44</b> 6. 5								COX
Asbestos Cloth Graphite, Phenolic Resin Graphite-Copper Graphite-Silver Carbon Graphite-Babbit Graphite-Babbit	2200	432.5								COX
Carbon Graphite-Copper 3 Carbon Graphite - Silver 3 Carbon Graphite-Babbit 3 Graphite-Babbit 3 10-1768	2200	430								COX
Carbon Craphite - Silver 3 Carbon Graphite-Babbit 3 d Epibond 70-1768	.275	607								COX
Carbon Graphite-Babbit 3 d Eptbond 70-1768	1200	588								COX
d Epibond 70-1768	3100	576.5								XOD
. 20	500 1000 1500 2000		300 300 300	1.4	4/4	0/4 1/2 1/3		-		20X 20X 20X 20X 20X 20X 20X 20X 20X 20X
Jamison(1970) Epibond 123 20 Hardmer 931 1	2000 100		297 297	1.4	5/9 0/21					COX COX
Pippen and '2T Epoxy 45 Stradling 50	<b>4</b> 500 5000		300	. 34	0/ <del>4</del> 1/3	0/4				COX COX
EA-40 Epoxy	3500 4000 4500		300 300			0/1 9/4 4/4				X X X 0 0 0 0 0 0
ti Laminated Glass-Filled Epoxy	2500	460								COX

١,

Ŧ

										Í	
Reference	Materials	Test Pressure	Ignition Temp.	Test Temp.	Mechanical Inipact Energy Reaction	ll Invoact eaction	Pneumatic Impact	Specimen 1 hickness	Flash Point	Fire Point	Environment
		(psi)	(K)	(K)	( kg mj ^l	Rate	Reaction Rate	(in)	(F.)	(K)	
Austin(1972)	Epoxy	15		06		20/20		0. 25			TOX
	Fiberglass	15		96		20/20					rox
		15		Š		20/20		0 05			rox
		15		06	3.46	20/20		0.05			TOX
		15		96	1.38	4/20		0. 05			LOX
		15		06 06	0.68	2/20		0.05			LOX LOX
		100		300		07/51		0.05			Š Š
		100		200	70.7	02/02		0.05			Š
		100		005	# - 4	2/20		0.05			
		100		300	27	0/20		0.05			
		100		300	3.46	0/20		0.05			X OS
		500		300		2/5		0. CS			GOX
	•	, 500		300		0/20		0.05			GOX
		1000		300		1/6		0.05			GOX
-		1500		300	4.17	1/1		0.05			COX
Guter(1967)		750	673								SUX CX
	Grade H22	C./51	<b>604</b>								COX
		3750	455								GOX
Marzani	G raphite	3800	724								GOX
Guten(1967)	Lamp Black	750	646								GOX
Temfore	r acheite.										
(01910)	Grade C	2000		294	1.4	0/20					GOX
	ET.V Viton	25							None	None	
Fuppen and	Cament.	20							201	201	
(1261)		50							617	617	XOD
•		100							632	632	COX
		500							574	574	COX
		1000							539	559	COX
		2000							516	516	XON XON
Jamis on	RTV	2000		297	1.4	4/4					GOX
(a261)		160	201,								200
uner[1907]		1500	474								
		3750	434								XOD
Jamison	Scot Weld										
(0261)	Structural	2000		2 62	1.4	2/19					GOX
z	Viton Cement				1.4						COX

Contraction of the local distribution of the

ì

• 1. -

i,

1944 - A

## APPENDIX II - NONMETALLIC MATERIALS DESIGN GUIDELINES AND TEST DATA HANDBOOK, APPENDIX E MATERIALS TEST DATA FOR APPLICATIONS IN HIGH PRESSURE OXYGEN AND OTHER HAZARDOUS FLUIDS, NASA, MSC-02681 (1972)

Tin the

APPENDIX E MATERIALS TEST DATA FOR APPLICATIONS IN HIGH PRESSURE OXYGEN AND OTHER HAZARDOUS FLUIDS • •

## E1.0 INTRODUCTION

41

3.

The test data presented in this appendix is from a computer generated report, NB/RT-71-45, dated February 1972. It is sorted by manufacturer's designation and presents thermal reaction data to materials tested in oxygen or other hazardous fluids. These tests were initiated as a result of the Apollo 13 investigation and were incorporated as Apollo Program Office requirements by addendum 2 of MSC-PA-D-67-13, Apollo Spacecraft Nonmetallic Materials Requirements.

The tests included in this report are:

- Pneumatic impact in gaseous oxygen
- Mechanical impact in gaseous oxygen
- The mogravimetric analysis
- Flash and fire point
- Reaction propagation in fluids other than oxygen
- Auto ignition
- Fluid impact in liquid oxygen and other fluids

E1-1

1			MAT CODE	19
		•		
·		PAGE (#)		Ling flammatio
				The second secon
				ulation tested.
۱.				k or form has been in follow
ā≱⊈		•	P POINT	the stoc better "N 99. "N" fol "N" fol
• • •		<u>ن</u> ي ي	NO OF REACT	the day and the day and the day the day the day where the day the day the day opening a determine the test.
		OF (DA1	ENER BNER	or assemb assemble red, entry se entance nog9, A propa test.
		ION AS		ponent, ponent, peterming t feed. F will I polyton. volumetric
		ESIGNAT	PRESS	osite, con delity perion acility perion and a termodia in point is point be en a pressure d pressure
riteration of the second s	VG KEY	MATERIAL TEST DATA BY MANUFACTURER'S DESIGNATION AS OF (DATE)	ENVR	stains the identification of the material, composite, component, or assembly and the stock or formulation number or othe unique manufacturer, formulator or producer of the material, component, assembly, etc., which has been tested. It is the particulter test shown. The material is component, assembly, etc., which has been tested and it is the particular test shown. The material was tested. The dash number suffix indicates that multiple tests been maker assigned to the test report by the facility performing the test. The dash number suffix indicates that multiple tests been maker assigned to the test report by the facility performing the test. The dash number suffix indicates that multiple tests been maker at latests we performed. ⁴
	ENCODING	NUFACT	1 MO.	the mate wm. rest reported in which per squi birential nu solat nu minated term per sample e sample mum term
N	E2 EN	LA BY MA	TEST RPT NO.	retains the identification of the material, commanufacturer, formulator or producer of the n all in the particular test shown. The number assigned to the test report by the forment (gaseous or liquid) in which the mat is in psia, which the material tests were performance of a material which the material tests were performance of a material degrees Fahrenheit ( $^{O}F$ ). It material degrees Fahrenheit ( $^{O}F$ ). It material degrees Fahrenheit ( $^{O}F$ ). For tests terminated before fire g theoretic ( $^{O}F$ ). For tests terminated before fire g themater of termination temperatures exceeding 1000 ^O fittere percent weight lost by the sample during the percent weight lost by the sample during the material which is the maximum temperature a
		EST DAI	SPEC. THICK.	the identi clurer, fo ber assig ber assig ber assig to assign to a
~		TERIAL T	SPEC THICI	
		, VM	51	
			MANUFACTURER	CMATION This columns is predimential the submer contrainer and the their report manual the their report manual the problem contains the manual termination is column site. This column site shows for the advant site.
			MANUI	UMULF ACTURER'S DESIGNATION INNULF ACTURER'S DESIGNATION DECOMMITMOCONER This column co DECOMMITMOCONER This column co TEST ERPORT MUMBER This column co TEST PRESSURE This column co TEST PRESSURE This column co TEST PRESSURE This column co DENER OF REACTUME This column co PRESCIPT FIRM FIGHT Column co INNUER OF REACTUME This column co PRESCIPT FIRM FIGHT Column co PRESCIPT FIRM FIGHT COLUMN CO PROPAGATION BISTANCE This column PRESCIPT ACTUMER to the column co PRESCIPT FIRM FIGHT LOSS THE COLUMN CO PROPAGATION BISTANCE This column co PERCENTACE WEIGHT LOSS THE COLUMN CO PERCENTACE WEIGHT COLUMN CO PERCENTACE WEIGHT CO PERCENTAC
			ATION	NAMUFACTURER'S DESIGNA MANUFACTURER'S DESIGNA PANUFACTURER This color SPECNAM TINCCRESS This TEST ERPORT MUMBER TI TEST ENVELORED This picture this TEST PRESSURE This color TEST PRESSURE This color TEST PRESSURE This color TEST PRESSURE This color EST FENDER OF REACTIONS T FILAGH POINT Flash point to MUMBER OF REACTIONS T FILAGH POINT Flash point to BURDER OF REACTIONS T FILAGH POINT Flash point to BURDER OF REACTIONS T FILAGH POINT Flash point to BURDER OF REACTIONS T FILAGH POINT FLASH POINT F FILAGH POINT F F FILAGH POINT F F F F F F F F F F F F F F
			MFUR'S DESIGNATION	0 000 00000 0 0 000
				E2-1

. ....

* * *

٤

• • • • , i

والمراجع المراجع والمراجع والمراجع المراجع المراجع المراجع

* * * *

120

;

. ;

و عدال الاريد المقط ومعلود والما الرحد و

- - -

54

1 N.

۰.

Monomeration       Monomeration       K       Case burst vertee or sealed container         A       No ignition source has been removed). (11/11)       L       Case external wait temperature exceeded 450°F.         B       Self-extinguishing (defined as, in the event of ignition, that the filame will go out within 3.0 inches of sample length after the ignition source has been removed). (10)       M       Matter transfer. Maternal sparked, source of matter using the will go out within 3.0 inches of sample length after the ignition source has been removed). (10)       N       N       No external effect (vented or sealed container)         C       Propagated partially, (flame propagated completely across       N       N       No external effect (vented or sealed container)         D       Propagated partially, (flame propagated completely across       Q       Emission of toxic gas or fumes (vented or sealed container).         D       Propagated completely across       Q       Emission of sparks or filames (vented or sealed container).         R       N       No external effect (vented or sealed container).       N         N       No external effect (vented or sealed container).       N       N         N       No external effect (vented or sealed container).       N       N         N       No external effect (vented or sealed container).       N       N         N       No external effect (vented or sealed container). <th>ontainer e exceeded 450°F.</th>	ontainer e exceeded 450°F.
No ignition (defined as no evidence of maxing ocen ignitied after ( ignition source has been removed). (11/1-1- Self-extinguishing (defined as, in the event of ignition, that the flame will go out within 3.0 inches of sample length after the ignition source has been removed). (10) Propagated partially, (flame propagated completely across sample). (5) Propagated completely. (Flame propagated completely across sample). (4)	e exceeded 450°F.
equition source has been removed	
Self-extinguishing (defined as, in the event of ignition, that the flame will go out within 3.0 inches of sample length after the ignition source has been removed). (10) Propagated partially, (Flame propagated completely across sample). (5) Propagated completely. (Flame propagated completely across sample). (4)	
ignition source has been removed). (10) Propagated partially, (Flame propagated completely across sample). (5) Propagated completely. (Flame propagated completely across sample). (4)	Matter transier. Material symmetry, sporter of antier transfer. (2)
Propagated partially, (Flame propagated completely across p sample). (5) Propagated completely. (Flame propagated completely across Q sample). (4)	sealed container)
samples. (3) Propagated completely. (Flam: propagated completely across sample). (4)	s (vented or sealed container).
Propagated completely. (Fiam- propagated completery across sample). (4)	(vented or sealed container
E lenitad exotosivety. (1) S Snoke, heav, and dark. (7)	
Light amore, visible (8) T Evidence of combustion (no rate	ate measured'
3	
H No evidence of fire; however, severe deformation of contrguration	Material burned at a high rate, too fast to measure, but mr' classified as an expission. (3)
testingmot to be Y	urning).
USED WENT SURPRE LEADANT	
1 Soot and/or draw ontertainer. (u)	
Test type code indicates type of t . performed. These codes and their definitions appear in the fortewing table.	
Cooke 1854 1 yes (1 ) years definition	
LS Fluid impact Test (LOX and other fluids)	
MATERIAL CODE Material code, a six-letter (t(ree pair) code capable of defining materials, components, subassemblies, etc. generically and functionally. The first pair of returns or these codes describes the functional applications for which the material is tested. The second pair of letters describes the basic chemical composition of the material and the third pair of hetters describes additionation, primarily of a chenical nature if available.	ly and functionally. The first pair of returns composition of the material and the third pair
DATE OF REPORT Date report is generated.	

Dates.

*

E2-2

The following information is a litting of material usage and generic identification found in the NB/PT-71-45 Test Data Listing. This code contains six letters (three groups of two each). The first group refers to the functional application of the material, while the second gives the chemical composition. The third group will give additional information, usually chemical information if available. Reference is made to all of this information as number sixteen of the key on pages E2-1 and E2-2.

4

523

17

1

AND NOT KANNED

in the second

	P4GE - Table	जन नन नन ननन नज नन नन ननन न न न न न न न
DES OF MATERIAL USAGE AND GENERIC IDENTIFICATION	PATERIAL CODES (CUPAT) Definition	ABSORGER, N.O.C. ADHES Y Y.N.O.C. ADHES Y Y.N.O.C. ADHES Y Y.O.D. TLM ADHES Y Y.O.D. TLM ADHES Y Y.O.D. TLM ADHES Y Y.O.D. YOL ADHES Y Y.O.D. YOL ADHES Y Y.O.D. YOL COATING CONFORMAL COATING CONFORMAL COATING FLUTION COATING FLUTION COATING FLUTION COATING FLUTION COATING INV.N.O.C. COATING FLUTION COATING FLUTION COATING FLUTION COATING FLUTION COATING FLUTION COATING FRIMER COATING FRIMER COATING FRIMER COATING FLUTION COATING FLUTION COATING FLUTION COMPOUND POTTING COMPOUND POTTING COMPOUND POTTING COMPOUND POTTING COMPOUND FRIMER COMPOUND FR
E2 CODES C	LISTING	ABSORBER ADHES, FILH ADHES, FILH ADHES, HOT HELT ADHES, HOT HELT ADHES, PRIMER ADHES, PRIMER BEARING MATL COATG, CONFORMAL COATG, CONFORMAL COATG, FRICTION COATG, FRICTION COMPOUND, GREASELIKE COMPOUND, OCC. FABRIC, COAT, IMPREG FABRIC, COAT, IMPREG FABRIC, COAT, FELT FABRIC, FELT FABRIC, FELT
	CODE	AAAAAAAAAAAAAAAAAAAAAAAA 日日日日 10 5 5 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5

э^{с 1}

:

با ویک ور مرمند المدین المحام ور الل در ا

• - ) )

á,Ť

į

And a second second

の言語の

:

• •

E2-4

AGE -Table PAGE

2

15

していていたのないでものでものできます。

÷

1

NASA MATERIAL CODES (CONAT) DEFINITION

LISTING

CODE

GASKETING OR SEAL, N.O.C. Gasketing or seal, rad! 5 frequency interference shield INSULATION, THERMAL, N.O.C. INSULATION, THERMAL, COMPOSITE LAYINATE, COTTON CLOTH BASE Laminate, glass fiber base FOAK,N.O.C. FOAM,FLEXIBLE CLUSED CELL FOAM,FLEXIBLE CPEM CELL FLUID, HALOCARBON, N.O.C. INSULATION, THERMAL, FILM FASTENER, N. U. C. FASTENER, NOCK AND PILE FLUID, PERFLUORD, N. D. C. LAMINATE,N.O.C. Laminate,Asbestos Hase FOAM, RIGID, CLOSED CELL FOAM, RIGID, OPEN CELL LAMINATE, MICA RASE FABRIC, DUCK WEAVE FABRIC, PEA WEAVE FILM, PHOTOGRAPHIC FINISH, N.O.C. FINISH, INORGANIC IMPREGANT.N.O.C. c FOAM, METALLIC FILM, DRAFTING FABRIC, WEBB' FLUID, N.O.C. LABEL.N.C.C. FILM, N.O.C. FILM, RUBBER FOOD.N.D.C. FLUX + PILE FOAM, RIGID, CLOS CELL FOAM, RIGID, OPEN CELL LAM, COTTON CL BASE Lam, CLASS FIBER BASE FOAN Foam,flex,clos gell Foam,flex,open gell NSUL, THERM, COMPOS NSUL, THERM, FILH OASKETING/SEAL Basketi'G/Sfal, Rfi Impregrant FABRIC, DUCK WEAVE FABRIC, OPEN WEAVE FILM.PHOTOGRAPHIC AM, ASBESTOS BASE FLUID, HALOCARBON INISH, INOGRANIC FLUID, PERFLUORO FABRIC, HEBBING FASTENER, HOOK FILM, DRAFTING FOAM, HETALLIC LAN, MICA BASE NSUL, THERN FILK, AUBBER FASTENER HSINIJ FLUID ABEL FILM FOOD FLUX X. 204 2 - J I いみ うおう 今日 ちゅじじじじじ しじじじじじじじじじじじじじ いいし オン・オイス 人口 じつじ しい リメ レド ハウ かり よう

a comparate and and a summer

and the second of the second

×,

р

.

ちょうている とうない ちゅうかい

R B A S E R B A S E L A H H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H A T H
TURAL TURAL LEATHER.M.TUFAL LEATHER.MTUFAL LUBRICANT.D3Y FILM LUBRICANT.D3Y FILM MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAT MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOUS.BAG MISCELLANEOU
TURAL LEATHER.MATURAL WITHETIC LEATHER.MATURAL FILM LUBRICANT.D3Y FILM LUBRICANT.D3Y FILM LUBRICANT.D1 MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG MISCELLANEOUS.PAG
YNTHETIC LEATFER, SYNTHETIC LUBRICANT, D3Y FILM LUBRICANT, D3Y FILM LUBRICANT, D1L LUBRICANT, D1L MISCELLANEOUS, AG MISCELLANEOUS, AG MISCELLANE, AG MISCELLANE
FILM LUBRICANT, D3Y FILM LUBRICANT, D3Y FILM LUBRICANT, D1L LUBRICANT, D1L LUBRICANT, D1L NISCELLANEOUS, MAC HISCELLANEOUS, MAC HISCELLANE
FILM LUGRICANT, D?Y FILM LUGRICANT, D.Y FILM LUGRICANT, DIL LUGRICANT, DIL MISCELLANEOUS, MAG MISCELLANEOUS, MAG MISCELLANEOUS, MAX MISCELLANEOUS, MAX MISCELLANEOUS, MAX MISCELLANEOUS, MAX PAPERANEOUS, MAX PAPERANE, PAR PAPERANE, PAR PAPERANEOUS, MAX PAPERANE, PAR PAPERANEOUS, PAR PAPERANEOUS, PAR PAPERANEOUS, PAR PAPERANEOUS, PAR PAPERANEOUS, PAR PAPERANE, PAR PAR PAPERANE, PAR PAR PAR PAR PAR PAR PAR PAR PAR PAR
SE LUGRIGANT, GKEASE LUGRIGANT, OIL HISCELLANEOUS, M. C. C. HISCELLANEOUS, BOTTLE HISCELLANEOUS, BOTTLE HISCELLANEOUS, BAT PAPER, N.O. C. PAPER, N.O. C. PAPER, N.O. C. PAPER, N.O. C. PLASTIC, MOLUI4G RESIN, N.O. C. PLASTIC, MOLUI4G RESIN, N.O. C. PLASTIC, MOLUI4G RESIN, N.O. C. ROD, N.O. C. ROD, N.O. C. ROD, N.O. C. ROD, PLASTIC ROD, N.O. C. ROD, PLASTIC ROD, N.O. C. ROD, PLASTIC ROD, N.O. C. ROD, PLASTIC ROD, N.O. C. ROD, RESIN RIL, PART SEALANT MATERIAL, I PART SEA
LE HISCELLANEOUS, M.C.C. HISCELLANEOUS, BOTTLE HISCELLANEOUS, BOTTLE HISCELLANEOUS, BAG HISCELLANEOUS, MAX PAPER, N.O.C. PAPER, N.O.C. PHARMACEUTICALS, M.O.C. PLASTIC, MOLUI4G RESIM, N.O.C. PLASTIC, MOLUI4G RESIM, N.O.C. PLASTIC, MOLUI4G RESIM, N.O.C. ROD, N.O.C. SHEET, RUBBER, N.O.C. SHEET, RUBBER N.O.C. SHEET, RUBBER N.O.C. SHEET, RUBBER N.O.C. SHEET, RUBBER SHEET,
LE HISCELLANEOUS, MC.C.C. HISCELLANEOUS, MAC HISCELLANEOUS, MAX HISCELLANEOUS, MAX PAPER, N.O.C. PAPER, N.O.C. PAPER, N.O.C. PHARMACEUTICALS, M.O.C. PLASTIC, N.O.C. PLASTIC, N.O.C. PLASTIC, N.O.C. PLASTIC, N.O.C. ROD, N.O.C. ROD, N.O.C. ROD, N.O.C. ROD, PLASTIC ROD, PLASTIC ROD, N.O.C. ROD, PLASTIC ROD,
LE MISCELLANEOUS, HAG MISCELLANEOUS, HAX MISCELLANEOUS, HAX PAPER, N. 0. C. PHARMACEUTICALS, M. 0. C. PLASTIC, M. 0. C. ROD, M. 0. C. ROD, PLASTIC ROD, PLASTIC
LE MISCELLANEOUS, EOTTLE MISCELLANEOUS, MAX MISCELLANEOUS, MAX PAPER, N. 0. C. Pharmaceuticals, M. 0. C. Pharmaceuticals, M. 0. C. Plastic, Moluige Resim, N. 0. C. Plastic, Moluige Resim, N. 0. C. Plastic, Moluige Resim, N. 0. C. Rod, M. 0. C. Rod, Plastic Rod, Material, 1 Part Rod, Material, 1 Part Rod, Material, 1 Part Sealant Material, 1 Part Sealant Material, 1 Part Stic Sheet, N. 0. C. Sheet, Rubber Stic Sheet, Rubber Stic Sheet, Rubber Solvent, N. 0. C. Tape, M. 0. C. Surf Solvent, N. 0. C.
TICALS MISCELLANEOUS, MAX PAPER.N.0.C. PHARMACEUTICALS, M.0.C. PLASTIC.N.0.C. PLASTIC.N.0.C. PLASTIC.N.0.C. PLASTIC.N.0.C. PLASTIC.N.0.C. PLASTIC.N.0.C. PLASTIC.N.0.C. PLASTIC.N.0.C. ROD.PLASTIC. ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.
TICALS PAPER.N.O.C. PAPER.N.O.C. PAPER.N.O.C. PLASTIC.N.O.C. PLASTIC.N.O.C. PLASTIC.N.O.C. PLASTIC.N.O.C. PLASTIC.N.O.C. PLASTIC.N.O.C. ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC ROD.PLASTIC RO
TICALS PHARMACEUTICALS, P.O.C. PLASTIC, N.O.C. PLASTIC, N.O.C. PLASTIC, N.O.C. PLASTIC, N.O.C. PLASTIC, N.O.C. ROD, N.O.C. ROD, N.O.C. ROD, PLASTIC ROD, PLASTIC ROD, PLASTIC ROD, PLASTIC ROD, PLASTIC ROD, PLASTIC RUBBER, N.O.C. RUBBER, N.O.C. SEALANT MATERIAL, I PART SEALANT MATERIAL, I PART SEALANT, NO.C. SURF TAPE, I PART, I PART SEAL, I PART SEAL, I PART SEAL, I PAR
TICALS PHARMACEUTICALS, P. 0.C. PLASTIC, N. 0.C. PLASTIC, N. 0.C. PLASTIC, N. 0.C. PLASTIC, N. 0.C. PLASTIC, N. 0.C. PLASTIC, N. 0.C. ROD, PLASTIC ROD, PLASTIC SAEET, RUBBER STIC SHEET, RUBBER SURF SOLVENT, N. 0.C. TAPE, N. 0.C. TAPE, N. 0.C. SURF TAPE, N. 0.C. TAPE, N. 0.C. PARTACFD SURFACFD ROD, PLASTIC SURF ROD, PLASTIC ROD, ROD, ROD, ROD, ROD, ROD, ROD, ROD,
OLD RESIN PLASTIC.N.O.C. DLD RESIN PLASTIC.NOLUTYG FESIN,N.O.C. IC ROD,PLASTIC ROD,PLASTIC RUBBER,N.O.C. FUBBER,N.O.C. FUBBER,N.O.C. FUBBER,N.O.C. FUBBER,N.O.C. ATL, PART SEALANT MATERIAL, I PART ATL,2 PART SEALANT MATERIAL, I PART SEALANT
OLD RESIN FLASTIC, MOLUING FESTMAN, U.C. IC ROD, PLASTIC ATL ROD, PLASTIC ATL ROD, PLASTIC ATL PART SEALANT MATERIAL, I PART ATL, I PART SEALANT MATERIAL, I PART ATL, I PART SEALANT MATERIAL, I PART ATL, I PART SEALANT MATERIAL, I PART SEALANT
IC ROD, PLASTIC ROD, PLASTIC RUBBER, N.O.C. ATL RUBBER, N.O.C. ATL PART SEALANT MATERIAL, I PART ATL, I PART SEALANT MATERIAL, I PART ATL, I PART SEALANT MATERIAL, I PART SEALANT MATERIAL, I PART SEALANT MATERIAL, THREAD SHEET, N.O.C. SHEET, RUBBER SHEET, RUBBER, N.O.C. SHEET, RUBBER, N.O.C. SURF SLEEVE, SOLDER, N.O.C. TAPE, N.O.C. TAPE, N.O.C.
IC ROD, PLASTIC ATL SEALANT MATERIAL (EXCLUDES GASKE ATL, PART SEALANT MATERIAL, I PART TL, 2 PART SEALANT MATERIAL, I PART ATL, THREAU SEALANT MATERIAL, THREAD STIC SHEET, N.O.C. SFIC SHEET, PLASTIC SER SLEEVE, SOLDER, N.O.C. SOLVENT, N.O.C. TAPE, M.O.C. TAPE, M.O.C.
ATL SEALANT MATEPIAL (EXCLUDES GASKE ATL, PART SEALANT MATEPIAL, 1 PART TL, 2 PART SEALANT MATERIAL, 1 PART ATL, THREAU SEALANT MATERIAL, 1 PART STIC SHEET, N.O.C. SFIC SHEET, N.O.C. SHEET, RUBBER SGR SHEET, RUBBER SOLVENT, N.O.C. TAPE, N.O.C. TAPE, N.O.C. TAPE, N.O.C.
ATL, PART SEALANT MATERIAL, PART TL, 2 PART SEALANT MATERIAL, 1 PART ATL, THREAU SEALANT MATERIAL, 1 PART STIC SHEET, N.O.C. SHEET, PLASTIC SHEET, RUBBER SDE SHEET, RUBBER SOL SHEET, RUBBER SOL SHEET, N.O.C. TAPE, N.O.C. TAPE, N.O.C.
ATL. THREAU SEALANT MATERIAL. THREA ATL. THREAU SEALANT MATERIAL. THREA STIC SHEET. PLASTIC Seret. Plastic Sere Sheet. Plastic Sheet. Rubber Sheet. Rubber Solvent. N. O. C. Tape. N. O. C. Tape. N. O. C.
ATL, THREAU SEALANT MATERIAL, THREA SHEET, N. 0. G. Sheet, Plastic Sheet, Rubber Sheet, Rubber Sheeve, Solder, N. 0. G. Solvent, N. 0. C. Tape, M. 0. C. Tape, Adhesive Surfaced
STIC SHEET.N.O.C. Sheet.Plastic See Sheet.Rubber Sheeve.Solder,N.O.C. Sleeve.Solder,N.O.C. Tape.N.O.C. Tape.Adhesive Surfaced
STIC SHEET, PLASTIC SEE SHEET, RUBBER LDER SLEEVE, SOLDER, N.O.C. SOLVENT, N.O.C. TAPE, M.O.C. TAPE, M.O.C.
SER SHEET,RUBBER LDER SLEEVE,SOLDER,N.O.C. Solvent,N.O.C. TAPE,N.O.C. TAPE,N.O.C.
LDER SLEEVE, SOLDER, N.O.C. Solvent, N.O.C. Tape, N.O.C. Tape, Adhesive Surface
SOL'ENT.N.O.C. TAPE.N.O.C. S'SURF TAPE.ADHESIVE SURFACF
TAPE,N.O.C. Hes surf tape, adhesive surfacf for the tape.
HES SURF TAPE, ADHESIVE SURFACF
ECIKICAL IAFE,ELECIK

÷

2 - - Jan an 180 -

CODE	LISTING	MATERIAL CODES (COPAT) Lefiaition	FAGE - Table
ちららはしてしてしる こうそうどう しゅうかか かかかかか いろう しょうし しょう しょう しょう しょう しょう しょう しょう しょう し	H HCHIFFEON ALLE E HLFISCHF ACHUCA COCOCOC	0 0 0 0 0 0 0 0 0 0 0 0 0 0	ଲେଲ୍ଲ୍ଲ୍ଲ୍ଲ୍ଲ୍ଲ୍ଲ୍ଲ୍ଲ୍ଲ୍ଲ୍ଲ୍ଲ୍ଲ୍ଲ୍ଲ୍ଲ୍ଲ
) X) X . (L. 16. 16.	LERING ZING M	OLDERING MATL. Razing Matl Eluing.n.o.c.	

E2-7

**1** 

ŝ

P&GE - 5 - 48LE				*
				: '
			•	-
(Cûral)				1 .
NASA HATERIAL CODES Definition	DETAIL DW85 M.O.C.		_	
NASA HA	SPECS USED ON			indexes of a subsection
() 2.	PROCESS SPECS		٠	and a second
CODE LISTING			•	<ul> <li>mecolulogicalment</li> </ul>
Ū	Ø X N X			

, ∳î

1

------

1

S. A. Maderia -

AGE - 6 Table

.

1

-

Such a second of a

4

an index

.

-

PAGE ACETAL, E.G., COPOLYMER (CELCOW), HOMOPOLYMER (DELRIN) HODIFIED (FOR USE IN COLUMNS 5 + 6) Polyinyl Chlorife, plastisol or organosol ACRYLIC, BUTYL METHACRYLATE Acrylic, Methyl Methacrylate, Cast /crylic, Methyl Methacrylate, Mulding Type CHLURINATED POLYFTHER (E., PEWTRON) ACRYLONITRILE-BUTADIENE-STYRENE AMINU,MELAMINE-FORMALDEMYDE(MF) SEE URETHANE, SPANDEX FOR CODF CELLULOSE AC¢TATE Cellulose Acetate-Butyrate NO CODE-TRAVE NAME DUPOMÍ Nu code-see urethamé. Nú code-!ee amino ALLYL,N.0.C. Allyl,Diallyl Phimalate Aminc,N.0.C. ANINO, UREA-FORMALDEHYDE URETHANE, MOISTURE CURED ZINC CHROMATE PIGMENTED CELLULOSE PF.OPIONATE CELLULOSE TRIACETATE NASA MATERIAL CODES (CONAT) CELLULOSE NITRATE CELEULOSIC, A.O.C. CODE-SEE AMIND ETHYL CELLULOSE ACRYLIC.N.O.C. ACRYLIC LATEX ALKYD.N.O.C. LATEX.N.O.C. EPOXY ESTER DEFIAITION SHELLAC 2 ACRYLIC, BUTYL METH. . ANINO. MELA-FORM(MF) , AMINO, UREA-FORM(UF) ZINC CHROMATE PIGHT CELLULOSE ACET-BUT CELLULOSE,ETHYL CELLULOSE,ETHYL CELLULOSE PROPION. CELLULOSE TRIACET. CHLORIN.POLYETHER JURETHANE, H20 CURED CELLULOSE ACETATE ACRYLIC, PMMA, MLDG ACRYLIC LATEX PVC.PLASTISOL ,EPOXY ESTER , ISOCYANATES , ACETAL. PON CELLULOSIC , ALLYL, DAP , MODIFIED , MELANINE , SHELLAC , ACRYLIC , SPANDEX , FREONS LIST'NG AHIND ,LATEX , ALKYP , ALLYL UREA. , ABS CODE Z 44444 ΗV 7 X 4 V JE N 2 ΗĶ X ¥ N 88 aw ▼. S.W 14 0 4 B 4 4 2 4

. ۱

· Jania and

ł

, . ,

ļ

śŤ,

ų.

٦

PAGE -Table

NN

NNNNN

20

NNNN

NASA MATEMIAL CUDES (COMAT) Defititon

LISTING

CODE

POLYCHLOROTRIFLUGADETNYLERE RESIN (E.G., KEL-F 81,82) EPOXY, CATALYTICALLY CURED (F.G., BF3-400 CURED) PERFLUCRO (ETHYLENE-PROPYLENE) COPOLYMER POLYPHENYLFME OXIDE,N.O.C. (E.G.,PPO) Polysulfone,N.O.C. Polyinyl fluoride (e.G., Tedlar) CHLOROTRIFLUOVOETPYLENE, N. J. C. Polychlopotrifluovoethyle, E, Fillej EVA (ETHYLENE-VINYL ACETATE),N.0.C PMENOLIC(PF)(PHENOL-FORMALDEHYDE) POLYETHYLENE TERPHTHALATE(PETP) CONOMER, N.O.C. (E.G., SURLYN A) EPOXY, HOVOLAK EPOXY, POLYAMIDF CUREP EPOXY, PROPRIETARY OR UNKNUWN HYLON, 6,6 TYPE Nylon,Soluble Nylon,Aromatic (e.g.,Momex) POLYOLEFIN, POLYPROPYLENE POLYOLEFIN, FULYETHYLENE EPOXY,N.O.C. EPOXY,AMINE CURED EPOXY,ANHYDRIDE CURED ARBONATE, N.O.C. CHLOROFLUORU, N.O.C. POLYBUTYLENE,N.O.C. POLILIAI JERIN.0.C. POLYINIDE.N.O.C. POLYOLEFIN, N.D.C PARYLENE.N.O.C. PLASTICS.N.O.C. SILICONE, N.O.C. F1 UORO, N. 0.C. NYLON, N.O.C. FURAN.N.O.C à . EPOXY, ANHTU, CUKED . EPOXY, CATALYT. CURED .EPOXY, NOVOLAK , EPUXY, POLYAM, CURED , EPOXY, PROPRI, OR UNK EVA (ETH-VINYLACET) EPOXY, AMINE CUREL POLYCARBONATE (PC) PE TEREPHTHALATE POLYPHENYL.OXIDE . "ARYLENE, N.O.C. .NYLON (6.6) .NYLON.SOLUBLE .NYLON.ARDMATIC POLYOLEFIN, PP PHENOLIC (PF) ,POLYOLEFIN ,POLYOLEFIN,PE CHLOROFLUORO **POLYBUTYLENE** , CTFE, FILLED POL YSULFONE CTFE RESIN **, POL YESTHER** , POLYIMIDE PLASTICS SILICONE . JONOMER ,FLUORD . NYLON , EPOXY . FURAN , CTFE , FEP PVF ນ ເຊ 96 08 80 87 101 BC 8 X 38 A C 80 80 80 E. H B 8 ž 9.0 B A Xa **8**≺ 87 2 55 **T** 3 В 5

~~~~~

NNN

00000

0 0

١

.....

-----

ちょうし ひょうかいがい

「「二」「二」「二」「二」「二」「二」」」

and the second second second

k

E2-10

n AGE --TAGLE

FAGE

VASA MATERIAL CODES (CULAT)

DEFIWITION

LISTING

CODE

\$j

とお話をしてたたいちょうとう

F. 7

1

TETRAFLUORDETHYLENIC.A.D.C. Tfesfte resin (t.g.,Teflo, Tfeshalon Tfesthiokol Tfe Tfesfte filled (e.g.,Rulan,fluðrogreen) Uretmanesn.g.C. (see also pupper and coatings lists) FLUORGELASTÜMER, N.G. (E.º., FLUUREL) Virylide flugaide and Hexafludurpropylene cupulymen Fluorusilicune rubrer (FSI), .U.C.(E.G., Silastic LS) CHLUROSULFONATED PULYETHYLENE, C.C. (E.G., HYPALON) ETHYLENE PROPYLENE RUBBER(EPI ... EPM.EPR). N.C.C. RUPHER, FILLED (SHE ALS" FLUOROSILICONE.) VULCANIZING VULCAMIZING RU PET, FAGI TEAPTINE RUALEN, FORN TEMPINATURE CHLOROFLUORU ELASTOMER, N. C. C. CHLOROPRENE, 0. C. C. CHLOROPRENE, 0. C. (NEDPRF.E) POLYISOBUTYLENE AURBERIN ...... SYNTHETIC ISOPREME HUBBER POLYSULFIDE RUBBER, MILLED POLYSULFIDE RUBBER, LIGUIC URETHANE, RESINOUS, L. O.C. NATURAL ISOPPENE RUBBER VINYL, POLYVIAYL ACETATE BUTADIENE RUHBER,4.0.C. VINYL, POLYVIAYL ALCHOL RUSBER,: .U.C. ACRYLIC RUBBER, N.O.C. STYRENE-ACRYLONIT?ILE NITRILE RUREER.N.O.C. BUTYL RUBBER.N.O.C. POLYSULFIDE, N.O.C. SILICONE, RESIAUUS URETHANE, SPA. DEX NECLAINE" RUPBER VINYL, N. U.C. (E.G. KYIAR) SILICUNE SILICUNE SILICONE SILICANE FLUDROSILICONE HUG. . MITHILE RURBER (CHK) SILIC.RUB, ILLED Silic.Rub, TV 1Pakt SILIC.RUB.ATV 2PART POLYISOBUTYLENE KUF STYRENE-ACRYLOWITR CHLUROPREN = (CR) , CHLUROSULF .PE(CSM) , POLYSULFIDE, FILLED POLYSULFIDE . LIQUID , CHLOROFLUDRO ELAST SILICONE, RESINCUS , URETHANE, RESINCUS , ISOPRENE(SYN), IK , ISOPRENE (NAT) , MI . URETHANE, SPANDEX RECLAIMED PUEBER ,FLUUPOELAST FPM FILLED TFE, PTFE RESIN ACRYLIC RUBBER ET4-PR0P.RU9. , BUTAPIENE(HR) . POLYSULFIDE **FLUOROELAST** VINYL, PVAC SUTYL(IIR) VINYL, PVAL , SILIC. RUB , URE THANE JYNIV. , TFE , VF2 00 30 5 S 25 č CΥ 36 ÐC Ha 20 aQ N C N 5 3 22 Z Sa 5 500

E2-11

ł

đ

A 1

1

ì

: •

;

;

ţ

o

PAGE -Table

. . .

52

5

Ł

÷

) ] ]

. معرف معرف

-٠, 2

a statute to

-

NAME AND ADDRESS OF NON NON O

MASA MATERIAL CUDES (CUPAT) PEFINITION LIJI 3 CODE

URETHAME RUBBER,LIDUID,AMINE CURE Urethame Rubber,Liduid,Catalytically Cured U.ethame Rufber,Liduid,Polyul Cure ETHYLENE-GLYOL 35 PCT.WATEP 65 PCT.N.O.C. Heat transfer,N.O.C. Processing,N.O.C. Profylene glycul-water,N.U.C. Diester,N.O.C. PLUS SOAP Vegitable oil hase (e.g.,castop),n.d.c. METALLIC BASE,N.O.C. Molyrdenum disulfide base,N.O.C. METHYL ETHYL KETONE, (MEK), N.O.C. MIXED LACOUER THINNER, N. D. C. FLUOROCARBON TELOMER, N.O.C. MIXED PAINT THINNER, N.O.C. CHLOROPHENYLPHENOL, N.O.C. RUBBER TRICHLOPOETHYLENE, N.O.C. HYDROCARBON HASE, 4.0.C. UPETHANE RURPER, .0.C. URETLANE RUBBER, FILLED DIESTER, PHOSPHATE TYPE FLUOROSILICONLAN.0.C. GRAPHITE BASE N. 0.C. BENZOIC ACIL, N.O.C. METHANOL Methylene chlop1fe STYRENE-BUTADIENE BENZEDRINE, N.O.C. SOAP BASE, N.O.C. TOLUENE, N.O.C. ASPIRIN, N.O.C. XYLENE, N.O.C. FLUORESCETN ACETONE URETH.RUB,LIO CATAL, URETH.RUB,LIO POLYO URETH.RUB, LIO AMINE, URETH.RUB, LIO CATAL ET-GLYCOL-H20 35-36 Heat transfer MIXED PAINT THINNER METHYL ETHYL KETONE FLUOROCARB. TELOMER "MIXED LACO THIRNER STY-BUTADI.RUB, S9R PROCESSING HOLYDISULFIDE BASE BASE METHYLENE CH. JAIDE , CHLOROPHENYLPHENOL , TRICHLOROETHYLENE **, URETH.RUB, MILLED** PLESTER, PHOSPATE HYDROCARBON BASE FLUORGSILICONE , GRAPHITE BASE VEGETABLE UIL BENZOIC ACID METAL BASE, , FLUORESCEIN , BENZEDRINE SOAP BASE URE TH. RUB , METHANOL ACETONE , DIESTER , TOLUENE . ASPIRIN XYLENE +SOAP EU ж ۸u 3 XD 20 - E E E E E E S E S Ě EX ц Ш 2 **4** 5 1 **8** 5 5

Prior to using this code in assigning a NASA MATERIAL CODE, refer to Page E2-16.

6. . . . A

1×11 15.

بيني. دين

E2-12

MASA MATERIAL CODES (COMAT) Definition

LISTILG

CODE

H 1

77

....

ł

SODIUM URTHOPHENYLPHENUL, ......... LITHIUM HYUROXIDE N. 6.C. FILLER, N. 0.C. FILLER, INORGAMIC, V.O.C. FILLER, METAL, N.O.C. Filler, Urganic, N.O.C. HYDROCARBON, 1. . 0.C. GLASS FIBERANO.C. PENICILLIN, N.O.U. ALUMINIZED, .. 0.C. PLUS BINDER, N.O.C METALLIZED,N.0.C. PROPYLENE GLYCOL ALUMINUM.N.C.C. ASBESTOS, N. U. C. FINISH, FRICTION GRAPHITE.N.O.C. CADMIUM.A.O.C. FIWISH, N.O.C. LUTION, N.O.C. CARBON, N.O.C. COTTON.N.O.C. FILLED, N.O.C. METAL, N. U.C. F18ER.N.0.C. PILL, N. O. C. FIBEN, GLASS CORK, N.U.C. I SGPECPANOL DYE.K.O.C. GALVANIZE GERAICIDE CHANCIS AN ORTHOPHENYLPHENUL LITHIUM HYPROXIDE PROPYLENE GLYCOL FILLER, INOPGANIC FINISH, FRICTION FILLER, METAL FILLER, ORGANIC GLASS FIBER FIBER, GLASS , HYDROCARBON . ISOPROPANOL PENICILLIN . .LUMINIZED . PETAL IZED **GALVANIZE GERMICIDE** ALUMINUM ASBESTOS . GRAPHITE ,+BINDER CHANO IS , CADHIUP ,LOTIGN , CARBON COTTON FILLED. **FILLER** HSINI7. , FIBER ;HETAL , CORK , DYE , PILL ¥ F 2 Z J 50 2 E 2 × 57 67 67 C B 00 GŨ ن سر Ë Ľ 5 ۲ ۲ 9 L9 99 99 G.J 19 \* . .

PAGE -Taule

10

\* Prior to using this code in assigning a NASA WATEMIAL COTE, refer to Page E2-16.

HETALLIZED, AL

ЭK

¢

HETALLIZED HITH ALUMINUM, .. U.C. NOT ALUMINIZED

;

: . . .

• : •

and the second se

į

;

;

E2-13

HASA MATERIAL CODES (COLAT) DEFISITION

LISTIC

GGDE

| CME FART<br>Papef<br>Polyflenij,*.,'.C.<br>Rayuf<br>Silicate | SILVER<br>TREATED<br>The Part<br>Unknown, C.C.<br>Uiknown, C.C.<br>Vulcanized fiber         | 2 N<br>1 N<br>2 N<br>2 N<br>2 N<br>2 N                                         |                                                                                | ECTA GLASS LIBER , FOU<br>HONEYCOME-LIKE STRUCTURE<br>COPPER, NUC<br>CERAMIC, MOC<br>RESURCINOL<br>FORMALDEHYDE, NUC<br>FORMALDEHYDE, LARCE SCALE<br>CLATED<br>EXPERIMENTAL |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .1PART<br>.PAPEP<br>.POLYELEND<br>.PAYOF<br>.SILICATL        |                                                                                             | コンド こうしょう                                                                      | PBI<br>FICA<br>FFUOE<br>FSOPRENE<br>MONEL<br>MONEL<br>STLICA<br>FIRED<br>FIRED |                                                                                                                                                                             |
| 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9                        | •<br>•<br>•<br>•<br>•<br>•<br>•<br>•<br>•<br>•<br>•<br>•<br>•<br>•<br>•<br>•<br>•<br>•<br>• | а<br>1 н с<br>9 | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1                                          | +<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+<br>+                                                                                      |

\* Prior to using this code in assigning a NASA MATERIAL CODE, refer to Page E2-16.

. 4

. . -

į. ۲

2 .

i

きょうちょうちょ こちきょう

ap Jaw

A Part and the set

ź

;

:

٢

;

.

and the state of the second and the second second and the second se

÷

11 PAGE -Table

ç

7

ľ.

4

<u>بر</u>

Ŋ

E.

• • •

C

いい あたいたい いいいたいまたいい

₹.

| ASA PITEPIL CODE (UCAAI) | FLE ITIC |
|--------------------------|----------|
|                          | LISTI: 6 |
|                          | CJDE     |

and the former of the second second

| n H            | , PUTTED             | PUTTes                  |
|----------------|----------------------|-------------------------|
| ۲۲             | , SEALED             | SEALEU                  |
| I.I.           | , VENTER             | VE TEJ                  |
| НX             | , JCK-UP             | r JCK-UP JR JUMPY       |
| ΥH             | RALIJACTIVE HATL     | RAPICACTIVE NATERIAL    |
| ΗZ             | , rYLUr 6            | LEPH-LACTA' TYPE VYLPW  |
| A I            |                      | 6LASS, MOC              |
| 9,<br><b>1</b> | CARBURANESILUXAME    | SIL                     |
| U<br>I         | POLYGULARXALINE RESI | PJEY, UT 'CKALIVE 321 \ |
| <b>1</b> F     | , SILICA GEL         | SILLUA GEL              |
| ××             |                      | PL CLASSIFICATION       |
| )<br>)         | SEE RENARKS          |                         |

E2-15



- - ----- **.** . . ÷ - - <u>í</u>...

:

and the second sec

÷.

. <u>\_\_</u>:

~~~~~~~~~~~

12

P46E -T48LE

- --

NASA MATERIAL COBES (CUMAT) Defi itto~

CODE LISTING

7

PAGE - 13 Table In order to facilitate the assignment of NASA MATERIAL CODES for metals as required for TEST CATEGORIES 'D' and 'J,' used in identifying TEST CATEGORY 'D' and 'J' metals. The 2nd pair of the NASA MATERIAL CODE will identify the base a special code table, "MATERIAL CODES FOR METALS," has been prepared and is tabulated below. Those codes identified on the previous pages by an asterisk (*) have been assigned a new code beginning with the letter 'M' which shall be metal and the 3rd pair will identify the primary alloying element.

* MATERIAL CODES FOR METALS *

N L D L C	О 2005 2005 2015 2015 2015 2015 2015 2015		T
NTINU NTINU NGPER NGAN	ULAROM ULAROM CARBON PLATINU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MACYADNU MAC	, NICKEL , COBALT , LEAU , Mercury , Silver , Tin	, TITANIUM , COLD , Vanafium , Tumgstem , 9ekyllium
ve ua c IXIII	エッウメ 』 エ エ エ エ エ エ エ エ	X T I I I I I N O C O K N	

ť

ġ

NNNNNN

AL AL AL AL

n)

<u></u>} -, 14 17 

<u>..</u>.,

. 7. ..

.

MASA RATERIAL CODES (COMAT) CEFIMITION COVE LISTING

1

PAGE -Table

2

ZH

, ZINC

ZIrC

ġ

.

and the second second

ومغارب المستعادين المجلوعة والمراجع

. !

**مبي** ۲

્રેલ

л¹,

MATERIAL TEST DATA FY MANUFACTUREP S DESIGNATION AS DE 31 JE 75

MEGR S DESIGNATION	MANUFACTURER	SPEC.	TEST RPT NO.	TESI	TFST	TEST	1 dral	40 0 M	۰۰٫۲۰ ا	u. a	10 N'30	с С	11.11	1. 1.
		THICK.		FNVR	PRF SS	1Eho	FriER	REACT	₽(+ ^ T	- La	PTST L055	1	C () 'r	ŗ
			10-83-17	CO X	1000.0				0 <b>60</b> W	oroly		4	ŝ	
			X-01/97E1-69	60 X	1000.0	707						~	5	
CRES		.0750	70-2035	60 X	1500.0		50	00/UQ						XXOMIC
	NR DOWNEY	• 0750	72-2035-1	GOX	1500.0			t0/00						DTHDXX
	GAC		71-2319	A-50	570°0	462								X X GHHO
A-286 SIFEL A-287 STFEL	GAC		71-2319-1	A-50	201.0	487						-	15 DM	DMMDXX
			2-6162-11	04-4	0.611	115								DMMDXX
	GAC			<b>∆</b> -5C	10	5 (19								NAMDX X
	GAC	.0750	70-2106	ŝ	4500.0			00/04						NMM I XX
A-236+IRDN BASE ALLOY		• 6750	70-2106-1	çõx	2000.0		50	00/07				4	11 Diff	XX1 MFIQ
	CORMING		7i-2670	60X	1500.0			C1/02						AECKGS
AUMESTVE 281	CORNING		71-2670-1	×09	1000.0				15	515			13 AE	CKGS
	DOW CHRNING CORP.		71-24,70-2	60X	1500.0		50	40/00						AECKGS
AG COATED CU HIRE	GAC		71-2704	A-50	783.0	523						L L	_	FLMCMR
3			71-2704-1	A-50	0.117.0	516								ELNCWR
AUC-3-126			71-2378	X C S	500.0		50	00/04						DICKXX
AGC-3-126			71-2378-1	60 X	500.0			01/04						DVCAXX
AGC-3-126			71-2378-2	60X	250.0			00/04				4 7		DVCKXX
ACC-3-176			71-2378-3	GOX	100.0				530	534				DVCKXX
AGC-3-54-6 SILICONE			71-2412	50 X	250.0			00/00					_	DVCKXX
	AGC ANC.		71-2412-1	XQ5	75°C				544	544				DVCKXX
ALLOY 52			71-2589	60X	1500.0			0/04						EXELEN
			71-2690	Š	15.0.0		50	00/04						EXMAXX
۰۵			71-2690-1	CO X	1500.0			40/00						EXMAXX
	GAC		71-2598	A-50	776.0	514								UMMAMIC
ALNICO 5			71-25 8-1	A-50	781.0	517								U HAMN
ALNICD 6/AU PLATE	PARKER AIRCRAFT		71-2421	A-50	754.0	504						1		DIMDMU
ALNEED 6/AU PLATE	PARKER AIRCRAFT		71-2421-1	A-50	771.0	40 L								DYMDMU
FLUX NO.	ALPHA METALS		71-2270	60 X	5.0	1000			666N	566N				82 X X X X
	ALFHA METALS		71-2270-1	COX	5.0.0		50	00/04						82XXXX
PLPMA FLUX NO. 90			71-2270-2	Š	510.0			.0/00						82XXXX
ALSIMAG TEFLON COATED	LAVA		70-1874	X C C	50.0	1000			066N	060N				BXXXY
ALSIMAG 049 Alcinac 445	ARTRICAN LAVA LUKP Amediran i ava rodd		66-01	Š	4000.0			10/00				-1	10 28	PBXX.
				101	*200.0			10/00						XXXXOA
ALCITAG 010 ALCIMAC 445	AMEDICAN LAVA COOL		2-66-01	ŝ	0004		000	00 07						6BXXXX
ALSTRAG A4S			10-00-6				200	10/00						XXXXX00
ALIM PHOSPHATE/ASRESTOS	GAF. C. FM MAT		10-44-10		0.0000		002	#0/00						DDAAAA
	GALA CHEM		10-00-10 10-00-10						125	7 0 7			-	
			21-00-01		0.0001				5552			4		UTHL XX
			10-84-8	XON	0.04				666N				-	FLXX
	C C CHEM MAT	0100	10-48-4	× 03	10-0-0				666N	66613				iji riL XX
ā		0410.	10-88	60X	2500.0			10/00						÷.
			Ē	X ( )*)	0.0005			10/00				4		
HEUN FRUST ALETASDESTU	S GOLO CHEM MAIL DEVI	• • • • •	10-48-5	X i	3500.0			10/00					10 01	×

5000

t

L

Ļ

10 m 10

1

¥.,~

and the second s

و ر بی والد کرد برای میکند. میکند میکند. میکند میکند میکند میکند میکند میکند میکند میکند و میکند و میکند میکند میکند میکند.

1

1

4 ---

1

.

۰.

シャンテレン シート ころう てんじょうしょう あいみ しょうてき きっか たいまたためいたいためのかん しん

ţ

~~~ .

**1**<sup>7</sup>

答

**',** 2 (

大学 ちちょういん あいてい e.

-+ +

NULL ST

2 Contraction

\*\*\*

| HER S DESIGNATION         MULFACTURE         SPEC.<br>Tests         TEST RF1 'IN'         TEST RF1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                  |                  |             |               |                      |             |        |       |     |                             |                |          |         |                      |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------|---------------|----------------------|-------------|--------|-------|-----|-----------------------------|----------------|----------|---------|----------------------|--|
| PHOSPARTE/XSRESTOS G-E. CHEW MAIL DEFT         -0750         10-89-5         GOX         4000.0           PHOSPARTE/XSRESTOS G-E. CHEM MAIL DEFT         -0750         10-89-5         GOX         4000.0         200           PHOSPARTE/XSRESTOS G-E. CHEM MAIL DEFT         -0750         10-89-5         GOX         4000.0         200           PHOSPARTE/XSRESTOS G-E. CHEM MAIL DEFT         -0750         10-89-7         GOX         \$500.0         200           PHOSPARTE/XSRESTOS G-E. CHEM MAIL DEFT         -0750         10-89-7         GOX         \$500.0         200           PHOSPARTE/XSRESTOS G-E. CHEM MAIL DEFT         -0750         10-1945         GOX         \$500.0         200           MAILON 1145         COST         07-1945         GOX         \$500.0         200         200           MAILON 1145         COST         07-1945         GOX         \$500.0         200         200           MAILON 1145         COST         07-1945         GOX         \$500.0         200         200           MAILON 1145         COL         700-1945         700.0         100.0         700         200           MAILON 1145         COL         700-1945         700.0         700.0         700         700.0         700.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Ś                                                                                                                                                                | MANUFAC TUR ER   | ΝË          | PEC.<br>HICK. | RPT                  |             |        |       |     | NO LIF FLASH<br>React Point | а I с<br>а I с | FLENS AT | а —<br> | MATL<br>CODE         |  |
| MONSPANTE/ASSESTOS         Calify MATL         DEPT         -0750         ID-RE-6         GOX         5000.0         200           MONSPANTE/ASSESTOS         Calify MATL         DEFT         -0750         ID-RE-6         GOX         5000.0         200           MONSPANTE/ASSESTOS         Calify MATL         GOX         5000.0         200         200           MONSPANTE/ASSESTOS         Calify MATL         GOY         1700.0         1000.0         200         200           MONSPANTE/ASSESTOS         Calify MATL         GOY         1700.0         0001.0         200         200           MANDER -MANDREL         NOSSEMUT         Ref.         CORP         70-1995         GOX         1500.0         200           MANDER -MANDREL         NOSSEMUT         Ref.         CORP         70-1995         GOX         1000.0         1000           MANDER -MANDREL         NOSSEMUT         Ref.         CORP         70-1995         GOX         100.0         1000           MALON         Text.         To         70-1995         GOX         100.0         100           MALON         Ref.         CHR         TO<-1995                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                  | G.E. CHEM MATL   | 36P T       | •0750         | 10-88-3              | co x        | 4000°C |       |     | 10/00                       |                |          | A 10    | DTFLXX               |  |
| PHOSPANIF ASSESTOS G-E: CHER MATL DEFT         07750         ICH B-F         GGX         5000.0         200           PMOSPANIF ASSESTOS G-E: CHER MATL DEFT         07750         ICH B-T         07750         ICH B-T         200         200           MAD SPANIF ASSESTOS G-E: CHER MATL DEFT         07750         ICH B-T         07750         ICH B-T         2000.0         200           MAD SPANIF ASSESTOS G-E: CHER MATL DEFT         07750         ICH B-T         07750         ICH B-T         2000.0         200           MAD SPANIF ASSESTOS G-E: CHER MATL DEFT         07750         ICH B-T         07750         ICH B-T         2000.0         200           MALOY 1145         GOS MALOY 1145         GOS MALOY 1145         0771.0         1000         200         200           MALOY 1145         GOS MALOY 1145         GOS MALOY 1145         0771.0         1000         200         200           MALOY 1145         GOS MALOY 1145         GOS MALOY 1145         1000         1000         200         200           MALOY 1145         GOS MALOY 1145         GOS MALOY 1145         1000         1000         200         200           MALOY 1145         GOS MALOY 1145         1000         1000         100         200         200         200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                  | G.E. CHEM MATL   |             | • 0.750       | 10-88-4              | 50 X        | 4500.0 |       |     | 10/00                       |                |          | A 10    | DIFL                 |  |
| Prosymit Fasterions         Construction         Constr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                  | G.E. CHEM MATL   |             | •0750         | 10-88-5              | CO X        | 5000.0 |       |     | 70/00                       |                |          |         |                      |  |
| Mathematical Sector         OT50         Cost 5000.0         Cost 5000.0 <thcost 5000.0<="" th="">         Cost 5000.0</thcost>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                  | G.E. CHEM MATI   |             | 0150          | 10-88-6              | 60 X        | 4000,0 |       | 00  | 10/00                       |                |          |         | _                    |  |
| NUSEMENT FNC. CORP         70-1985         GOX         1500.0         50           RUSEMENT FNC. CORP         .0750         70-1995-1         GOX         1500.0         90           RUSEMENT FNC. CORP         .0750         70-1995-1         GOX         1500.0         90         90           REECH AIRCARFT         70-1995-1         GOX         1500.0         90         90           REECH AIRCARFT         70-1995-1         GOX         1500.0         90         90           NR         NR         71-2520-1         MHH         A11.0         910         91           NR         71-2530-1         MHH         A15.0         771.0         91         91           MAGC         71-2334-1         A-50         771.0         91         71         91         91           MAGC         AGC         71-2334-1         A-50         710 </th <th></th> <th>S G.E. CHEM MATI</th> <th><b>JEP1</b></th> <th></th> <th>10-88-7</th> <th>CO X</th> <th>5000.0</th> <th>-</th> <th>200</th> <th>00/04</th> <th></th> <th></th> <th></th> <th>PTFL XX</th>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                  | S G.E. CHEM MATI | <b>JEP1</b> |               | 10-88-7              | CO X        | 5000.0 | -     | 200 | 00/04                       |                |          |         | PTFL XX              |  |
| RECH AIRCARFT         0750         70-1995         GOX         500.0         50           REECH AIRCARFT         07750         70-1995         GOX         500.0         50           REECH AIRCARFT         0770         70-1995         GOX         500.0         50           REECH AIRCARFT         70-1995         GOX         500.0         50         50           REECH AIRCARFT         70-1995         GOX         500.0         50         50         50           REECH AIRCARFT         70-1995-1         GOX         500.0         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | AL (MENA PONDER-MANDRE)<br>AL (MENA DONDER-MANDRE)                                                                                                               | ROSEMONT ENG.    |             |               | 70-1985              | X 00        | 1500.0 |       | 50  | 00/04                       |                |          | A I V   | _                    |  |
| MUST MULTINE       -0750       70-2110-1       GOX       2500.0       50         R BEECH AIRCART       -0750       70-2110-1       GOX       2500.0       50         R BEECH AIRCART       70-1995-1       GOX       500.0       50         R BEECH AIRCART       70-1995-1       GOX       1000       50         R BECH AIRCART       70-1995-1       GOX       1000       50         R BECH AIRCART       70-1995-1       GOX       771.0       50         R BECH AIRCART       71-2334-1       A-50       781.0       50         AAC       71-2334-1       A-50       781.0       50       50         GAC       71-2334-1       A-50       781.0       50       50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                  |                  | 7.7         |               | 70-1985              | 100         | 0.0001 |       |     |                             |                |          |         | -                    |  |
| ALLOY 115         Construct of the second of the secon | SCUTTER FUNDER-MANUKC                                                                                                                                            | KUSERUNI ENG.    |             |               | 70-1985-1            | 203         | 1500.0 | 1000  |     | 565N                        | 00-            | v        | A 13    | DOMAX                |  |
| FOIL RELECTOR BEECH AIRCART         OCO 2010         FOIL RELECTOR BEECH AIRCART         OCO 2010         FOIL RELECTOR BEECH AIRCART         FOIL RELECTOR RECORD         FOIL RECORD         FOIR RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                  | 6AC              |             |               | 70-2110              | 20X         | 2000•0 |       | •   | 00/04                       |                |          |         |                      |  |
| FOIL REFLECTOR BEECH AIRCART         TOTATY         TOTATY <th></th> <th></th> <th></th> <th></th> <th>1-0112-01</th> <th></th> <th>0.0062</th> <th></th> <th></th> <th>40/00</th> <th></th> <th></th> <th></th> <th>FIMAXX<br/>SISTERNAXX</th>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                  |                  |             |               | 1-0112-01            |             | 0.0062 |       |     | 40/00                       |                |          |         | FIMAXX<br>SISTERNAXX |  |
| FOIL FFLECTOR BEECH AIRCRAFT       70-1995-1       GCX       170000       914         2014 CHRONIC ANGLE       71-2520-1       MHH       111.0       914         2014 CHRONIC ANGLE       70-2151-1       GCX       25000.0       914         2014 CHRONIC ANGLE       70-2151-1       GCX       25000.0       914         2014 CHRONIC ANGLE       70-2151-1       GCX       7771.0       919         2014 CHRONIC ANGLE       71-2394-1       A-50       771.0       919         2015 CHRONIC ANGLE       71-2391-1       A-50       771.0       919         2024 GAC       71-2391-1       A-50       771.0       910       910         2024 SULF AN       GAC       71-2391-1       A-50       778.0       910       910         2024 SULF AN       GAC       71-2391-1       A-50       778.0       910       910         2024 SULF AN       GAC       71-2391-1       A-50       778.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                  |                  |             |               | 70-1995              |             |        |       | 20  | +0/00                       |                |          |         |                      |  |
| FOIL REFLECTOR BEECH AIRCRAFT         70-195-1         GOX         1000         1000           LENTATE         NR         71-2520-1         MHH         646.0         710         50           LENTATE         NR         71-2520-1         MHH         646.0         710         50           LENTATE         NR         71-2520-1         MHH         646.0         710         50           2014 <chronic angle<="" td="">         NGAC         70-2151         GOX         4500.0         497           2014<chronic angle<="" td="">         NGAC         71-2334         7-50         771.0         497           2024         GAC         71-2334         A-50         771.0         50         50           2024         GAC         71-2394         A-50         788.0         50         50</chronic></chronic>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | FOIL                                                                                                                                                             | BEECH            |             |               | 70-1995-1            | ŝ           | 1500.0 |       | ŝ   | 40700                       |                |          |         |                      |  |
| FOIL REFLECTOR BEECH AIRCRAFT         TO-1995-7         GGX         #0.0         1000           LEMINATE         MR         #1.0         514           LEMINATE         MR         #1.0         514           Z014         CHRONIC ANGAC         770-1950         #14H         646.0         470           Z014         CHRONIC ANGAC         70-2151         GOX         4500.0         610           Z014         CHRONIC ANGAC         70-2151-1         GOX         4500.0         610           Z024         GAC         71-2334-1         A-50         771.0         499           Z024         GAC         71-2334-1         A-50         771.0         591           Z024         GAC         71-2391-1         A-50         774.0         591           Z024         SULF         M         GAC         71-2391-1         600         771.0           Z024         SULF         M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | FOIL                                                                                                                                                             | BEECH            |             |               | 1-2361-07            | COX         | 1,00.0 |       |     | 40/00                       |                |          |         |                      |  |
| LEMINATE       NR       71-2520       MHH       R11.0       514         2014       CHRONIC MIGAC       77-2151       60X       4500.0       473       473       473       473       473       57         2014       CHRONIC MIGAC       777.0       471       777.0       493       777.0       493       57         2024       GAC       771.0       511       777.0       493       771.0       511         2024       GAC       771.2334.1       A-50       771.0       511       771.0       511       772.0       493       771.0       511       772.0       493       771.0       511       772.0       493       771.0       511       772.0       493       771.0       511       772.0       493       771.0       511       772.0       493       771.0       511       772.0       600       700       500       700       700       700       700       700       700       700       700       700       700       700       700       700       700       700       700       700       700       700       700       700       700       700       700       700       700       700       700 <th>FOIL</th> <th>BEECH</th> <th></th> <th></th> <th>70-1995-2</th> <th>60 X</th> <th>80.0</th> <th>1000</th> <th></th> <th>566N</th> <th>002</th> <th>0</th> <th></th> <th></th>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | FOIL                                                                                                                                                             | BEECH            |             |               | 70-1995-2            | 60 X        | 80.0   | 1000  |     | 566N                        | 002            | 0        |         |                      |  |
| LENTIMATE       NR       71-2520-1       WHL       646.0       470       70         2014       CHRONIC ANGAC       70-2151-1       GOX       2500.0       991       911         2014       CHRONIC ANGAC       71-2334-1       A-50       777.0       499       911         2024       GAC       71-2334-1       A-50       777.0       491       911         2024       GAC       71-2334-1       A-50       778.0       911       911         2024       GAC       71-2391-1       A-50       778.0       911       911         2024       GAC       71-2391-1       A-50       786.0       911       911         2024       GAC       71-2391-1       A-50       786.0       910       910         2024       GAC       71-2391-1       A-50       786.0       910       910         2024       SUF       AN       GAC       71-2394-1       A-50       786.0       910       910         2024       SUF       AN       GAC       71-2394-1       A-50       786.0       910       910         2024       SUF       AN       GAC       71-2394-1       A-50       786.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                  | XX               |             |               | 71-2520              | IWW         | A11.0  | 514   |     |                             |                |          |         |                      |  |
| 2014 CHRONIC ANGAC       70-2151       60X 4500.0       50         2024       6AC       77.0       499       77.0       491         2024       6AC       77.0       491       77.0       491       77.0       491         2024       6AC       77.0       71.0       71.0       513       77.0       491       77.0       491         2024       6AC       71.0       71.0       71.0       71.0       513       450       778.0       513         2024       6AC       71.0       71.0       7491       71.2394-1       A-50       778.0       513         2024       6AC       71.0       71.2394-1       A-50       784.0       513         2024       5UF       50       71.2394-1       A-50       784.0       513         2024       5UF       50       71.2394-1       A-50       784.0       513         2024       5UF       50       71.2394-1       A-50       784.0       510       50         2024       5UF       50       71.2394       A-50       784.0       50       50         2024       5UF       50       70.2157-1       500       70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                  |                  |             |               | 71-2520-1            | MCM         | 646.0  | 479   |     |                             |                |          |         |                      |  |
| 2014       CHROMIC       70-2151-1       GOX       2500.0       50         2024       GAC       777.0       911       777.0       911         2024       GAC       777.0       511       777.0       501         2024       GAC       777.0       501       777.0       501         2024       GAC       71-2334-2       A-50       771.0       511         2024       GAC       71-2334-2       A-50       771.0       511         2024       GAC       71-2394-1       A-50       785.0       509         2024       GAC       71-2394-1       A-50       785.0       509         2024       GAC       71-2394-1       A-50       785.0       509         2024       SULF       AA       6AC       770.0       510       50         2024       SULF       AA       6AC       770-2157       60X       5000.0       50         2024-1351       GAC       71-2395-1       A-50       780.0       50       50         2024-1351       GAC       71-2395-1       60X       5000.0       50       50         2024-1351       GAC       71-2395-1       60X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                  |                  |             |               | 70-2151              | 60 X        | 4500.0 |       |     | 20/04                       |                |          |         |                      |  |
| 2024       6AC       717.0       497         2024       6AC       777.0       497         2024       6AC       777.0       497         2024       6AC       777.0       513       771.0       513         2024       6AC       778.0       513       778.0       513         2024       6AC       771.2334-1       A-50       774.0       513         2024       6AC       778.0       510       510       510         2024       5UF AN       6AC       778.0       510       510       510         2024       5UF AN       6AC       778.0       510       769.0       510       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | _                                                                                                                                                                | Ā                |             |               | 70-2151-1            | ×03         | 2500.0 |       |     | 20/04                       |                |          |         |                      |  |
| 2024       GAC       71-2334-1       A-50       771.0       517         2024       GAC       71-2334-2       A-50       771.0       513         2024       GAC       71-2334-2       A-50       778.0       509         2024       GAC       71-2391       A-50       778.0       509         2024       GAC       71-2394-1       A-50       778.0       509         2024       GAC       71-2394-1       A-50       778.0       509         2024       GAC       71-2394-1       A-50       778.0       509         2024       SULF <an< td="">       GAC       71-2394-1       A-50       778.0       510         2024       SULF<an< td="">       GAC       71-2394-1       A-50       778.0       510       500         2024       SULF<an< td="">       GAC       70-2157-1       GOX       5000.0       501       500         2024-1351       GAC       71-2394-1       A-50       778.0       500       500       501         2024-1351       GAC       70-2191-1       GOX       70-2193-1       GOX       5000.0       501         2024-1351       GAC       Y + W       A1RCRAFT       CASTINGS</an<></an<></an<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                  | GAC              |             |               | 71-2334              | A-50        | 777.0  | 667   |     |                             |                |          |         | _                    |  |
| 2024       54C       771.0       511       771.0       513         2024       54C       771.0       513       771.0       513         2024       54C       771.0       513       771.0       513         2024       54C       771.0       510       769.0       590       590         2024       54C       71-2394-1       A-50       769.0       590       500         2024       50C       771.0       510       71-2396-1       A-50       769.0       500         2024       50C       71-2396-1       A-50       769.0       500       500       500         2024       50C       71-2396-1       A-50       760.0       510       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -                                                                                                                                                                | GAC              |             |               | 71-2334-1            | A-50        | 738.0  | 497   |     |                             |                |          |         | _                    |  |
| 2024       54C       769.0       509       508         2024       6AC       769.0       509.0       510       509         2024       6AC       71-2391-1       A-50       769.0       509       500         2024       6AC       775.0       775.0       510       510       500         2024       6AC       775.0       775.0       510       510       500         2024       6AC       771-2394-1       A-50       769.0       510       50         2024       5UF AN       6AC       771-2394-1       A-50       769.0       50       50         2024       5UF AN       6AC       70-2157-1       60X       5000.0       50       50         2024-1351       6AC       70-2157-2       60X       5000.0       50       50         2024-1351       6AC       70-2157-2       60X       5000.0       50       50         2024-1351       6AC       71-2333       70-2157-2       60X       500.0       50       50         2024-1351       6AC       70-2157-2       60X       70-2157-2       60X       500.0       50         2024-156       Y + W       AIRCR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                  | GAC              |             |               | 71-2334-2            | A-50        | 771.0  | 511   |     |                             |                |          |         | _                    |  |
| 2024       6AC       71-2391       A-50       795.0       509         2024       6AC       71-2396-1       A-50       785.0       510       500         2024       6AC       71-2396-1       A-50       785.0       510       500         2024       5UF       M       6AC       71-2396-1       A-50       785.0       510       500         2024       5UF       M       6AC       70-2157       60X       5000.0       510       50         2024       7351       6AC       70-2191       60X       5000.0       50       50         2024-1351       6AC       0750       70-2191       60X       5000.0       50       50         2024-1351       6AC       0750       70-2191       60X       5000.0       50       50         2024-1351       6AC       0750       70-2135       60X       5000.0       50       50         2024-1351       6AC       0750       70-2135       60X       5000.0       50       50         2024-1351       6AC       V + W       MRCRAFT       CASTINGS       0750       70-2135       60X       500.0       50         2024-1351                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                  | GAC              |             |               | 71-2334-3            | A-50        | 768.0  | 508   |     |                             |                |          |         |                      |  |
| 2024       64C       71-2391-1       A-50       78.0.       513         2024       5024       64C       78.0       605.0       510       50         2024       500       64C       71-2396.1       A-50       789.0       510       50         2024       500       64C       7750       70-2157-1       60X       5000.0       50         2024       501       64C       7750       70-2157-1       60X       5000.0       50         2024       501       64C       7750       70-2157-2       60X       1500.0       50         2024       7351       64C       7750       70-2151-1       60X       1500.0       50         2024       7351       64C       7750       70-2157-2       60X       1500.0       50         2024       7351       64C       77212125       60X       1500.0       50         2024       7351       64C       7721235       60X       780.0       50       50         2024       731       64C       772202       60X       1500.0       50       50         2024       731       70       70       70       71       232<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                  | GAC              |             |               | 71-2391              | A-50        | 195.0  | 503   |     |                             |                |          |         |                      |  |
| 2024       64C       71-2396       A-50       769.0       496         2024       5UF AN       6AC       0750       70-2157-1       600.0       510       50         2024       5UF AN       6AC       0750       70-2157-1       607       500.0       50         2024       5UF AN       6AC       0750       70-2157-1       60X       5000.0       50         2024-1351       6AC       07750       70-2191       60X       1500.0       50         356-16       V + W       AIRCRAFT       07750       70-2135       60X       1500.0       50         356-16       V + W       AIRCRAFT       CASTINGS       0750       70-2135       60X       1500.0       50         356-16       V + W       AIRCRAFT       CASTINGS       0750       70-2202       60X       1500.0       50         356-16       V + W       AIRC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                  | GAC              |             |               | 1-162-11             | A-50        | R]R.O  | 513   |     |                             |                |          |         |                      |  |
| 2024       500       0750       77-2396-1       A-50       785.0       510       50         2024       SUF AN       6AC       0750       70-2157-1       60X       5000.0       50         2024       SUF AN       6AC       0750       70-2191       60X       5000.0       50         2024       SUF AN       6AC       0750       70-2191       60X       5000.0       50         2024-1351       6AC       0750       70-2191       60X       1500.0       50         2024-1351       6AC       0750       70-2191       60X       1500.0       50         2024-1351       6AC       0750       70-2191       60X       1500.0       50         2024-1351       6AC       0750       70-2195       60X       1500.0       50         2024-1351       6AC       70-2191       60X       1500.0       50       50         2024-1351       6AC       70-2135       6075       70-2135       607       50       50         356-16       Y       H       AIRCRAFT       CASTINGS       0750       70-2135       60X       500.0       50         356-16       Y       H <td< th=""><th></th><th>6AC</th><th></th><th></th><th>71-2396</th><th>A-50</th><th>769.0</th><th>495</th><th></th><th></th><th></th><th></th><th></th><th></th></td<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                  | 6AC              |             |               | 71-2396              | A-50        | 769.0  | 495   |     |                             |                |          |         |                      |  |
| 2024 SUF M       6AC       0750       70-2157       60X       5000.0       50         2024 SUF M       6AC       0750       70-2191       60X       1500.0       50         2024 SUF M       6AC       0750       70-2191       60X       1500.0       50         2024-1351       6AC       0750       70-2191       60X       1500.0       50         2024-1351       6AC       0750       70-2191       60X       1500.0       50         2024-1351       6AC       0750       70-2135       60X       1500.0       50         2024-1351       6AC       0750       70-2135       60X       1500.0       50         356-156       V + W       AIRCRAFT       0750       70-2135       60X       1500.0       50         356-156       V + W       AIRCRAFT       CASTINGS       0750       70-2135       60X       1500.0       50         356-156       V + W       AIRCRAFT       CASTINGS       0750       70-2133       499       50         356-156       V + W       AIRCRAFT       CASTINGS       0750       70-2332       450       799       50         356-156       V + W       AIRCRAFT </th <th>2024</th> <th></th> <th></th> <th></th> <th>71-2396-1</th> <th>A-50</th> <th>785.0</th> <th>510</th> <th>•</th> <th></th> <th></th> <th></th> <th></th> <th></th>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2024                                                                                                                                                             |                  |             |               | 71-2396-1            | A-50        | 785.0  | 510   | •   |                             |                |          |         |                      |  |
| 2024 SUF NN GAC       70-2157-1       600.0       5000.0         2024 SUF NN GAC       -0750       70-2157-2       600 to ten 500.0       50         2024 SUF NN GAC       -0750       70-2191-1       600 to ten 500.0       50         2024-T351       6AC       -0750       70-2191-1       600 to ten 500.0       50         2024-T351       6AC       -0750       70-2191-1       600 to ten 500.0       50         356-T6       V + W AIRCRAFT CASTINGS       -0750       70-2191-1       60X       1500.0       50         356-T6       V + W AIRCRAFT CASTINGS       -0750       70-2135       60X       1500.0       50         356-T6       V + W AIRCRAFT CASTINGS       -0750       70-2135       60X       1500.0       50         356-T6       V + W AIRCRAFT CASTINGS       -0750       70-2022-1       60X       1500.0       50         356-T6       V + W AIRCRAFT CASTINGS       -0750       70-2022-1       60X       1500.0       50         356-T6       V + W AIRCRAFT CASTINGS       -0750       70-2022-1       60X       1500.0       50         6061       6AC       71-2332-1       A-50       789.0       504         6061       6AC <td< th=""><th>2024 SULF</th><th></th><th>-</th><th></th><th>70-2157</th><th>GO X</th><th>5000.0</th><th></th><th>50</th><th>00/04</th><th></th><th></th><th></th><th>-</th></td<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2024 SULF                                                                                                                                                        |                  | -           |               | 70-2157              | GO X        | 5000.0 |       | 50  | 00/04                       |                |          |         | -                    |  |
| 2024-3351       6400.0         2024-1351       640         2024-1351       640         2024-1351       640         356 4L00INE FINGAC       -0750       70-2191       60X       1500.0         356 4L00INE FINGAC       -0750       70-2191       60X       1500.0       50         356 4L00INE FINGAC       -0750       70-2191       60X       1500.0       50         356-16       V + W       AIRCRAFT CASTINGS       -0750       70-2135       60X       1500.0       50         356-16       V + W       AIRCRAFT CASTINGS       -0750       70-2123       60X       1500.0       50         356-16       V + W       AIRCRAFT CASTINGS       -0750       70-2202       60X       1500.0       50         356-15       V + W       AIRCRAFT CASTINGS       -0750       70-2202       60X       1500.0       50         356-16       FOR       71-2332       A-50       780.0       499       50         6061       GAC       A       71-2333       A-50       789.0       504         6051       GAC       A       71-2333       A-50       789.0       504         6051       GAC       A<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2024 SULF                                                                                                                                                        |                  |             |               | 70-2157-1            | X<br>C<br>C | 5000.0 |       |     | 00/04                       |                |          | A 10    |                      |  |
| 2024-11331       502       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       507       506       607       507       506       607       507       506       607       506       607       506       607       506       607       506                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2024 506                                                                                                                                                         |                  |             |               | 70-2157-2            | 20X         | 6800.0 |       |     | 104                         |                |          |         | _                    |  |
| 356 T101 IL       0750       0750       075111-1       0.0       0.0       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00       00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2024-1351                                                                                                                                                        |                  |             |               | 1612-01              | 603         | 1500.0 |       | 4   | 00/04                       |                |          |         |                      |  |
| 356-76       V + W AIRCRAFT CASTINGS       0750       70-2202       600       500.0         356-76       V + W AIRCRAFT CASTINGS       0750       70-2202       600       500.0         356-76       V + W AIRCRAFT CASTINGS       0750       70-2202       600       500.0       50         356-76       V + W AIRCRAFT CASTINGS       0750       70-2202       600       1500.0       50         6061       GAC       V + W AIRCRAFT CASTINGS       0750       70-2202       600       499       50         6061       GAC       V - Y       V 1-2332       A - 50       781.0       499       50         6061       GAC       V 1-2333       A - 50       789.0       504       47         6061       GAC       V 1-2333       A - 50       789.0       504       47         6061       ALDDINE       GAC       71-2335       A - 50       789.0       504         6061       ALDDINE       GAC       71-2335       A - 50       701.0       486         6061       ALDDINE       GAC       71-2335       A - 50       700.0       604         6061       ALDDINE       GAC       70-2149-1       GOV.0       70-2149-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 356 AL OT NEW                                                                                                                                                    |                  |             |               | ru=2141-1<br>70-2136 |             | 0.0001 |       | 02  | 40/00                       |                |          |         | -                    |  |
| 356-16       V + W AIRCRAFT CASTINGS       0750       70-2202-1       60X       1500.0       50         6061       GAC       V - W AIRCRAFT CASTINGS       0750       70-2202-1       60X       1500.0       499         6061       GAC       T1-2332       A - 50       781.0       499       70       50         6061       GAC       71-2333       A - 50       7805.0       499       508         6061       GAC       71-2333       A - 50       789.0       508         6061       GAC       71-2333-1       A - 50       789.0       504         6061       GAC       71-2335       A - 50       789.0       504         6061       GAC       71-2335-1       A - 50       789.0       504         6061       GAC       71-2335-1       A - 50       789.0       504         6061       A1001NE       GAC       71-2335-1       A - 50       710.0       486         6061       A1001NE       GAC       71-2335-1       A - 50       700.0       504         6051       A1001NE       GAC       71-2335-1       A - 50       700.0       504         6051       A1000NE       GAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 356-16                                                                                                                                                           | W AIRCRAFT       | 1 NGS       |               | 20-2202              |             | 1500.0 |       |     | *0/00                       |                |          |         | LTMAYX               |  |
| 6061       GAC       71-2332       A-50       781.0       499         6061       GAC       71-2332       A-50       781.0       499         6061       GAC       71-2333       A-50       705.0       497         6061       GAC       71-2335       A-50       705.0       496         6061       GAC       71-2335       A-50       705.0       496         6061       GAC       71-2335       A-50       705.0       487         6061       GAC       71-2335       A-50       705.0       486         6061       A1000NE       GAC       70-2149       G0X       2000.0       504         6061       A100DINE       GAC       70-2149       G0X       2000.0       50         6061       A100DINE       GAC       70-2167       GUX       2000.0       50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                  | + W ATRCRAFT     |             |               | 70-2202-1            | XU2         | 1500.0 |       | 2   | 40700                       |                |          |         |                      |  |
| 6061         GAC         71-2332-1         A-50         P05.0         499           6061         GAC         71-2333         A-50         R05.0         499           6061         GAC         71-2333-1         A-50         R05.0         499           6061         GAC         71-2333-1         A-50         789.0         508           6061         GAC         71-2335-1         A-50         789.0         504           6061         A10DIME         GAC         70-2149-1         GUX         2000.0         50           6061         A10DIME         GAC         70-2149-1         GUX         2000.0         50           6061         AMDIIZFD         GAC         70-2167         GUX         2000.0         50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | _                                                                                                                                                                |                  |             | 2             | 71-2332              | A-50        | 781.0  | 667   | ŝ   |                             |                |          |         | _                    |  |
| 6061         Cac         71-2333         A-50         R03.0         508           6061         Cac         71-2335-1         A-50         766.0         487           6061         Cac         71-2335-1         A-50         769.0         504           6061         Cac         71-2335-1         A-50         769.0         504           6061         AldDine         Cac         71-2335-1         A-50         701.0         486           6061         AldDine         Cac         70-2149-1         GOX         2000.0         50           6061         AldDine         Cac         70-2149-1         GUX         2000.0         50           6061         AldDine         Cac         70-2167         GUX         2000.0         50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                  | GAC              |             |               | 71-2332-1            | A-50        | P.05.0 | 667   |     |                             |                |          |         |                      |  |
| 6061         Cac         71-2333-1         A-50         766.0         487           6061         GAC         71-2335         A-50         789.0         504           6061         GAC         71-2335         A-50         789.0         504           6061         GAC         71-2335         A-50         701.0         486           6061         ALDDINE         GAC         71-7335-1         A-50         701.0         486           6061         ALDDINE         GAC         70-2149         GOX         2000.0         50           6061         ALDDINE         GAC         70-2149-1         GUX         2001.0         50           6061         ANDIZFD         GAC         70-2167-1         GUX         2001.0         50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                  | GAC              |             |               | 71-2333              | A-50        | A03.0  | 508   |     |                             |                |          |         | _                    |  |
| 6061         6AC         71-2335         A-50         789.0         504           6651         6AC         71-2335-1         A-50         701.0         486           6061         ALDDINE         6AC         71-7335-1         A-50         701.0         486           6061         ALDDINE         6AC         70-2149         60x         2000.0         50           6061         ALDDINE         6AC         70-2149-1         GUX         2500.0         50           6061         ANDULEFD         GAC         70-2167-1         GUX         2000.0         50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                  | GAC              |             |               | 71-2333-1            | A-50        | 766.0  | 487   |     | •                           |                |          |         |                      |  |
| OCOI         GAC         71-2335-1         A-50         701.0         486           6061         + ALDDINE         GAC         70-2149         GOX         2000.0         50           6061         + ALDDINE         GAC         70-2149-1         GUX         2500.0         50           6061         + ALDDINE         GAC         70-2149-1         GUX         2500.0         50           6061         AMDIZFP         GAC         70-2167         GUX         2000.0         50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                  | GAC              |             |               | 71-2335              | A-50        | 789.0  | 504   |     |                             |                |          |         | _                    |  |
| SUBIL         ALUDINE         GAL         70-2149         GOX         2000.0         50         60         50         60         50         60         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70 <th 70<="" <="" th=""><th></th><th></th><th></th><th></th><th>71-2335-1</th><th>A-50</th><th>201.0</th><th>486</th><th></th><th></th><th></th><th></th><th></th><th></th></th>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <th></th> <th></th> <th></th> <th></th> <th>71-2335-1</th> <th>A-50</th> <th>201.0</th> <th>486</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> |                  |             |               |                      | 71-2335-1   | A-50   | 201.0 | 486 |                             |                |          |         |                      |  |
| 6061 AMD012FP GAC 70-2167 GUX 2000.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                  |                  |             |               | 70-2149              |             | 2000.0 |       |     | 70/00                       |                |          | A 10    | N LO                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 6061                                                                                                                                                             | J                |             |               | 70-2167              |             | 0.0005 |       |     | 40700                       |                |          |         |                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                  |                  | •           |               |                      |             |        |       |     |                             |                |          | •       | (<br>                |  |

- \* X \*

í , :,

100

13 A.

.

00-470 00-470 CIMMEN'S x > 9 W DTMAXX TMEXX NMMC X X 0000 I MAXX X X 7 M J XXJW ベメトントリ FMAX TMAX TMAXX TMAXA 4CNX+ ;;; BBGXX "HAX" **TNAX** (XAM' 1 とくろ 2.5 MATL CODE P 46.E 0 α. NO UF FLASH FIPE PROP WT REACT PRINT PT DIST LUSS 513 80R 640 570 e S S S S 412 31 JAN 72 00707 40/00 10/04 40/00 40/00 40/00 00/04 00/04 01/01 00/04 00/00 00/04 00/00 +0/00 207,00 70/00 20/04 I MP T Enfr MATERIAL TEST DATA BY MANUFACTURER S DESIGNATION AS OF 20 29 50 50 20 50 33 50 TEMP 504 495 495 495 496 498 520 497 503 5103 497 497 2000.0 4500.0 5000.0 745.0 745.0 760.0 760.0 4500.0 25500.0 1500.0 1500.0 797.0 747.0 682.0 1500.0 1500.0 5000.0 5000.0 3700.0 8500.0 6800.0 25000.0 25000.0 25000.0 25000.0 1500.0 11500.0 11500.0 11500.0 759.0 744.0 756.0 805.0 50.0 765.0 767.0 1500.0 6.2 81.0 797.0 TEST TEST ENVR PRESS 783.0 600X 9 9 1 5 0 X 9 9 1 5 0 X 9 9 1 5 0 0 X 9 0 0 0 0 X 9 0 0 0 0 X × × × × Š × × × × × HXC Ţ TEST RPT NO. 70-2155 70-2239 70-2239-1 71-2402 71-2402-1 71-2399-1 71-2399-1 10-2234-1 11-2293-1 11-2293-1 71-2293-2 71-2293-3 71-2293-3 71-2555 71-2555-1 71-2590 71-2590-1 70-2153-5 70-2153-6 70-2153-6 70-2156 170-2156 70-2062-1 70-2062-1 71-2397-1 71-2397-1 1-2297 1-2290 1-2295 1-2295 1-2295 1-2298-1 0-2218-1 1-2367-2 1-2367-2 1-2367-2 1-2296-1 70-2152 70-2153 70-2153-1 55-.0750 •0150 SPEC. 500 500 500 I. DUPONT CO..INC I. DUPONT CO..INC S. DUPONT CO..INC 0 00 HARVEY ALUMINUM HARVEY ALUMINUM Gac Gac LOYS. 101 TALS REYNOLDS ALIM Reynolds Alum Advanced Alidy 2 CEC ALLOY ARMSTRONG MONSANTO CGRP MONSANTO CGRP ACONDA WIRE MANUFACTURER AM IL TON STI AMIL TON STI MACONDA MIF I. DUPONT •1. DUPONT IS NO inin NDVANCED A ARMS TRONG **ADVAN** PACIF 5AC 5AC 1730-27A SVSK 81370-124 SVSK 81370-29A SVSK 81370-29A SVSK 81370-164 SVSK 81370-164 SVSK 81370-16 SVSK 81370-14 SVSK 81370-14 \*\*\*\*\*\*\* ₹ NTED WIRE 651 651 HARD HARD 4480 S DESIGNATION 7075-7 65 7075-7 65 7075-1 65 Ĩ # COATED 1909 6061 80° -5616 -3651 5 -0.1 K ž HFGA Ĩ Ĩ 5 굴굵

11.

117 21 V 17468A

MATERIAL TEST DATA BY MANUFACTURER S DESIC' TION AS OF 31 JAN 72

4

PAGE

|                                | -                                               |                 |                          |              |               |              |      |         |                |                 |         |                |             |               |
|--------------------------------|-------------------------------------------------|-----------------|--------------------------|--------------|---------------|--------------|------|---------|----------------|-----------------|---------|----------------|-------------|---------------|
| KFOR S DESIGNATION             | MANUFACTURER                                    | SPEC.<br>THICK. | TEST RPT NO.             | TEST<br>ENVR | TEST<br>PRESS | TEST<br>TEMP | ENER | ND DF 1 | FLASH<br>PUINT | FIRF 0<br>PT () | PEUP WT | s R            | 0 I<br>     | MATL<br>CODE  |
| ARTICLOR 1242                  | MONSANTO CORP                                   |                 | 71-2590-2                | ×09          | 50.0          |              |      |         | 640            | 640             |         | c              |             | DCEKAD        |
| ASTN 0260 BAU-4                | GAC                                             | .0750           | 70-2126                  | COX<br>COX   | 2000.0        |              | -    | 00/00   |                |                 |         | 4              | 10 F        | FL. MNMU      |
| Ŧ                              |                                                 | .0750           | 10-82                    | ŝ            | 500.0         |              |      | 40/00   |                |                 |         | 4              |             | TMGXX         |
| AP-4144/WP-3046 ADKES IVEN SOL | VENY SOL CORP                                   |                 | 71-2328                  | GOX          | 6800.0        |              |      | 10/10   |                |                 |         | -              |             | ABBGXX        |
|                                | ADHES IVEHYSOL CORP                             |                 | 71-2328-1                | ŝ            | 6800.0        |              | 20   | 00/C4   |                |                 |         | 4              |             | ABBGXX        |
| I SHOP SHE SIVE IT-OF          | VENVSOL CORP                                    |                 | 71-2328-2                | Š            | 3000.0        |              |      |         | 256            | 256             |         | ¢              | m           | BBGXX         |
| B IIIZ STEEL/SH PLATE          | 6 A C                                           |                 | 71-2708                  | A-50         | 675.0         | 493          |      |         |                |                 |         | -              |             | <b>DMMOMS</b> |
| B IILZ STEEL/SH PLATE          |                                                 |                 | 71-2708-1                | A-50         | 771.0         | 515          |      |         |                |                 |         | ~              |             | CMMDMS        |
|                                | SEAL/LOS A                                      |                 | 70-1971                  | A-50         | 334.0         | 430          |      |         |                |                 |         | <b>-</b>       |             | JC 7. XX      |
|                                | SEAL/LOS                                        |                 | 1-1161-01                | A-50         | 397.0         | 21           |      |         |                |                 |         |                | ŝ           | DJC2XX        |
|                                | PARKER SCAL/LOS ANGLS<br>BAAREA SEA: /105 ANC'S |                 | 2-1201-02                | A-50         | 571.0         | 1994<br>1994 |      |         |                |                 |         | ⊢,             | 2 '<br>5 '  | LJC Z X X     |
|                                | 36461 603                                       |                 | 71-2513                  |              | 0.020         |              |      |         |                |                 |         | - •            |             | XX7000        |
|                                |                                                 |                 | 71-2619-1                |              |               |              |      |         |                |                 |         | - 1            |             |               |
|                                |                                                 | 0760            | 70-2140                  |              | 010°0         | 61c          | 0    |         |                |                 |         | •              |             |               |
| _                              | REAVICO                                         | 0750            | 70-2211                  |              |               |              |      |         |                |                 |         | ۹.             |             |               |
| REAVLATION CHADO-C-530         | BERYI CO                                        |                 | 70-2211-1                | ŝ            | 1500-0        |              | 50   | 40,00   |                |                 |         | . <            |             |               |
| BEAVLETUN CH-00-C-530          | BERYLCO                                         |                 | 70-2211-2                | A-50         | 779.0         | 498          | 2    |         |                |                 |         | <b>۲</b> ۲     |             |               |
| BERYLLIUM CH.00-C-530          | BERYLCO                                         |                 | 70-2211-3                | A-50         | 756.0         | 501          |      |         |                |                 |         |                |             | CMY MMC       |
| BOEING 101 BEARING MATL        |                                                 |                 | 70-1982                  | COX OS       | 1500.0        |              | 50   | 00/04   |                |                 |         | • •            |             | CHMMHA        |
| BUEING 101 BEARING KATL        |                                                 |                 | 70-1982                  | Š            | 1500.0        |              |      | 00/04   |                |                 |         | 4              |             | OMMMHA        |
|                                | BOEING CO.                                      |                 | 70-1982-1                | GOX          | 1500.0        |              |      |         | 666N           | 066N            |         | 4              |             | OMWMHA        |
| BBMCMASTER NTT3                | PITTSBURGH PLATE GLASS                          |                 | 71-2481                  | A-50         | 637.0         | 475          |      |         |                |                 |         | -              |             | ABBGGS        |
| BUNDINSTER HTT3                | PITISBURGH PLATE GLASS                          |                 | 71-2481-1                | A-50         | 770.0         | 504          |      |         |                |                 |         | 1              |             | BBGGS         |
|                                | DARLING-R.E. CD. INC                            | •0750           | 70-1644                  | ŝ            | 5000.0        |              | 50   | 00/07   |                |                 |         | 4              |             | HGUXX         |
| BORE HAND WASHER               |                                                 |                 | 70-1644-1                | õ            | 5000.0        |              | -    | 10/10   |                |                 |         | •              |             | CHGUXX        |
| BONE HARD WASHER               | NG-R-E- CO-                                     |                 | 70-1644-2                | Ň            | 5000.0        |              |      | 01/02   |                |                 |         | -              |             | HGUXX         |
| 5                              |                                                 |                 | 71-2479                  | A-50         | 776.0         | 506          |      |         |                |                 |         | -              |             | AEGSXX        |
| DR \$10 ADMESTYE               | W.T. BEAN                                       |                 | 71-2479-1                | A-50         | 769.0         | 495          |      |         |                |                 |         | -              |             | EGSXY         |
|                                |                                                 |                 | 71-2703                  | A 150        | 339°0         | 376          |      |         |                |                 |         | <del>،</del> ب | 51          | OPCJXX        |
| BRASS 1/2 HARD                 | ARI F                                           | _               | 70-2056                  |              |               |              |      |         |                |                 |         |                |             | 2 X C D L     |
| BRASS 1/2 HARD                 |                                                 |                 | 70-2056-1                | A-50         | 779.0         | 521          |      |         |                |                 |         | - 1            |             | ZWOWW         |
| -                              | OIL                                             |                 | 69-1424                  | 60 X         | 0.5           | 000          |      |         | 619            | 666N            |         | >              |             | DBBPXX        |
|                                | 011                                             |                 | 69-1424-1                | ×09          | 25.0          | 1000         |      |         | ~              | 666N            |         | -,             |             | DBBPXX        |
| -                              | 110                                             | • 0050          | 69-1424-13               | 60 X         | 4000.0        |              | •    | 10/10   |                |                 |         | -              |             | DBBPXX        |
|                                | 011                                             | •0020           | +2+-1                    | õ            | 4500.0        |              | -    | 10/00   |                |                 |         | 4              |             | 68PYX         |
|                                |                                                 | • 0050          | 69-1424-12               | ×09          | 5000.0        |              |      | 04/04   |                |                 |         | -              |             | DBBPXX        |
| •                              |                                                 | •0150           | 454-1                    | ŝ            | 2000.0        |              | 500  |         |                |                 |         | 4              | _           | 00.6P X X     |
| HAVCULE 41                     | BRAT UIL CU<br>Arav Die CD                      |                 | 69-1424-14<br>43-1424-15 |              |               | 1000         |      | ~ *     |                | 666N            |         | -, -           | 6<br>6<br>6 | 0.88PXX       |
|                                | 10                                              |                 | 61-121-12<br>40-1422-2   |              |               |              |      | •       |                | 555N            |         | • •            | -           | ××4000        |
|                                |                                                 |                 | 6-1424-3                 |              |               |              |      | -       |                | 6660N           |         | ⊾ <            |             | *******       |
|                                | 011                                             |                 | 12                       | XOS          | 100.0         |              |      | •       |                | 516             |         | 10             |             | DARPYX        |
|                                |                                                 |                 |                          |              |               |              |      |         |                | •               |         | :              |             |               |

\*\*\*

ł

1101111

1111

ļ

5

1

۲

....

6

•••

14

4

, ;

<u>ب</u> ج

•

5

÷.,

. .

1775

ちょう アンテアン しょうかい

MATERIAL TEST DATA AY MANUFACTURFY S DESIGNATION AS DE 31 JAN 72

s

271.5

21

K, S,

-. + +

5 7.

1

-•

|                        | RANUTACIUKEN          | SPEC.   | IEST KPT NU.             | ENVR       | TEST<br>PRESS | TEST 12<br>TEMP EN | IMPT NU UA | GF FLASH     | NT P1    |     | /<br>• - •<br>لہ |          | 0005        |
|------------------------|-----------------------|---------|--------------------------|------------|---------------|--------------------|------------|--------------|----------|-----|------------------|----------|-------------|
| BRAYCOTE 617           | BRAY DIL CO           |         | 69-1424-5                | X US       | 500.0         |                    |            | 4<br>1       | 57<br>1  | a,  |                  |          | DBB P X     |
| ARAYTOTE 417           |                       |         | 49-1424-6                | X U S      |               |                    |            | 4            | -        | -   |                  |          | DARPY       |
|                        |                       |         | 40-1424-7                |            |               |                    |            |              |          |     |                  |          |             |
| DENTION OF ALT         |                       |         | 03-1-2-1-0<br>40-1-2-2-0 | 200        |               |                    |            |              |          |     |                  |          |             |
|                        |                       |         | x=+7+1-40                | ¥ 0.9      | 2 000 × 0     |                    |            |              |          | ¢   |                  |          | 1000        |
|                        |                       | • 00 50 | 6-424-0                  | x og       | 3500.0        |                    | 00/07      |              |          |     |                  |          | DBBPXX      |
|                        | 10                    |         | 70-1746                  | <u>cox</u> | 25.0          | 1000               |            | 666N         |          | a   |                  |          | 0ABPE       |
| BRANCOTE ABLA          | BRAY DIL CO           |         | 70-1746-1                | ð<br>Ö     | 50.0          | 1000               |            | N994         |          | ŋ   |                  |          | DABPE       |
| BRAYCOTE 631A          | 110                   |         | 70-1746-2                | 20X        | 62.0          | 1 000              |            | 000N         |          | 0   |                  |          | OABPE       |
|                        | 12                    |         | 70-1746-3                | ŝ          | 1 45.0        |                    |            | 0001         |          | ç   |                  |          | DAPPE       |
|                        | 5                     |         | 70-1766-6                |            |               | 00011              |            | 66.0         |          | •   |                  |          |             |
|                        |                       |         | 70-176-5                 |            |               |                    |            |              |          | . 0 |                  |          | UADDE C     |
|                        | 52                    |         |                          |            |               |                    |            | - 4          |          |     |                  |          |             |
|                        |                       |         | 70-1746-7                |            |               |                    |            | 2 8 <b>4</b> |          |     |                  |          |             |
|                        |                       |         |                          |            | 0.000         |                    |            | 5 .          |          |     |                  |          |             |
|                        | 2                     |         | 1041 14011               | 202        | 2000-0        |                    |            |              | ~        |     |                  | 2:       |             |
|                        |                       |         | 1861-01                  | ŝ          | 0.0041        | ••                 | 40/00 00   | * .          |          |     |                  | 39       |             |
|                        | NUTARU AND TAKTUN     |         | 1861-0/                  | ŝ          | 1200.0        |                    | 100        |              |          |     |                  | <b>7</b> |             |
| ALLOY ANS-             | HANDY AND HARNON      |         | 1-1981-01                | Š          | 1500.0        | 1000               |            | 0661         | 662<br>0 | ç   |                  |          | FL ×××      |
| ANCO NO.               | A.M. CASTLE CO.       |         | 70-2199                  | GOX        | 1500.0        |                    | 8          | 104          |          |     |                  | 2        | XXXMO       |
| 2                      | A.M. CASTLE CO.       |         | 70-2199-1                | ŝ          | 1500.0        | ·                  | 50 00/04   | 70           |          |     |                  | 11       | DMXXXX      |
| z                      | VICTOR EQUIPMENT CO.  |         | 71-2779-1                | 20X        | 2500.0        |                    | 027        | 04           |          |     |                  | 2        | CHOJXX      |
| BUNN K FRICTION NASHER | VICTOR EQUIPMENT CO.  |         | 71-2779-2                | Š          | 1500.0        |                    | 10         | 01           |          |     |                  |          | CHDJX       |
|                        | EQUIPMENT             |         | 71-2779-3                | X OS       | 1000.0        |                    | 10/10      | 10           |          |     |                  |          | CHDJXX      |
| N FRICTION             | EOUIPMENT             |         | 71-2779-4                | XQS        | 500.0         |                    | 200        | 40           |          |     |                  |          | CHDJXX      |
| N D-RING               | FOUIPMENT             |         | 1-2772-15                | X09        | 2500-0        |                    | 120        | 02           |          |     |                  |          | CHDJXX      |
|                        | EOUIPHENT             |         | 71-2777-2                | SOS.       | 1000-0        |                    | 01/02      | 02           |          |     |                  |          | CHOLXX      |
| 2                      | FOUTOMENT             |         | 21-2775-15               | 202        |               |                    |            |              |          |     |                  |          | YY NHU      |
|                        |                       |         | 71-2784-1                | Ň          | 2500.0        |                    | 200        | 50           |          |     |                  |          | CHURX       |
| 1                      | EQUIDMENT             |         | 71-2784-2                | ŝ          |               |                    | 22         | Ś            |          |     |                  |          |             |
| 2                      |                       |         |                          |            |               |                    |            |              |          |     |                  |          |             |
| E a                    | INSERTOOS             |         | 11-2184-3                |            | 0.00.01       |                    | 33         |              |          |     |                  |          |             |
|                        | VICTUR EQUIPMENT CU-  |         | 1-48/2-1/                |            | 1000.0        |                    | 10         | 10           |          |     |                  |          | KKUCHU      |
| SHIND & OFFINE         | EQUIPMENT             |         | 71-2784-5                | ŝ          | 200.0         | 1                  | 00         | 40           |          |     |                  |          | CHOUXX      |
| BUTM                   | t t                   |         | 70-1965                  | A-50       | 451.0         | 515                |            |              |          |     |                  |          | DVCZXX      |
| BUTN                   | × ×                   |         | 70-1965-1                | A-50       | 604.0         | 611                |            |              |          |     |                  |          | XX Z JAO    |
| BUTA                   | ž                     |         | 70-1965-2                | A-50       | 651.0         | 649                |            |              |          |     |                  |          | DVC2X       |
| BUTM                   | Ĩ                     |         | 70-1965-3                | A-50       | 568.0         | 507                |            |              |          |     |                  |          | DVCZX       |
| BUTN                   | ¥                     |         | 70-1965-4                | A-50       | 460.0         | 496                |            |              |          |     |                  |          | OVCZX       |
| BUTYL                  | 22                    |         | 70-1955-5                | INI        | 760.0         | 505                |            |              |          |     |                  |          | DVCZXX      |
| BUTN                   | Ĩ                     |         | 70-1965-6.               | III        | 767.0         | 509                |            |              |          |     |                  |          | DVCZX       |
|                        | SEAL/LUS ANG          |         | 71-2601                  | A-50       | 804.0         | 518                |            |              |          |     |                  |          | CHCZXX      |
| BUTYL 591-00           | PARKER SEAL/LOS ANGLS |         | 71-2631-1                | A-50       | 773.0         | 516                |            |              |          |     |                  |          | CHC ZXX     |
| C-1213 STEEL           | HAMSLEY               |         | 71-2652                  | A-50       | 762.0         | 506                |            |              |          |     |                  |          | X X Q M M Q |
| (;-1213 STEEL          | HAMSLEY               |         | 71-2652-1                | A-50       | 771.0         | 507                |            |              |          |     |                  |          | XXUMMO      |
| C-147-7 NEOPRENE       | PARKER SEAL/LOS ANGLS | -0750.  | 10-48                    | 60X        | 1000.0        |                    | 00/04      | 04           |          |     |                  |          | СНЛВХХ      |
|                        |                       |         |                          |            |               |                    |            |              |          |     |                  |          |             |

. ....

• • • • •

....

----

;

. . . . .

v P

้ ...ี ห

. .

.... .

CHORXX CHDBXX CHDBXX CHDBXX CHD8XX CHDBXX CH'JB X X CHDBXX CHOBXD XTHOS CHOB) MATL CHOB CHOB CHDB CHO<sup>2</sup> 0 0 FIRE PROP WT PT DIST LOSS 405 471 395 398 298 298 700 666N 666N 701 FLASH POINT 405 471 298 298 298 666N 666N 700 701 NO OF REACT 01/02 01/02 04/04 00/04 00/04 00/04 00/06 00/06 40/00 00/04 00/04 1 MP T ENER 20 0.000 20 200200 S S 20 TEAF 1000 513 518 1500 0 1500 0 773 0 774.0 TEST PRESS TES T ENVR ş 70-2215-2 71-2362-1 71-2362-1 71-2362-2 70-1592 10-54-13 10-54-15 10-54-15 10-54-15 10-54-15 10-54-16 10-54-18 10-54-18 10-54-18 70-1992 70-1992-1 71-2606 71-2606-1 RPT 10-48-10 10-48-12 10-48-12 10-48-2 10-48-3 10-48-5 10-48-5 10-48-5 10-48-5 10-48-5 10-48-5 10-48-5 10-48-5 10-48-5 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-12 10-48-10 10-48-10 10-48-10 10-48-10 10-48-10-48-10 10-48-10-48-100-1 11-22%7 71-2267-1 70-2215 0-54-10 0-2215-1 0-54-1 54-3 ĩ ĩ 512 0-5-5-0 TEST 9 9 4 9 9 ç 0750 0750 0750 07570 07570 07570 07570 07570 07570 07570 07570 07570 07570 07570 •0750 •0750 •0750 SPEC. THICK. ANGLS ANG ANG ANGLS ANGLS ANGLS ANGLS ANGLS ANGLS ANGLS ANGLS ANGLS ANG SCAL/LOS SEAL/LOS SEAL/LOS SEAL/LOS SEAL/LOS SEAL/LDS SEAL/LDS SEAL/LOS SO 8 SEAL/LOS SOJ SO S SOS SEAL/I SEAL/I NANUFACTURER SEAL/ SEAL SEAL/ SEAL/ SEAL/ SEAL/ ROSENONT ROSENONT ROSENONT Gac Gac ARKER ARKER ARKER PAKER HFCR 5 SESICHATION 

ł

MATERIAL.TEST DATA BY MANUFACTURER S DESIGNATION AS DF 31 JAN 72

PAGE

MATERIAL TEST DATA RY MANUFACTURER S BESIGNATION AS 14 31 JAN 72

LA THE REAL PROPERTY AND

Statistic Contraction of the Statistic Contra

. . . -- .

r-

| MFGR S DESIGNATION          | MANUFACTURER                  | SPFC.  | TEST RPT NO. | TEST       | 7 E S 7 | TE 5 1 | Ldwl | ND DF | FLASH |      | ∷∘la d | 1-<br>3 | ₩<br>(1 | Ā        | <u>ر</u>                                                                                             |
|-----------------------------|-------------------------------|--------|--------------|------------|---------|--------|------|-------|-------|------|--------|---------|---------|----------|------------------------------------------------------------------------------------------------------|
|                             |                               | THICK. |              |            | PRESS   | TEMP   |      | REACT | POINT | 14   | 1510   | ۲uSu    | ⊢<br>   | CODE     | E.                                                                                                   |
| CEMENDERD AND CH RE WIDE    | ulbfmcfr                      |        | 70-2042      | CO X       | 6.2     | 1000   |      |       | 9999  | 000N |        |         |         | -        | HG1MC                                                                                                |
|                             |                               |        | 70-2042-1    | 202        | 4       |        |      |       | NGOO  | Ó    |        |         |         |          |                                                                                                      |
|                             |                               |        | 70-2041      |            |         |        |      |       | NOOD  | 0001 |        |         |         |          |                                                                                                      |
|                             |                               |        |              |            |         |        |      |       |       |      |        |         |         |          |                                                                                                      |
| LEAKUDENU-UPPEK PAKICLORSPL |                               |        | 1-1-07-01    | 109        | - 7     | 1 000  |      |       | ***   | ***  |        |         |         |          |                                                                                                      |
|                             | MARCHEN                       |        | 71-2572      | ž          | 2000.0  |        | 20   | 40/00 |       |      |        |         |         |          | 3F 8 P                                                                                               |
|                             | MARCHEN                       |        | 71-2572-1    |            | 2500.0  |        |      | 10/10 |       |      |        |         |         |          | 3F(3P                                                                                                |
| CFX LUBRICANT               | MARCHEN                       |        | 71-2572-2    |            | 2000.0  |        |      | 10/10 |       |      |        |         |         |          | 3F 9 P                                                                                               |
|                             | MARCHEN                       |        | 71-2572-3    |            | 1500.0  |        |      | 10/10 |       |      |        |         |         |          | SFBP                                                                                                 |
|                             |                               |        | 71-2572-4    |            | 1000-0  |        |      | 01/02 |       |      |        |         |         |          | F AD                                                                                                 |
|                             |                               |        | 71-2572-5    | 22         |         |        |      | 20/00 |       |      |        |         |         |          | C 7GF RD                                                                                             |
|                             | CO LOACE OTV                  |        | 70-1970      | 200        |         |        |      | 10100 |       |      |        |         |         |          |                                                                                                      |
|                             |                               |        |              |            |         |        | Ċ    |       |       |      |        |         |         |          |                                                                                                      |
|                             |                               |        |              | Kn3        | 1500.0  |        | Š    | 40/09 |       |      |        |         |         |          |                                                                                                      |
| CHENCERAN/ GLASS LANINATE   | LAMINATENNITTAKER (PACE DIV.) |        | 70-1978-1    | ŝ          | 1000.0  | 1000   |      |       | 666N  | 066N |        |         |         |          | RHUHT                                                                                                |
| CHEMICK 407                 | HUGHSON CHEMICAL              |        | 71-2434      | 80X        | 100.0   |        |      |       | 270   | 270  |        |         |         |          | XXX                                                                                                  |
|                             |                               |        | 71-2434-1    | ž          | 1550.0  |        | 50   | 00/00 |       |      |        |         |         |          | ABCKXX                                                                                               |
|                             |                               |        | 71-2434-2    | NUS        | 1550-0  |        |      | 10/10 |       |      |        |         |         |          | BCKXX                                                                                                |
|                             |                               |        | 70-1041      |            | 25      | 100    |      |       |       |      |        |         |         | <u>د</u> | XXI HAU                                                                                              |
|                             |                               |        |              |            |         |        |      |       |       |      |        |         |         |          |                                                                                                      |
|                             |                               |        | 1-1961-07    |            | 117.0   | 55     |      |       |       |      |        |         |         |          |                                                                                                      |
|                             | CHEM                          |        | 70-1961-2    | A-50       | 132.0   | 295    |      |       |       |      |        |         |         |          |                                                                                                      |
| CMR                         | CHEN                          |        | 70-1961-3    | A-50       | 156.0   | 310    |      |       |       |      |        |         |         |          | XXTHAQ                                                                                               |
|                             | CREW                          |        | 70-1961-4    | IN         | 122.0   | 302    |      | •     |       |      | •      |         |         |          | XX7T                                                                                                 |
| CMA                         |                               |        | 70-1961-5    | INI        | 314.0   | 411    |      |       |       |      |        |         |         |          | XXCHVQ                                                                                               |
| Crea                        | THIDKDL CHEM CORP             |        | 70-1977      | A-50       | 133.0   | 294    |      |       |       |      |        |         |         |          | XX7                                                                                                  |
| ĊĦ                          | THIDKOL CHEM CORP             | •      | 1-1977-1     | A-50       | 131.0   | 304    |      |       |       |      |        |         |         |          | XXTHAO                                                                                               |
| CINK                        | THIDKOL CHEM CORP             |        | 70-1977-2    | A-50       | 120.0   | 290    |      |       |       |      |        |         |         |          | XXT                                                                                                  |
| C                           | THIOKOL CHEM CORP             |        | 70-1977-3    | A-50       | 112.0   | 279    |      |       |       |      |        |         |         |          | XXCHVQ                                                                                               |
|                             | CHEN                          |        | 70-1977-4    | I          | 778.0   | 470    |      |       |       |      |        |         |         |          | XXTHAO                                                                                               |
|                             |                               |        | 70-1077-5    | N M N      | 757.0   | 572    |      |       |       |      |        |         |         |          | DVH.IXX                                                                                              |
|                             |                               |        |              |            |         |        |      |       |       |      |        |         |         |          | ~ ~ ~                                                                                                |
|                             | KOL CHFM                      |        | 70-1977-6    | Ē          | 0+642   | 245    |      |       |       |      |        |         |         |          | X Y PHAO                                                                                             |
| COBALT NITRATE/BORDN        | #SFC                          |        | 70-2054      | X OS       | 6 • 5   | 1000   |      |       | 666N  | 666N |        |         |         |          |                                                                                                      |
| COBALT NITRATE/BORON        |                               |        | 70-2054-1    | ŝ          | 16.5    | 1000   |      |       | 666N  | 000X |        |         |         |          |                                                                                                      |
| COIN SILVER                 | THE WILKINSON CO.             |        | 71-2271      | 60 X       | 1500.0  |        | 50   | 00/04 |       |      |        |         |         |          | E X MRMC                                                                                             |
| COIN SILVER                 | THE WILKINSON CO.             |        | 71-2271-1    | ŝ          | 1500.0  |        |      | 00/07 |       |      |        |         |         |          | R MC                                                                                                 |
| EX THE HOSE                 | MCKE INC                      |        | 71-3001      | COX<br>COX | 3000.0  |        | 50   | 40/00 |       |      |        |         |         |          | EGCOXX                                                                                               |
| CONFLEX TFE HOSE LINER      | HOKE INC                      |        | 71-3001-1    | XO3        | 3000.0  |        |      | 01/02 |       |      |        |         |         |          | XXOC                                                                                                 |
| TFE HOSE                    |                               |        | 71-3001-2    | XOS        | 2500.0  |        |      | 00/04 |       |      |        |         |         |          | EGCOXX                                                                                               |
| COLFLEX TFE HOSE LINER      |                               |        | 71-3001-3    | ŝ          | 2000-0  |        |      | 00/01 |       |      |        |         |         |          | COXX                                                                                                 |
|                             | WIRS + CARIE                  |        | 71-2672      | A-50       | 748-0   |        |      |       |       |      |        |         |         |          | OTHCXX                                                                                               |
|                             |                               |        | 71-2672-1    | A-50       | 757_0   |        |      |       |       |      |        |         |         |          | DIMCXX                                                                                               |
|                             |                               |        | 71-2672-2    |            | 757.0   |        |      |       |       |      |        |         |         |          | DIMCXX                                                                                               |
|                             |                               |        | 71-2677-3    |            | 0.458   |        |      |       |       |      |        |         | . H     |          | DINCXX                                                                                               |
| COTICS<br>FORMER CTATO      |                               |        | 71-2461      |            |         |        |      |       |       |      |        |         |         |          |                                                                                                      |
|                             |                               |        | 71-2451-1    |            |         |        |      |       |       |      |        |         |         | -        |                                                                                                      |
| CUPPER SIMIP                |                               |        | 1-162-11     |            | ů.      | 120    |      |       | 0001  | 0001 |        |         |         |          | < < 3<br>2<br>2<br>2<br>3<br>3<br>4<br>3<br>4<br>3<br>4<br>3<br>4<br>3<br>4<br>3<br>4<br>3<br>4<br>3 |
|                             |                               |        | >+>>=01      | ~ ~ ~ ~    | •       |        |      |       | ~~~2  |      |        |         | -       |          | 2                                                                                                    |
|                             |                               |        |              |            |         |        |      |       |       |      |        |         |         |          |                                                                                                      |

. . .

, , ,

, ...,

t t

こで 着す きゅうてい ませんご おんてんま ひとうちょう ステレート しんちょう またいしょう しんしょう

•

. . . . . . . . . .

\* \* \* \* \*

×

\*\*\*\*\*\*\*

and the state of the state of

The second secon

٩.

| THER S DESIGNATION MANUFACT<br>COPPER-INDIUM BISMUTH MSFC<br>COPPER/TIM COATED AMACONDA<br>COPPER/TIM COATED AMACONDA<br>COPPER/TIM COATED AMACONDA<br>COPPER/TIM COATED AMACONDA<br>COPPER/TIM PLATED GAC<br>COPPER/TIM PLATED GAC<br>COPPER/TIM PLATED GAC<br>COPPER/TIM PLATED GAC<br>COPPER/TIM PLATED GAC<br>COPMING 0010 GLASS CORMING<br>CURMING 0010 GLASS CORNING<br>CURMING 0010 GLASS CORNING | TURER<br>A WIRE + LASLE CO<br>A WIRE + LASLE CO<br>A WIRE + CABLE CO<br>A WIRE + CABLE CO<br>A WIRE + CABLE CO<br>A WIRE + CABLE CO<br>Class<br>Glass<br>Glass<br>Glass<br>Glass<br>Glass<br>Odge<br>Ddge                    |            | TEST RPT ND.         | 7EST<br>ENVR    | TEST<br>PRESS | TEST         | TQMI | NO DE |        | u    | 0000 | MT A          | -           | 1 × 1.            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------|-----------------|---------------|--------------|------|-------|--------|------|------|---------------|-------------|-------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | MIRE + LAGLE<br>MIRE + LAGLE<br>MIRE + CABLE<br>MIRE + CABLE<br>LASS<br>LASS<br>LASS<br>LASS<br>LASS<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD |            |                      |                 |               |              |      | 55    | POINT  |      | 151  | 5 S 1         | - 1         | CODE              |
| O U U U U U U U U U U U U U U U U U U U                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | WIRE + LAGLE<br>WIRE + CABLE<br>WIRE + CABLE<br>WIRE + CABLE<br>LASS<br>LASS<br>LASS<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>OGE                                                          |            | 70-2040-1            | 60 X            | 16.5          | 1000         |      | -     | 0000   | 0000 |      | 2             |             |                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | WIRE + CABLE<br>WIRE + CABLE<br>LASS<br>LASS<br>LASS<br>LASS<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD                                         |            | 70-2047              | ALEO            |               |              |      |       |        | •    |      | - •           |             |                   |
| TED<br>TED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | WIRE + CABLE<br>WIRE + CABLE<br>LASS<br>LASS<br>LASS<br>LASS<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD<br>STANDARD                                         |            | 70-2097-1            |                 |               | 200          |      |       |        |      |      |               | <u> </u>    |                   |
| TED<br>TED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | WIRE + CARLE<br>LASS<br>LASS<br>LASS<br>STANDARD<br>STANDARD<br>DGE<br>DGE                                                                                                                                                   |            | 70-2097-2            | M M M           | 754 . 0       | 515          |      |       |        |      |      |               | 3 4         |                   |
| TED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | LASS<br>LASS<br>LASS<br>STANDARD<br>STANDARD<br>STANDARD<br>DGE<br>DGE                                                                                                                                                       |            | 70-2097-3            | HMH             | 750.0         |              |      |       |        |      |      | - 1           | 1           |                   |
| TED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ING GLASS<br>ING GLASS<br>ING GLASS<br>ING GLASS<br>LTON STANDARD<br>LTON STANDARD<br>S DDDGE<br>PS DDDGE                                                                                                                    |            | 11-2702              | A-50            | 757.0         | 515          |      |       |        |      |      |               | n u         |                   |
| TED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ING GLASS<br>ING GLASS<br>ING GLASS<br>ING GLASS<br>LTON STANDARD<br>LTON STANDARD<br>S DDDGE<br>PS DDDGE                                                                                                                    | , ,-       | 71-2702-1            | A-50            | 779.0         | 520          |      |       |        |      |      | - }-          | -<br>-<br>- |                   |
| TED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ING GLASS<br>ING GLASS<br>ING GLASS<br>LTON STANDARD<br>LTON STANDARD<br>S DDDGE<br>PS DDDGE                                                                                                                                 | • ••       | 70-2203              | A-50            | 779.0         | 403          |      |       |        |      |      | - <b>-</b>    |             | CHARAKY<br>NMTAXY |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ING GLASS<br>LTOM STANDARD<br>LTOM STANDARD<br>LTOM STANDARD<br>S DDDGE<br>PS DDDGE                                                                                                                                          |            | 70-2203-1            | A-50            | 713.0         | 486          |      |       |        |      |      |               | 5           | XXVING            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | LTON STANDARD<br>LTON STANDARD<br>LTON STANDARD<br>Standard<br>Standard<br>PS DDDGE                                                                                                                                          |            | 10-2203-2            | A-50            | 775.0         | 49R          |      |       |        |      |      | -             | 15          | DMIAXX            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | LTON STANDARD<br>LTON STANDARD<br>LTDN STANDARD<br>SS DDDGE<br>PS DDDGE                                                                                                                                                      | •          | 71-2382              | ğ               | 1500.0        |              | 50   | 00/04 |        |      |      | -4            | 11          | EXMENT            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | LTUM STANDARD<br>LTON STANDARD<br>SS DDDGE<br>PS DDDGE                                                                                                                                                                       |            | 1-2382-1             | хoч             | 1500.0        |              |      | 00/00 |        |      |      | 4             | 0           | E KNINY 3         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | LTON STANDARD<br>LTDN STANDARD<br>SS DODGE<br>PS DDDGE                                                                                                                                                                       |            | 1-2263               |                 | 5000.0        |              |      | G0/04 |        |      |      | •             | 10          | 00 1 A X X        |
| LINER 22-01910-22 Hamilton Charles Constants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | LIUM STANDAKU<br>SS DODGE<br>PS DODGE                                                                                                                                                                                        |            | 1-2263-1             |                 | 6800.0        |              | -    | 00/04 |        |      |      | 4             | 10          | <b>OD LAXX</b>    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PS 0006E                                                                                                                                                                                                                     |            | 11-2263-2            | Š               | 3033.0        | 1000         |      | -     | 606N   | 0007 |      | 4             | 61          | XXTIOC            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | TS UUUVE                                                                                                                                                                                                                     |            | 1-2673               | INI             | 775.0         | 5 <b>1</b> 5 |      |       |        |      |      | +-            | 5           | ELMCXX            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              |            | 1-2673-1             |                 | 789.0         | 520          |      |       |        |      |      | <del>سر</del> | 15          | EL MC XX          |
| CICLERETU DOMANICU UNKIS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                              | ·          | 1-2495               |                 | 1500.0        |              | 50   | 00/04 |        |      |      | ۹             |             | ABBGAY            |
| 001-4-66                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | DLER LUKP                                                                                                                                                                                                                    |            | 1-2495-1             |                 | 1500.0        |              |      | 00/04 |        |      |      | ٩             | 10          | ABBC XY           |
| DECTOC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | CHRYSLER CURP                                                                                                                                                                                                                | r- ·       | 71-2495-2            | X09             | 1000.0        |              |      |       | 554    | 554  |      | C             | 13          | ABBCXX            |
| DE-A-Anga Datked Added 1006-E-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | CTCR TRIC<br>Correction                                                                                                                                                                                                      |            | U-88-11              |                 | 50.0          |              |      |       |        | 000X |      | ۹             | 61          | DTFL XX           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              |            | 1642-1               |                 | 1500.0        |              | 20   | 00/04 |        |      |      | ۹             | Ц           | AUCK XX           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              | -,         | 1-16+2-11            |                 | 1500.0        |              |      | 00/04 |        |      |      | ۹             | с <b>т</b>  | AUCNXX            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              | - •        | 1-2497-2             |                 | 1000-0        | 1000         |      | ٠     | - 606N | 666N |      | 4             | 5           | <b>UCEXX</b>      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              | - 1        | 10-1454              | A-50            | 524.0         | 44 T         |      |       |        |      |      | -             | 15          | DRBGGS            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              |            | 0-1954-1             | A-50            | 0.965         | 373          |      |       |        |      |      | +             | 15          | RB(465            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              |            | 70-1954-2            | A-50            | 341.0         | 391          |      |       |        |      |      | -             | 15          | R B 45 5          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              |            | 0-1954-3             | A-50            | 370.0         | 406          |      |       |        |      |      | -             | 5           | RBGGS             |
| 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | CURNING CURP                                                                                                                                                                                                                 |            | 70-2029              | Š.              | 1500.0        |              | 205  | 00/07 |        |      |      | ٩             | 11          | ADPXX             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              | 05/0       | 10-202-01            | 60X             | 1500.0        |              | -    | 00/04 |        |      |      | 4             | 2           | BADPXX            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              | - 1        | 2-6202-02            |                 | 200.0         |              |      |       | 504    | 204  |      | မ<br>ျ        | 13          | <b>ADPXX</b>      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              | - 1        | 0-6164-9             | 22.4            | 0.0001        |              |      |       | 4 50   | 450  |      | 0             |             | BADPXX            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              | - 14       | 71-2105<br>71-2705-1 |                 | 113.0         | 50           |      |       |        |      |      | ı – ۱         | 5           | C 2 C K X X       |
| 00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                              |            | 71-2623              |                 |               |              |      |       |        |      |      | -             |             | C ZCKXX           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              | - 1        | 1-2521               |                 | 0.0001        |              | 200  | 40/00 |        |      |      | ◀ .           | 7           | DAG4XX            |
| NCC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                              | - ,        | 1-222-1-             | 200             |               |              | -    | 00/04 |        |      |      | 4             | 2           | DAGHXX            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              | - <b>r</b> |                      | Š               |               | 1000         |      | -     |        | 506N |      | 7             | 2           | DAGHXX            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              |            | 1-2521-5             | xn <sub>2</sub> | 1000.0        | •            |      |       | 70%    | 704  |      | 0             | 13          | DAGHXX            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              | - 6        | 11-2213              |                 | 0.050         | 184          |      |       |        |      |      | <b></b> - ;   | 15          | DBCKAD            |
| ne.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                              |            | 1-2213-1             |                 |               | 5 F F        |      |       |        |      |      | - 1           | <u>5</u>    | BTCLXX            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              | - 6-       | 1-2503-1             |                 |               |              |      |       |        |      |      | - 1           | <u>^</u>    | AXCKXX            |
| 04 PUNF FLUID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                              |            | 70-2227              |                 | 0.0014        | 104          | 2    |       |        |      |      | - •           | <u>:</u> ۲  | AXCKXX            |
| OWIId                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                              | - г        | 0-233-3              |                 |               |              |      | *0.00 |        |      |      | 4             |             | X X X X X         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              | -          | 1                    |                 | ~~~~~         |              | -    | 40/10 |        |      |      | -             | -           | <b>XXXX</b> 9     |

,

• •~•

-

. ; ;

8

..

١ .

4

·, :

٩ : ł

7 :v

ì

÷,

|                                  | MATERIAL T                           | TEST DATA       | HY MANUFACTURF      | R<br>S       | DESIGNATION AS | V NUI.       | υF           | אמנ וד              | 72            |         |                      | P 261    | ç                 |
|----------------------------------|--------------------------------------|-----------------|---------------------|--------------|----------------|--------------|--------------|---------------------|---------------|---------|----------------------|----------|-------------------|
| MFGR S DESIGNATION               | MANUF AC TURER                       | SPEC.<br>THICK. | TEST RPT NO.        | TEST<br>ENVR | TEST<br>PRESS  | TFST<br>TFMP | ENFP<br>FNFP | NN (1F F<br>React P | FLASH<br>POIN | 61 R1 P | PRUP WT<br>NTST LNSS |          | MA TI.<br>C (ID = |
| DC-704 DUMP FLUID                |                                      |                 | 70-2227-2           | 60 X         | 2500-0         |              |              | 00/04               |               |         |                      | 10       | BVXXXX            |
| PUMP FLUI                        |                                      |                 | 70-2227-3           | GUX          | 3000.0         |              | -            | 01/02               |               |         |                      | 0        | BVXXXX            |
| -704 PIMP                        |                                      |                 | 70-2227-4           | COX<br>SOX   | 3500.0         |              |              | 01/02               |               |         |                      | 10       | BVXXXX            |
| -704 PUMP                        |                                      |                 | 702227-5            | GDX          | +000.0         |              | -            | 01/02               |               |         |                      | 0        | BVXXXX            |
| -704 PIMP                        |                                      |                 | 70-2227-6           | 60)          | 4500.0         |              |              | 10/10               |               |         |                      | 10       | AVXXX             |
|                                  |                                      |                 | 70-2227-7           | 60 X         | 5000.00        |              | •            | 10/10               |               |         |                      | 01       | BVXXXX            |
| +66-                             | CORNING                              |                 | 71-2404             | 60 X         | 250.0          |              |              | 00/04               |               |         |                      | 2        | BTCL XX           |
|                                  | CORNING                              |                 | 71-2404-1           | 20X          | 74.0           | 1000         |              |                     | 666N          | 0002    |                      | -        | TCLXX             |
| DC-997 VARNISH<br>DC-997 VARNISH | DOW CORNING CORP<br>Dow Corning Corp | • 0050          | 70-2189             |              | 1500.0         |              |              | 00/04               |               |         |                      |          | BICLXX            |
|                                  | DRUENS NG                            |                 | 70-2189-2           | X D S        |                |              | 04           | 70700               |               |         |                      | 1 -      | BICLYX<br>BICLXX  |
|                                  | CORNING                              |                 | 70-2189-3           | X DU<br>U    | 100.0          | 1000         |              | -                   | 666           | 0001    |                      |          | BTCLXX            |
|                                  | CORNINC                              |                 | 70-2189-4           | 20X          | 500.0          |              |              | •                   | 643           | 643     |                      | 12       | BTCLXX            |
|                                  | CORNING                              |                 | 70-2189-5           | GOX          | 1000.0         |              |              |                     | 5 8')         | ٦٩٢     |                      | 13       | HTCL XX           |
|                                  | CORNING                              |                 | 70-2189-6           | ŠŐ           | 1500.0         |              |              |                     | 387           | 3 A ,   |                      | 13       | HTCL XX           |
|                                  | CORNING                              |                 | 70-2189-7           | COX          | 2              | ļ            |              |                     | 370           | 370     |                      | <b>6</b> | BTCLXX            |
|                                  | CORN ING                             |                 | 71-2480             | A-50         |                | 471          |              |                     |               |         |                      | 5        | ATCL XX           |
| DC-997 VARNISH                   | DOW CORNING CORP                     |                 | 71-2480-1           | A-50         |                | 501          |              |                     |               |         |                      | <u>5</u> | HTCLXX            |
| 2-CA-FLUORO-BIPHENYL             |                                      |                 | 70-2066             | 60X          |                |              |              |                     | 287           | 162     |                      | <u> </u> | AVEPXX            |
| DELRIN                           | • DUPONI CO.                         |                 | 10-102              | X ( ) X      | 0,0            | 1000         |              |                     |               | 0005    |                      | -        | 11 P J X X        |
| DELKIN                           | DUPUNI CU.                           | 0160            | 10-102-10           |              | 0°42           |              |              | 20710               | זיול          | 504     |                      | 1:       |                   |
|                                  |                                      |                 | 10-102-11           |              |                | •            |              | 20/20               |               |         |                      | 12       |                   |
|                                  | DUPONI CO.                           |                 | 10-102-17           |              |                |              |              | 10/00               |               |         |                      | 1        |                   |
| DEC RIN                          |                                      |                 | 10-102-2            | ŝ            | 0.001          | -            | 2            |                     | 4 A 5         | 4.81    |                      |          |                   |
| DEL B IN                         | DIPON COL                            |                 | 10-102-3            | xuy          | 50.05          |              |              |                     | 457           | 457     |                      |          | DI AJXX           |
| DELKIN                           | DUPONT                               |                 | 10-202-4            | x og         | 500.0          |              |              |                     | 382           | 3.9.2   |                      | 5        | DL AJXX           |
| DELRIN                           | CUPONT CO                            |                 | 10-102-5            | 60 X         | 1000.0         |              |              |                     | 373           | 373     |                      | 13       | DLAJXX            |
| DELRIN                           | CD1                                  | •0750           | 10-102-6            | ×09          | 500.0          |              |              | C0/04               |               |         |                      | 10       | OL AJXX           |
| DELRIN                           | DUPONT COI                           | • 750           | 10-102-7            | ¥09          | 1000.0         |              |              | 01/03               |               |         |                      | C I      | סר אטאצ           |
| DELRIN                           | DUPONT CO.                           | •0750           | 0-102-8             | X CO         | 1500.0         |              |              | 01/02               |               |         |                      | 0        | PLAJXX            |
|                                  | E-I. DUPONT COINC.                   | • 0150          | 12-102-9            | 205<br>202   | 2000-0         |              | e<br>L       | 04/04               |               |         |                      | 2:       |                   |
| DEXIGANS INSULATION              | DEXTER LUKP                          |                 | 55, 1-01<br>5991-07 | x x          | 0.005          |              | 20           | 40/00               |               |         |                      | 19       | REGDXX            |
|                                  |                                      |                 | 70-1993-1           | XQS          | 1500.0         |              |              | 00/07               |               |         |                      | 207      | BFGDXX            |
| DEXIGLASS INSULATION             |                                      |                 | 10-1993-1           | х<br>су      | 1500.0         |              | 04           |                     |               |         |                      | Ξ        | BFGDXX            |
|                                  | DEXTER CORP                          |                 | 70-1993-2           | 60 X         | 500.0          | 1000         |              | •                   |               | 666N    |                      | 13       | BFGDXX            |
| "FXIGLASS INSULATION             | TEK CORP                             |                 | 70-1993-3           | 60 X         | 1501.0         | 1000         |              | 2                   | ~             | 060N    |                      | 13       | BFGDXX            |
| DN:-313                          | CHEMICAL                             |                 | 71-2435             | 60 X         | 1000.0         |              | i            |                     | 0.66          | 390     |                      | <u> </u> | BGBSXX            |
|                                  | CHEMICAL                             |                 | 71-2435-1           | X DS         | 1500.0         |              | 50           | 00/04               |               |         |                      | 1        | BGBSXX            |
|                                  | SUN CHEMICAL CORP<br>MD              | .0760           | 71-2435-2           | X 09         | 1560.0         |              |              | 19/10               |               |         |                      |          | BGBSXX            |
|                                  | NR<br>NR                             | .0750           | 70-2209-1           | XOS          | 500.0          |              |              | 10/07               |               |         |                      | 2 -      | XXXX MO           |
|                                  | NR.                                  |                 | 70-2209-2           | COX<br>SOX   | 1500.0         |              | 50           | 00/00               |               |         |                      | : =      | DMKXXX            |
|                                  |                                      |                 |                     |              |                |              |              |                     |               |         |                      |          |                   |

1 Singer

~ ;;

¢.

۲,

| HIGK & UESIGNALIUN | MANUF AC TURER        | SPEC.<br>THICK. | TEST RPT NN. | TEST<br>FNVR | TEST<br>PRESS | TEST<br>TEMP | I MP T<br>ENER | NC UF F | FLASH<br>POINI | FIRF<br>PT | PRUP | HT I<br>USS |      | MATL<br>CUDE   |
|--------------------|-----------------------|-----------------|--------------|--------------|---------------|--------------|----------------|---------|----------------|------------|------|-------------|------|----------------|
| DRILL ROD          | NR                    |                 | 70-2209-3    | с O X        | 1500.0        |              |                | 00/00   |                |            |      |             |      | CMXXXX         |
| ш.                 | D.                    |                 | 10-56        | 60 X         | 6•2           |              |                |         | 672            | 672        |      | -           | 13   | DACNXX         |
|                    | SCIENCES              |                 | 70-1937      | X OS         | 1500.0        |              | 50             | 0C/04   |                |            |      | -           | 11   | СНІАХ          |
|                    | SCIENCES C            |                 | 937-         | ¥09          | 1000.0        | 1000         |                |         | 0690           | 069N       |      | ſ           |      | CHIAXX         |
|                    | SCIENCES C            | .0750           | 70-1937-2    | <u>60</u>    | 1500.0        |              |                | 00/07   |                |            |      | -           |      | CHIAXX         |
|                    | AL SCIENCES C         |                 | 1            | 60X          | 1500.0        | 1000         |                | ۷       | 666N           | 006N       |      |             |      | CHIAXX         |
|                    | -                     |                 | 70-2222      | Х09          | 1500.0        |              |                | 00/04   |                |            |      | -           |      | DUCPIA         |
| DURDID 5813        |                       |                 | 70-2222-1    | COX          | 1500.0        |              | 50             | 00/07   |                |            |      |             |      | DUCPIA         |
| DUR01D 5813        | ROGERS CORP           |                 | 70-2222-10   | 60X          | 1000.0        |              |                | 10/10   |                |            |      |             |      | DUCPIA         |
| DURDID 5813        | ROGERS CORP           |                 | 70-2222-11   | 60 X         | 500.0         |              |                | 00/00   |                |            |      |             |      | 5              |
| DURDIO 5813        |                       |                 | 70-2222-2    | 60 X         | 1000.0        |              |                |         | 260            | 940        |      |             |      | DUCP1A         |
| DUR010 5613        |                       |                 | 70-2222-3    | ¥05          | 2500.0        |              |                | 10/10   |                |            |      | •           |      | DUCPIA         |
| DURDID 5813        | ROGERS CORP           |                 | 70-2222-4    | X OS         | 1500.0        |              |                | ~       |                |            |      |             |      | DUCP I A       |
| CURUID 5813        | RUGERS CORP           |                 | 70-2222-5    | 60 X         | 1000.0        |              |                | 10/10   |                |            |      | •           |      | DUCPIA         |
|                    | 5                     |                 | 70-2222-6    | COX          | 500.0         |              |                | 00/04   |                |            |      |             |      | DUCPIA         |
| DURDID 5813        |                       |                 | 70-2222-7    | 60           | 5000.0        |              | 50             | 00/04   |                |            |      |             |      | DUCPIA         |
|                    |                       |                 | 70-222-8     | Ň            | 2500.0        |              |                | 10/10   |                |            |      |             |      | DUC P I A      |
|                    | ROGERS CORP           |                 | 70-222-9     | 60 X         | 1500.0        |              |                | 01/01   |                |            |      | •           |      | DUCPIA         |
| DOAC MICKEL PLATED | ,                     |                 | 70-2159      | 50X          | 4500.0        |              |                | 00/04   |                |            |      |             |      | HWCWTO         |
|                    | KER SEAL/LOS ANGL     |                 | 69-1565      | CO X         | 5.0           | 1000         |                |         | 950            | 666N       |      |             |      | XXQQQQ         |
| E-515-8            | SEAL/LOS ANGL         |                 | 69-1565-1    | XŨIJ         | 10.0          | 1000         |                |         | 930            | 000N       |      |             |      | 000D X X       |
| E-515-8            | SEAL/LOS              |                 | 69-1565-10   | COX          | 1000-0        |              |                |         | 299            | 299        |      | -           | 0 13 | XX 0000        |
| E-515-6            | SEAL/LDS ANGL         |                 | 69-1565-11   | 60 X         | 1087.0        |              |                |         | 296            | 296        |      |             |      | DUDDXX         |
| E-515-8            | SEA! /LOS ANGL        |                 | 69-1565-12   | 60 X         | 1265.0        |              |                |         | 321            | 321        |      |             |      | DODPXX         |
| E-515-8            | SEAL/LOS ANGL         |                 | 69-1565-13   | Š            | 1500.0        |              |                |         | 282            | 282        |      | -           |      | x x a a a a    |
| E-515-8            | SEAL/LDS ANGL         |                 | 69-1565-14   | COX<br>COX   | 1565.0        |              |                |         | 331            | 331        |      | -           |      | xxaana         |
| E-515-8            | SEAL/LOS ANGL         |                 | 69-1565-15   | <u>60</u> X  | 2000.0        |              |                |         | 29.0           | 290        |      | -           |      | <b>NODD XX</b> |
| E-515-8            | SEAL/LOS ANGL         | •0750           | 69-1565-16   | 60 X         | 1500.0        |              |                | +0/00   |                |            |      |             |      | <b>DUDDXX</b>  |
| E-515-8            | SEAL/LOS ANGL         | •0750           | 69-1565-17   | ŝõx          | 2000.0        |              |                | 04/04   |                |            |      |             |      | XXQQQQ         |
| E-515-8            | SEAL/LOS ANGL         | • 0 7 5 0       | 565-1        | 60 X         | 2500.0        |              |                | 01/04   |                |            |      | •           |      | XXQQQQQ        |
| E-515-8            | SEAL /LOS ANG!        | •0150           | 7            | õ            | 200.0         |              | 200            | 04/04   |                |            |      |             |      | XX GOOG        |
| E-515-8            | SEAL/LCS ANGL         |                 | 69-1565-2    | Š<br>O<br>O  | 20.0          | 1000         |                |         | 920            | 666N       |      |             |      | XXQQQQ         |
| E-515-8            | CCAL/LOS ANGL         | •0150           | 69-1565-20   | Š            | 1000.0        |              |                | 10/10   |                |            |      |             |      | DOCOXX         |
| E-515-8            | SEAL/LCS ANGL         | • 0 7 5 0       | 565-         | 80X          | 1500.0        |              | 200            | 10/10   |                |            |      |             |      | xx0000         |
| E-515-6            | SEAL/LOS ANGL         | .0750           | 69-1565-22   | Š            | 2000,0        |              |                | 10/10   |                |            |      |             |      | x x 0000       |
| E-515-8            | SEAL/LOS ANGL         |                 | 565-         | 60X          | 25.0          |              |                |         | 604            | 621        |      | -           |      | XXOOOO         |
| E-515-8            | SEAL/LOS ANGL         |                 | 565-         | ŝ            | 30.0          | 1000         |                |         | 926            | 066N       |      |             |      | XX 0000        |
| E-515-8            | SEAL/LOS APUL         |                 | 69-1565-5    | GOX          | 40.0          |              |                |         | 510            | 510        |      | _           |      | XXQQQQ         |
| E-515-8            | SEAL/LOS ANG          |                 | 69-1565-6    | Š            | 50.0          |              |                |         | 510            | 510        |      |             |      | xx 0000        |
| E-515-8            | SEAL/LOS ANGL         |                 | 69-1565-7    | 60 X         | 50.0          |              |                |         | 435            | 435        |      | -           |      | DUDDXX         |
| E-515-8            | SEAL/LDS ANGL         |                 | 69-1565-R    | × 00         | 100-0         |              |                |         | 368            | 368        |      |             |      | X X 0000       |
| Ĩ                  | ANGL                  |                 | 69-1565-9    | <b>2</b> 09  | 500.0         |              |                |         | 797            | 297        |      | -           | 6    | 0000 X X       |
| E-515-8            | SEAL/LOS ANGI         |                 | 70-1970      | A-50         | 746.0         | 505          |                |         |                |            |      |             | -    | XXUDDU         |
| E-515-8            | PARKED CEAL/INS ANCIS |                 |              | •            |               |              |                |         |                |            |      |             |      |                |

MATERIAL TEST DATA BY MANUFACTURFH S DESIGNATION AS DF 31 JAN 12

.

.

PAGE 10

•

ちょうしょう しょうそう しょうちょう ひょうちょう ちょうちょう かんしょう かんしょう かんしゅう かんしゅう しょうしゅう かんしゅう かんしょう ひょうしょう しょうしょう しょうしょう しょうしょう しょうしょう しょうしょう しょうしょう しょうしょう しょうしょう

and the second s

.

×

••••

•

; ;

MATERIAL TEST DATA BY MANUFACTURFR S DESIGNATION AS OF 31 JAN 72

PAGE 11

1 л

ţ

. •

•

I

×

ľ

7 i

١.

i Ng

And the Association of the Assoc

2

,

| MFGR S DESTGNATION | MANUFACTURER                                   | SPEC.<br>THICK. | TEST RPT NO.             | TEST<br>ENVR         | rest<br>Press | TEST IMPT<br>TEMP ENER | IMPT NO OF<br>Ener react | OF FLASH<br>CT POINT | F I R<br>P T | F PREP WT<br>DISI LOSS | а I<br>I I  | MATL<br>CODE                            |
|--------------------|------------------------------------------------|-----------------|--------------------------|----------------------|---------------|------------------------|--------------------------|----------------------|--------------|------------------------|-------------|-----------------------------------------|
| E-515-8            | PARKER SEAL/LDS ANGLS                          |                 | 70-1970-2                | A-50                 | 748.0         | 510                    |                          |                      |              |                        |             | DUCDXX                                  |
| E-515-8            | SEAL/LOS                                       |                 | 70-1970-3                | A-50                 | 805.0         | 497                    |                          |                      |              |                        |             | xxaaaa                                  |
| E-540-B            | PARKER SEAL/LDS ANGLS                          |                 | 70-1972                  | A-50                 | 267.0         | 416                    |                          |                      |              |                        | _           | DVCDXX                                  |
| E-540-8            | PARKER SEAL/LOS ANGLS                          |                 | 70-1972-1                | A-50                 | 768.0         | 489                    |                          |                      |              |                        | 15          | DVDDXX                                  |
| E-540-8            |                                                |                 | 70-1972-2                | A-50                 | 508.0         | 457                    |                          |                      |              |                        | T 15 (      | DVDDXX                                  |
| E-54C-8            | SEAL/LOS                                       |                 | 70-1972-3                | A-50                 | 760.0         | <b>¢</b> 87            |                          |                      |              |                        | 15          | DVCDXX                                  |
| E-540-8            |                                                |                 | 70-1972-4                | A-50                 | 758.0         | 500                    |                          |                      |              |                        | 19          | DVCDXX                                  |
| E-617-9            | SEAL/LOS                                       |                 | 691564                   | CO X                 | 5.0           |                        |                          | 586                  | 64           | 9                      | 13          | CHEDXX                                  |
| E-617-9            | SEAL/LOS                                       |                 | 69-1564-1                | ×00                  | 25.0          |                        |                          | 450                  | 5            | 6                      | 61          | CHDDXX                                  |
| É-617-9            |                                                | .0750           | 69-1564-11               | XOS                  | 4500.0        | 50                     | 00/00                    |                      |              |                        | 17          | CHEDXX                                  |
| E-617-9            |                                                | .0750           | 69-1564-12               | ×09                  | 4500.0        |                        | 10/10                    | 10                   |              |                        | 5           | CHEDXX                                  |
| E-617-9            |                                                |                 | 69-1564-13               | XOS                  | 4000.0        |                        | 01/01                    | 01                   |              |                        | 07          | CHEDXX                                  |
| E-617-9            |                                                |                 | 69-1564-14               | X09                  | 3000.0        |                        |                          | 27                   | 8 271        | σ                      | 13          | CHODXX                                  |
| E-617-9            | PARKER SEAL/LOS ANGLS                          |                 | 69-1564-15               | X 0 9                | 3000.0        |                        |                          | 234                  | 23           | ÷                      | 67          | CHEBXX                                  |
| E-617-9            |                                                |                 | 69-1564-16               | XOS                  | 5000-0        | Ġ                      | 50 00/                   | /04                  |              |                        | 1           | CHUDXX                                  |
| E-617-9            | SEAL/LDS                                       |                 | 69-1564-17               | X O S                | 500-0         | •                      | 0                        | 10                   |              |                        | 0           | CHDCXX                                  |
| E-617-9            | SEAL /LOS                                      |                 | 69-1564-18               | XUS                  | 0.0001        |                        | 10/10                    | 10                   |              |                        | 2           | CHDOXX                                  |
| 6-617-9            | SEAL /LOS                                      |                 | 64-1564-19               | SOX S                | 1500.0        |                        | 0/10                     |                      |              |                        | 2           | CHUDXX                                  |
| E-617-9            | SEAL /1 OS                                     |                 | 69-1564-2                | X S                  |               |                        |                          | - 07<br>-            | 401          |                        | ) (*<br>4 ~ | CHUNKY                                  |
| F-617-9            | SEAL /1 OS                                     |                 | 49-1566-20               | E D X                | 2500-0        |                        | 10/10                    |                      |              |                        |             | CHDDXX                                  |
| F-417-9            | SEAL /I DS                                     |                 | 40-1544-21               | A Go                 |               | ŭ                      |                          | 10                   |              |                        | 22          |                                         |
| F-617-0            | SEAL /I DS                                     |                 | 00 1564-22               | ŝ                    |               |                        |                          |                      |              |                        | -           |                                         |
|                    | SCAL / DS                                      |                 | 07-1/04-22<br>40-1544-23 |                      |               |                        |                          |                      |              |                        | 4 4         |                                         |
|                    |                                                |                 |                          | ()<br>()<br>()<br>() |               | n d                    |                          |                      |              |                        | 9           |                                         |
|                    |                                                |                 | 69-1564-24               | ŝ                    |               | 600 Z                  | 100100 G                 | 224                  | 465          |                        |             |                                         |
|                    |                                                |                 |                          |                      |               |                        |                          |                      |              |                        | 2 :         | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |
|                    | DAPKED CEAL/LUS ANGLO<br>DAPKED CEAL/LOS ANGLO |                 | 40-1277-2                |                      |               |                        |                          | 200                  | 222          |                        | 5           |                                         |
|                    | SCAL/LUS                                       |                 |                          |                      | 0.000         |                        |                          |                      |              |                        | <u>-</u>    |                                         |
|                    | SCAL/LUS                                       |                 | 0-4061-60                | s no                 | 1000.0        |                        |                          |                      |              | _                      | 2           | CHUUXX                                  |
|                    | SEAL/LUS                                       |                 | 69-1564-1                | ŝ                    | 1500.0        |                        |                          | 12                   | 273          | ~                      |             | CHIDOXX                                 |
|                    | AL/LUS                                         |                 | 69-1564-8                | X                    |               |                        |                          | 287                  |              |                        | 13          | CHIDDXX                                 |
|                    | MFG.                                           | • 0050          | SP-6918                  | Š                    |               | 1000                   |                          | 63                   | 4            | •                      | 13          | ABXXXX                                  |
|                    |                                                | • 0050          | SP-6918-1                | X OS                 | 25.0          |                        |                          | 659                  |              |                        | Ē           | ABXXXX                                  |
| EA-40 ADHESIVE     |                                                |                 | SP-6918-10               | ŝ                    | 1500.0        |                        |                          | 30                   | 904          | .*                     | 13          | ABXXXX                                  |
|                    |                                                |                 | SP-6918-11               | 60 X                 | 50.0          |                        |                          | 521                  |              |                        | 2           | ABXXXX                                  |
|                    | _                                              |                 | 5P-0918-12               | Š                    | 500.0         |                        |                          | 465                  | 465          | 10                     | Ę           | ABXXXX                                  |
|                    | MFG                                            |                 | SP6918-13                | ×00                  | 2000.0        |                        |                          | 253                  |              | ~                      | 5           | ****                                    |
| -                  | MFG                                            |                 | SP-6918-14               | Š                    | 100.0         |                        |                          | 507                  |              | -                      | 13          | ABXXXX                                  |
|                    | 5<br>L                                         |                 | SP-6918-15               | 60X                  | 1000.0        |                        |                          | 304                  |              |                        | 13          | XXXXB                                   |
| EA-40 ADHESIVE     | MFG                                            | •0050           | SP-6918-2                | Š                    | 50.0          |                        |                          | 637                  |              | _                      | 13          | ABXXXX                                  |
|                    | Ю.<br>Ч                                        | • 0050          | SP-6918-3                | COX                  |               | 1000                   |                          | 663                  | 666N         | ~                      | 61          | XXXXQ                                   |
| -                  | RFG                                            | • 0050          | SP-6918-4                | <u>60</u> X          | 165.0         |                        |                          |                      | 66           | •                      | 1           | ABXXXX                                  |
|                    | #FG                                            | -0050           | SP-6918-5                | GUX                  | 3500.0        |                        | 10/00                    | 01                   |              |                        | 2           | ABXXXX                                  |
| -                  | りしな                                            | •0050           | SP-6918-6                | Š                    | 4000.0        |                        | 40/00                    | 40                   | •            |                        | 0           | ABXXXX                                  |
| ZA-40 ADHESIVE     | SNDOTH-DN MFG CO.                              | • 0050          | SP-6918-7                | COX                  | 4500.0        |                        | 04/04                    | 04                   |              |                        | 20          | ABXXXX                                  |

. . .

4

÷ 1

•

.

a server of the server of the server and the server of the

1 1005 10

,

ł

į

|                                      | MATERIAL T                              | TEST DATA (     | RY MANUFACTURFR         | s             | DESIGNATION     |              | AS OF           | NAL IF             | 12             |                              | PAGE 12     |
|--------------------------------------|-----------------------------------------|-----------------|-------------------------|---------------|-----------------|--------------|-----------------|--------------------|----------------|------------------------------|-------------|
| MFGR S DESIGNATION                   | MANUFALTURER                            | SPEC.<br>THICK. | TEST RPT NO.            | TES T<br>ENVR | TE ST<br>PRE SS | TEST<br>TEMP | I MP T<br>E NER | NO UF I<br>REACT P | FLASH PCINT 9  | FIRE PPOP WI<br>PT DIST LOSS | R T MATI    |
| EA-40 ADKESIVE                       | SMODTH-ON MFG CO.                       | •0050           | SP-6918-8               | COX           | 250.0           |              | 200             | 04/04              |                |                              | D 11 ABX:XX |
| EA-40 ADHESIVE                       |                                         | • 00 5 0        | Sp-6918-9               | 60X           | 000¢            |              | 200             | 01/01              |                |                              | Ξ           |
| EASY FLOW 45                         | HANDY AND HARHON                        |                 | 71-2528                 | Š             | 1500.0          |              | 50              | 00/04              |                |                              | A 11 FKM5MC |
| CAST FLOW 43                         |                                         |                 | 1-0212-11               |               |                 |              |                 |                    |                |                              | 5 0         |
| EALT-TLU 47<br>Fatvaein 45           |                                         |                 | 70-2138-1               | A-50          | 754.0           | 464          |                 | *0/04              |                |                              | 2 5         |
| EAZY-FLO 45                          | GAC                                     |                 | 70-2138-2               | A-50          | 775.0           | 501          |                 |                    |                |                              | 5           |
| EC-9-1-N GLASS YARN                  | Ş                                       |                 | 70-2093                 | 60%           | 1500.0          |              | 50              | 00/04              |                |                              | 11          |
| EC-9-1-N GLASS YARN                  | OWENS CORNING FIBGLS                    |                 | 70-2093-1               | 60X           | 1500.0          |              |                 |                    |                |                              | 10          |
| ASS                                  | CHENS CORNING FIBGLS                    |                 | 70-2093-2               | ×03           | 1000.0          |              |                 | <b>~</b>           | 1 666N         | N900<br>122                  | A 13 EDGUXX |
|                                      |                                         |                 | 2012-11                 | 33            |                 |              | Ċ               |                    | 401            | 1 - 1                        | 2 -         |
| ECCD-SIDCK K-19<br>ECCD-STACK R-19   | ENERSON CONTROL NO                      |                 | 71-2762-2               | ŝ             | 250.0           |              | 00              | 40/00<br>00/07     |                |                              |             |
|                                      | EMERSON CUMING INC                      |                 | 70-1953                 | A-50          | 401.0           | 505          |                 |                    |                |                              | 12          |
| ECCOFORM                             | ENERSING CULTURE INC                    |                 | 70-1953-1               | A-50          | 771.0           | 515          |                 |                    |                |                              | 15          |
| ĸ                                    | •••                                     |                 | 71-2825                 | GOX           | 100.0           |              |                 |                    | 517            | 517                          | 61          |
|                                      | 5                                       |                 | 71-2825-1               | COX           | 250.0           |              | 50              | 70/00              |                |                              | 1           |
| EHS-3                                | ATRESEARCH INDST DIV                    |                 | 71-2825-2               | X09           | 250.0           |              |                 | 00/07              |                |                              |             |
| SVSK                                 |                                         |                 | 11-2289                 | 503           | 2000-0          |              |                 | 40/00              |                |                              | 3:          |
|                                      |                                         |                 | 1-6972-11               | x age         | 0.0003          |              | C<br>U          | 10,10              |                |                              |             |
| ELASIUTER SYSK BIS (U-1              | MANICIUM SIANUAKU<br>Mamilitan Standado |                 | 71-2280-3               |               | 1500.5          |              | 20              | *0.00              | 525            | 5.2 4.                       |             |
|                                      |                                         |                 | 71-2289-4               | s s           | 3000-0          |              |                 |                    | 4 B 6          | 4 A K                        | 2           |
| LM 100                               | ELECTROFILM INC.                        |                 | 70-1876                 | eox<br>Cox    | 1500.0          |              |                 | 70/00              |                |                              | 2           |
|                                      | ELECTROFILM INC.                        |                 | 70-1876-1               | 50X           | 62.0            | 1000         |                 |                    | 1 666N         | 0690                         | ٤I          |
|                                      | ELECTROFILM INC.                        |                 | 70-1876-10              | COX<br>COX    | 1500.0          |              |                 |                    | 606            | <b>6</b> 0 <i>h</i>          | 13          |
|                                      |                                         |                 | 70-1876-11              | ×03           | 2000.0          |              |                 |                    | 59 A           | 5 9.8                        | 2           |
| ELECTROFILM 1000                     | Σ:                                      |                 | 70-1876-12              | 60X           | 950°0           |              |                 |                    |                | 450                          | <u> </u>    |
|                                      |                                         |                 | 70-1876-2               | ŝ             | 165.0           | 1000         |                 | -                  |                | 555V                         | 1:          |
| ELECTROFILM 1000<br>ELECTROFILM 1000 | FLEUTROFILM INC.<br>Fiertanetim inc.    |                 | 70-1876-1               | ŝ             | 0.004           | 0000         |                 |                    | 614<br>N900    | 014<br>050<br>0              | 2 4         |
|                                      |                                         | . 0050          | 70-1876-4               | COX           | 1500.0          |              | 50              | ÷0/00              |                |                              | 1           |
| _                                    |                                         |                 | 70-1876-5               | COX           | 50.0            | 1000         |                 |                    |                | 000N                         |             |
| ELECTROFILM 1000                     |                                         |                 | 70-1876-6               | 60X           | 50.0            | 1000         |                 | -                  |                | 0000                         | 5           |
| -                                    |                                         |                 | 70-1876-7               | ×09           | 100.0           | 1000         |                 |                    |                | 066N                         | -           |
| -                                    |                                         |                 | 70-1875-R               | 60X           | 500.0           |              |                 |                    | 581            | 58]                          | ň           |
| ELECTROFILM 1000                     | M INC.                                  |                 | 70-1576-9               | ŝ             | 1000.0          |              |                 |                    | 621            | 621                          | <u> </u>    |
| EN306                                | I NOS T                                 |                 | 57-0247                 | X OS          | 1565.0          |              |                 |                    | 467<br>1       | 495                          |             |
| ENS-342                              | AFRESEARCH THOST DIV                    |                 | 67-0794                 | ŝ             | 1087.0          |              |                 |                    | 4 0 4<br>6 0 4 | 43R<br>407                   |             |
|                                      | I SUM                                   |                 |                         |               |                 |              |                 | 007.00             | 175            | 146                          |             |
| EM5-342                              | AIRESEARCH INUS! ULV                    | 0620.           | 01-1010-19<br>7-1020-19 | ŝ             |                 |              | ¢,              | 20/10              |                |                              |             |
| ERS-342                              | INDST                                   | •0750           | 67-0794-4               | x os          | 250.0           |              | 2               | 40/00              |                |                              | -           |
| EKS-363                              |                                         | •0750           | SP-6929                 | GOX           | 25.0            |              |                 | I                  | 651            | 651                          | 5           |
|                                      |                                         |                 |                         |               |                 |              |                 |                    |                |                              |             |

. . .

ŧ

ì

i

AT BE LEWIST WATE

Ĺ

52

ł

| Hera & DeSimination         Multical matrix         Fig.         Fis. matrix         Fig.         Fis. matrix         Fig. matrix                                                                                                                                                                                                                                                                                                                                                                                                    |                    |                    |    |                 |            |               |        |     |       |              |            |     |   |              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|----|-----------------|------------|---------------|--------|-----|-------|--------------|------------|-----|---|--------------|
| MIRESTAC:         NOT:         0730         S=-037-11         DOI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Ś                  | MANUFACTURER       |    | SPEC.<br>THICK. | RPT NG     | TES T<br>ENVR | - ss   |     |       |              | F1RF<br>PT | LOS |   | HATL<br>CODE |
| ATTRESTART         10051         0100         0000         0000         0000         0000           ATTRESTART         10051         10051         0100         0000         0000         0100         0100           ATTRESTART         10051         10051         0100         0000         0000         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         0100         01000         010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | EMS-363            |                    | ۵  | .0750           | 1-609-dS   | Š             | 50.0   |     |       | 606          | <u></u> 06 |     |   | 00C Q X X    |
| ATTRESTARCI         MONST         Distr         Distr <thdistr< th="">         Distr         Distr</thdistr<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | EMS-363            |                    | ٥  | •0750           | SP-6929-10 | COX           | 000    |     | 04/04 |              |            |     | _ | DOCOXX       |
| ATTRESTANCE         10057         0710         51-0027-11         0070         200         00704         373         373           ATTRESTANCE         10057         11         0710         51-0027-11         0070         00704         373         373           ATTRESTANCE         10057         11         050         0704         373         373           ATTRESTANCE         10057         017         50         0704         373         373           ATTRESTANCE         10057         017         50         0704         373         373           ATTRESTANCE         10057         017         50         0704         50         0704           ATTRESTANCE         10057         017         50         01704         50         113         313           ATTRESTANCE         10057         017         50         01704         50         201         113           ATTRESTANCE         10057         017         50         01704         50         201         113           ATTRESTANCE         10057         01702         50         01702         50         201         113           ATTRESTANCE         10057         017 <td< th=""><th>ENS363</th><th></th><th>ရ</th><th>•0750</th><th>SP-6929-11</th><th>Š</th><th>500.0</th><th>200</th><th></th><th></th><th></th><th></th><th>_</th><th>DOCQXX</th></td<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ENS363             |                    | ရ  | •0750           | SP-6929-11 | Š             | 500.0  | 200 |       |              |            |     | _ | DOCQXX       |
| ATTRESTARCE         10057         0170         50072-13         632         1500.0         200         0701         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313         313 <th>EMS-363</th> <th></th> <th>٥</th> <th>.0750</th> <th>SP-6929-12</th> <th>CO X</th> <th>1000.0</th> <th>200</th> <th></th> <th></th> <th></th> <th></th> <th>-</th> <th>DOCOXX</th>                                                                                                                                                                                                                                                                                                                                                                                                                                               | EMS-363            |                    | ٥  | .0750           | SP-6929-12 | CO X          | 1000.0 | 200 |       |              |            |     | - | DOCOXX       |
| MIRSS RACH         NON         200         00004         773         773         773           MIRSS RACH         NOST         101         5000         500         00004         773         773         773           MIRSS RACH         NOST         101         5000         500         00004         773         773         773           MIRSS RACH         NOST         101         5000         500         00004         773         773         773           MIRSS RACH         NOST         101         5000         500         00004         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773         773<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | EMS-363            |                    | ٥  | •0550           | SP-6929-13 | Š             | 1500.0 | 200 |       |              |            |     | _ | DOCQXX       |
| MINESS MACH         MOST L/V         SP-0027-15         Gatx         150.00         50         773         713           MINESS MACH         MOST L/V         SP-0072-15         Gatx         500.00         50         07/01         713         713           MINESS MACH         MOST DIV         SP-0072-15         Gatx         500.00         50         07/01           MINESS MACH         MOST DIV         SP-0072-25         Gatx         700.00         50         07/01           MINESS MACH         MOST DIV         SP-0072-25         Gatx         700.00         50         07/01           MINESS MACH         MOST DIV         SP-0072-25         Gatx         700.00         20         201.01           MINESS MACH         MOST DIV         SP-0072-25         Gatx         1000.00         201.01         201         201           MINESS MACH         MOST DIV         SP-0072-25         Gatx         1000.00         201.01         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201 </th <th>EMS-363</th> <th></th> <th>Ċ</th> <th>•0.750</th> <th>SP-6929-14</th> <th>COX</th> <th>2000.0</th> <th>200</th> <th></th> <th></th> <th></th> <th></th> <th>-</th> <th>DOCQXX</th>                                                                                                                                                                                                                                                                                                                                                                                                                       | EMS-363            |                    | Ċ  | •0.750          | SP-6929-14 | COX           | 2000.0 | 200 |       |              |            |     | - | DOCQXX       |
| MIRESERVE:         NOTE:         Sensor-15         GIX         Source         Sour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ENS-363            |                    | د  |                 | SP-6929-15 | Š             | 150.0  |     |       | 37           | ~          |     | _ | DOCOXX       |
| MIRESEARCH         INOS         500.0         500.0         500.0         500.0         500.0           MIRESEARCH         INOS         101         566         676         711         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | EMS-363            |                    | ç  |                 | SP-6929-16 | CUX<br>CDX    | 500.0  | 50  | 90/06 |              |            |     | _ | DOCOXX       |
| ATRESTART         INDST DIV         579-6925-13         GOX         550.00         50         67%         7         1           ATRESTART         INDST DIV         0105         550.00         50         67%         7         1           ATRESTART         INDST DIV         579.00         51         51         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | EHS-363            |                    | ٥  |                 | SP-6929-17 | ×09           | 500.0  |     | 10/10 |              |            |     |   | DOCOXX       |
| MIRESTARIA         INDST         DIV         579.05         DIV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | EMS-363            |                    | ۵  |                 | SP-6929-18 | COX<br>COX    | 1500.0 | 50  | +0/00 |              |            |     | _ | DOCOXX       |
| MIRESEARCH         MOST         DIV         OTA         SP-0972-25         GDX         GDX         SP-0000         SP-00000         SP-00000         SP-00000         SP-00000         SP-00000         SP-00000         SP-00000         SP-00000         SP-00000         SP-000000         SP-0000000         SP-0000000         SP-0000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ENS-363            |                    | 0  |                 | SP-6929-19 | Š             | 1500.0 |     | 01/04 |              |            |     |   | DOCOXX       |
| NIRESEARCH         NOST DIV         SP-0072-26         GOX         TODOLO         291         291         291         291         291         291         291         291         291         291         291         291         291         291         291         291         291         291         291         291         291         291         291         291         291         291         291         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201 <th>EMS-363</th> <th></th> <th>۵</th> <th>•0750</th> <th>SP-6929-2</th> <th>GOX</th> <th>62.0</th> <th></th> <th></th> <th>566</th> <th>676</th> <th></th> <th>_</th> <th>DOCCXX</th>                                                                                                                                                                                                                                                                                                                                                                                                                                              | EMS-363            |                    | ۵  | •0750           | SP-6929-2  | GOX           | 62.0   |     |       | 566          | 676        |     | _ | DOCCXX       |
| ATTRESTARCH         INDET         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         211         <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | EMS-363            |                    | 0  |                 | 5P-6929-20 | Š             | 1000.0 |     |       | 31           | 291        |     | _ | DOCOXX       |
| ATRESTACT         HOST DIV         SP-0927-23<br>SIG         GOX         SO.05<br>SIG         SO.05<br>SIG <thso.05<br>SIG         <thso.05<br>SIG         <thso.< th=""><th>ENS~363</th><th></th><th>٥</th><th></th><th>SP-6929-21</th><th>GOX</th><th>500.0</th><th></th><th></th><th>211</th><th>211</th><th></th><th>_</th><th>DOCOXX</th></thso.<></thso.05<br></thso.05<br> | ENS~363            |                    | ٥  |                 | SP-6929-21 | GOX           | 500.0  |     |       | 211          | 211        |     | _ | DOCOXX       |
| ATRESENCY         INDEX         Cols         Los         Los <thline< thr="">         Los         Los         &lt;</thline<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ENS-363            |                    | 0  |                 | SP-6929-22 | ×09           | 50.0   |     |       | 0 <b>6</b> 2 | 290        |     |   | DOC 0XX      |
| MIRESERIC:         INDST         DIV         SP-6929-25         GXX         1000.0         345         345         D         13           AIRESERIC:         INDST         DIV         57-6929-25         GXX         2000.0         223         223         223         231         201         D         13           AIRESERIC:         INDST         DIV         0750         57-6929-25         GXX         2000.0         01/02         231         201         D         13           AIRESERIC:         INDST         DIV         0750         57-6929-26         GXX         5000.0         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | EMS-363            |                    | 0  |                 | SP-6929-23 | 60X           | 109.0  |     |       | 29b          | 286        |     | - | DGCQXX       |
| ATRESTARY         NOST DIV         SF-6929-25         GGX         1500.0         201         201         201         0         13           ATRESTARY         HOST DIV         0750         SF-6929-25         GGX         1500.0         00/04         643         523         201         0         10           ATRESTARCH         HOST DIV         0750         SF-6929-25         GGX         1000.0         01/02         643         523         0         10           ATRESTARCH         HOST DIV         0750         SF-6929-4         GGX         1000.0         01/02         643         523         0         10         0         10         0         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | FRS-363            |                    | 0  |                 | SP-6929-24 | Š             | 1000.0 |     |       | 345          | 345        |     | _ | DOCOXX       |
| ATRESENCT         NOST DIV         OTS0         SP-6979-26         GX         2000.0         640         643         D         D           ATRESENCT         NOST DIV         0750         SP-6979-3         GX         200.0         00/04         643         D         D           ATRESENCT         NOST DIV         0750         SP-6979-3         GX         200.0         01/02         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | E#K-353            |                    | 0  |                 | SP-6929-25 | 60X           | 1500.6 |     |       | 201          | 201        |     | - | DOCOXX       |
| Altrestance         House T         Diversional         Gots         165.0         Gots         165.0         101         101           Altrestance         House T         HouseT         House T         House T <th>EMS-363</th> <th></th> <th>٥</th> <th></th> <th>SP-6929-26</th> <th>Š</th> <th>2000.0</th> <th></th> <th></th> <th>223</th> <th>223</th> <th></th> <th>_</th> <th>XX I 000</th>                                                                                                                                                                                                                                                                                                                           | EMS-363            |                    | ٥  |                 | SP-6929-26 | Š             | 2000.0 |     |       | 223          | 223        |     | _ | XX I 000     |
| ATRESERVE!         NUMS         DIV         OT30         SP-697-4         DIX         Z00.00         DI/O2         DI/O2 <thdi o2<="" th="">         DI/O2         <thdi o2<="" th=""> <t< th=""><th>EMS-363</th><th></th><th></th><th>• 0750</th><th>SP-6929-3</th><th>X OS</th><th>1.65.0</th><th></th><th></th><th></th><th>643</th><th></th><th>_</th><th>DOCOXX</th></t<></thdi></thdi>                                                                                                                                                                                                                                                                                                                                             | EMS-363            |                    |    | • 0750          | SP-6929-3  | X OS          | 1.65.0 |     |       |              | 643        |     | _ | DOCOXX       |
| ARESEARCH HOST DIV       0750       5P-659       500       01/02       01/02         ARESEARCH HOST DIV       0750       5P-659       500       01/02       01/02         ARESEARCH HOST DIV       0750       5P-6929       60X       5000       01/02       01/02         ARESEARCH HOST DIV       0750       5P-6929       60X       5000       01/02       01/02         ARESEARCH HOST DIV       0750       5P-6929       60X       5000       01/02       01/02         ARESEARCH HOST DIV       0750       5P-6926       70X       5000       01/02       01/02         ARESEARCH HOST DIV       0750       5P-6926       70X       500       01/02       01/02         ARESEARCH HOST DIV       0750       5P-6926-10       60X       507       606       01         ARESEARCH HOST DIV       0750       5P-6926-11       60X       507       606       01         ARESEARCH HOST DIV       0750       5P-6926-13       60X       100       00/01       10         ARESEARCH HOST DIV       0750       5P-6926-13       60X       1000       00/01       10         ARESEARCH HOST DIV       0770       5P-6926-13       60X       100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | EHV-363            |                    | ٥  | •0150           | SP-6929-4  | Š             | 200.0  |     | 00/04 |              |            |     | - | 00CQXX       |
| ATRESERVCH         NOST         DIV         OT/00         DIV/00         DIV/02         DIV/02 <th></th> <th></th> <th>0</th> <th>• 0750</th> <th>5P-69 9-5</th> <th>X 09</th> <th>500.0</th> <th></th> <th>01/02</th> <th></th> <th></th> <th></th> <th>-</th> <th>DOCOXX</th>                                                                                                                                                                                                                                                                                                                                                |                    |                    | 0  | • 0750          | 5P-69 9-5  | X 09          | 500.0  |     | 01/02 |              |            |     | - | DOCOXX       |
| ATRESEARCH       TMDST       DIV       -0750       55-050.00       DI/02       DI         ATRESEARCH       TMDST       DIV       -0750       55-050.00       DI/02       DI       DI         ATRESEARCH       TMDST       DIV       -0750       55-050.00       DI/02       DI       DI         ATRESEARCH       TMDST       DIV       -0750       55-050.00       DI/02       DI       DI         ATRESEARCH       TMDST       DIV       -0750       59-9526-11       GDX       500.00       DI/02       DI       DI         ATRESEARCH       TMDST       DIV       -0750       59-9526-11       GDX       500.00       DI/02       DI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | EM3-303            |                    |    | •0150           | SP-6929-6  | ŝ             | 1000.0 |     | 01/02 |              |            |     |   | DOC GXX      |
| ATRESERVEN         MONST DIV         -0750         SP-9929-9         GGX         20500.0         01/02         572         572         67         10           ATRESERVEN         MOST DIV         -0750         SP-9929-9         GGX         2500.0         01/02         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                    | 9  | •0750           | 5P-6929-7  | 20X           | 1500.0 |     | 01/02 |              |            |     |   | SOC GXX      |
| AIRESEARCH         MOST DIV         -0750         SP-9926-10         G/X         500.0         572         572         610         3           AIRESEARCH         MOST DIV         -0750         SP-9926-10         G/X         500.0         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572 <th></th> <th></th> <th></th> <th>•0120</th> <th>5P-6929-8</th> <th>Š</th> <th>2000.0</th> <th></th> <th>01/05</th> <th></th> <th></th> <th></th> <th></th> <th>COXX</th>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                    |    | •0120           | 5P-6929-8  | Š             | 2000.0 |     | 01/05 |              |            |     |   | COXX         |
| AIRESEAL:       MOST DIV       57-69266       /dx       50.0       572       572       572       572       572       572       572       571       571       572       572       572       572       572       571       50.0       50       11         AIRESEACH       MOST DIV       .0750       55-6926-11       60x       500       500       00/01       567       606       0       11         AIRESEACH       MOST DIV       .0750       55-6926-11       60x       500       500       00/01       A       11         AIRESEACH       MOST DIV       .0750       55-6926-11       60x       750.00       50       00/01       A       11         AIRESEACH       MOST DIV       .0750       55-6926-11       60x       12       600       11       A       11         AIRESEACH       MOST DIV       .0750       55-9526-15       60x       12       600       00/01       A       11         AIRESEACH       MOST DIV       .0750       55-9526-16       60x       100       00       00       10         AIRESEACH       MOST DIV       .0750       57-9526-16       60x       100       00       10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                    |    | •0750           | SP-6269-6  | X             | 2500.0 |     | 01/05 |              |            |     |   | Coxx         |
| ATRESEARCH         INDS7         DIV         SP-6926-11         GOX         62.0         56.7         606         D         D           ATRESEARCH         INDS7         DIV         0750         SP-6926-11         GOX         50.0         00/01         A         11           ATRESEARCH         INDS7         DIV         0750         SP-6926-11         GOX         500.00         50         00/01         A         11           ATRESEARCH         INDS7         DIV         0750         SP-6926-17         GOX         1000.00         50         00/01         A         11           ATRESEARCH         INDS7         DIV         -0750         SP-6926-14         GOX         1500.00         50         00/01         A         11           ATRESEARCH         INDS7         DIV         -0750         SP-6926-14         GOX         1500.00         50         00/01         A         11           ATRESEARCH         INDS7         DIV         -0750         SP-6926-14         GOX         100.00         50         00/01         A         10           ATRESEARCH         INDS7         DIV         -0750         SP-6926-14         GOX         100.00         00/01         <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | EM5-382            |                    |    |                 | SP-6926    | ž             | 50.0   |     |       | 572          | 572        |     |   | XX1000       |
| AIRESERACH INDST DIV       0750       590.00       500.00       500.00       500.00       11         AIRESERACH INDST DIV       0750       59-6926-11       60X       750.00       50       00/01       A 11         AIRESERACH INDST DIV       0750       59-6926-11       60X       1000.00       50       00/01       A 11         AIRESERACH INDST DIV       0750       59-6926-14       60X       1000.00       50       00/01       A 11         AIRESERACH INDST DIV       0750       59-6926-14       60X       1000.00       50       00/01       A 11         AIRESERACH INDST DIV       0750       59-6926-14       60X       1000.00       50       00/01       A 11         AIRESERACH INDST DIV       0750       59-6926-14       60X       100.00       00/01       A 10         AIRESERACH INDST DIV       0750       59-6926-14       60X       100.00       00/01       A 10         AIRESERACH INDST DIV       0750       59-6926-14       60X       100.00       00/01       A 10         AIRESERACH INDST DIV       0750       59-6926-14       60X       100.00       00/01       A 10         AIRESERACH INDST DIV       0750       59-6926-15       60X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 542-362            |                    | Ċ  |                 |            | 202           | 62.0   | :   |       | 567          | 606        |     |   | 01XX         |
| ATRESEARCH INDST DIV       -0750       5P-6926-11       GOX       750.00       50       00/01       A       11         ATRESEARCH INDST DIV       -0750       5P-6926-17       GOX       1000.00       50       00/01       A       11         ATRESEARCH INDST DIV       -0750       5P-6926-17       GOX       1000.00       50       00/01       A       11         ATRESEARCH INDST DIV       -0750       5P-6926-15       GOX       1500.00       50       00/01       A       11         ATRESEARCH INDST DIV       -0750       5P-6926-15       GOX       1500.00       50       00/01       A       11         ATRESEARCH INDST DIV       -0750       5P-6926-16       GOX       100.00       00/01       A       11         ATRESEARCH INDST DIV       -0750       5P-6926-16       GOX       200.00       00/01       A       10         ATRESEARCH INDST DIV       -0750       5P-6926-16       GOX       500.00       00/01       A       10         ATRESEARCH INDST DIV       -0750       5P-6926-16       GOX       500.00       00/01       A       10         ATRESEARCH INDST DIV       -0750       5P-6926-16       GOX       500.00       00/01<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | EMS-382            |                    | 2  | • 0750          | SP-6926-10 | ŝ             | 200.0  | 50  | -     |              |            |     |   | 200 I XX     |
| AIRESEARCH INDST DIV       -0750       57-6926-13       GUX       1000.0       50       00701       A II         AIRESEARCH INDST DIV       -0750       57-6926-13       GUX       1000.0       50       00701       A II         AIRESEARCH INDST DIV       -0750       57-6926-15       GUX       1000.0       50       00701       A II         AIRESEARCH INDST DIV       -0750       57-6926-15       GUX       100.0       00701       A II         AIRESEARCH INDST DIV       -0750       57-6926-15       GUX       100.0       00701       A II         AIRESEARCH INDST DIV       -0750       57-6926-15       GUX       100.0       00701       A II         AIRESEARCH INDST DIV       -0750       57-6926-15       GUX       100.0       00701       A II         AIRESEARCH INDST DIV       -0750       57-6926-16       GUX       500.0       00701       A II         AIRESEARCH INDST DIV       -0750       57-6926-17       GUX       500.0       00701       A II         AIRESEARCH INDST DIV       -0750       57-6926-17       GUX       500.0       00701       A II         AIRESEARCH INDST DIV       -0750       57-6926-20       GUX       100.0       01/02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                    | 0  | • 0750          | SP-6926-11 | × 00          | 750.0  | 20  | -     |              |            |     |   | 01XX         |
| AIRESEACH INDST DIV       -0750       SP-6926-13       GOX       1250.0       50       00/01       A II         AIRESEARCH INDST DIV       -0750       SP-6926-14       GOX       1500.0       50       00/01       A II         AIRESEARCH INDST DIV       -0750       SP-6926-15       GOX       1500.0       50       00/01       A II         AIRESEARCH INDST DIV       -0750       SP-6926-15       GOX       100.0       00/01       A II         AIRESEARCH INDST DIV       -0750       SP-6926-15       GOX       100.0       00/01       A II         AIRESEARCH INDST DIV       -0750       SP-6926-15       GOX       200.0       00/01       A II         AIRESEARCH INDST DIV       -0750       SP-6926-15       GOX       200.0       00/01       A II         AIRESEARCH INDST DIV       -0750       SP-6926-19       GOX       500.0       00/01       A II         AIRESEARCH INDST DIV       -0750       SP-6926-19       GOX       435.0       00/01       A II         AIRESEARCH INDST DIV       -0750       SP-6926-20       GOX       1000.0       01/02       572       572       0       010         AIRESEARCH INDST DIV       -0750       SP-6926-20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |                    |    | 0610.           | 21-9269-17 | K B           | 1000.0 | 0   |       |              |            |     |   | XXIO         |
| AIRESEARCH INDST DIV       -0750       SP-5926-15       GGX       1000.00       00701       A 10         AIRESEARCH INDST DIV       -0750       SP-6926-15       GGX       1000.00       00701       A 10         AIRESEARCH INDST DIV       -0750       SP-6926-15       GGX       1000.00       00701       A 10         AIRESEARCH INDST DIV       -0750       SP-6926-15       GGX       200.00       00701       A 10         AIRESEARCH INDST DIV       -0750       SP-6926-15       GGX       500.00       00701       A 10         AIRESEARCH INDST DIV       -0750       SP-6926-15       GGX       500.00       00701       A 10         AIRESEARCH INDST DIV       -0750       SP-6926-15       GGX       500.00       00701       A 10         AIRESEARCH INDST DIV       -0750       SP-6926-20       GOX       100.00       01/02       572       572       0       10         AIRESEARCH INDST DIV       -0750       SP-6926-20       GOX       16.00       01/02       572       572       0       10         AIRESEARCH INDST DIV       -0750       SP-6926-20       GOX       16.00       01/02       10       10         AIRESEARCH INDST DIV       -0750                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CF3-382<br>CK5-382 |                    | 00 | 06/0*           | SF-6926-13 |               | 1250.0 | 05  |       |              |            |     |   | XX1000       |
| ATRESEARCH INDST DIV       -0750       SP-6976-16       600X       200.00       00701       A 10         ATRESEARCH INDST DIV       -0750       SP-6976-16       600X       200.00       00701       A 10         ATRESEARCH INDST DIV       -0750       SP-6976-16       600X       200.00       00701       A 10         ATRESEARCH INDST DIV       -0750       SP-6926-19       600X       500.00       00701       A 10         ATRESEARCH INDST DIV       -0750       SP-6926-19       60X       500.00       00701       A 10         ATRESEARCH INDST DIV       -0750       SP-6926-20       60X       435.00       00704       A 10         ATRESEARCH INDST DIV       -0750       SP-6926-20       60X       1000.00       01/02       572       572       0       10         ATRESEARCH INDST DIV       -0750       SP-6926-20       60X       1600.00       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02       01/02 <t< th=""><th></th><th></th><th>2</th><th>0220</th><th>S0-5026-15</th><th></th><th>0.001</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |                    | 2  | 0220            | S0-5026-15 |               | 0.001  |     |       |              |            |     |   |              |
| ATRESEARCH INDST DIV       -0750       SP-6926-17       60X       300.00       00/01       A 10         ATRESEARCH INDST DIV       -0750       SP-6926-18       60X       400.0       00/01       A 10         ATRESEARCH INDST DIV       -0750       SP-6926-18       60X       400.0       00/01       A 10         ATRESEARCH INDST DIV       -0750       SP-6926-16       60X       400.0       00/01       A 10         ATRESEARCH INDST DIV       -0750       SP-6926-26       60X       435.0       00/01       A 10         ATRESEARCH INDST DIV       -0750       SP-6926-20       60X       435.0       01/02       D 13         ATRESEARCH INDST DIV       -0750       SP-6926-20       60X       1000.0       01/02       D 10         ATRESEARCH INDST DIV       -0750       SP-6926-22       60X       16/17       200       01/02       D 10         ATRESEARCH INDST DIV       -0750       SP-6926-23       60X       16/17       200       01/02       D 10         ATRESEARCH INDST DIV       -0750       SP-6926-23       60X       16/17       200       01/02       D 10         ATRESEARCH INDST DIV       -0750       SP-6926-23       60X       16/17       200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | F#S-382            |                    |    | -0750           | SP-6926-16 | 5             | 0.004  |     |       |              |            |     |   |              |
| ATRESEARCH INDST D:V         -0750         SP-6426-16         G0X         400.0         00/01         A 10           ATRESEARCH INDST DIV         .0750         SP-6426-15         G0X         500.0         00/04         A 10           ATRESEARCH INDST DIV         .0750         SP-6426-19         G0X         500.0         00/04         A 10           ATRESEARCH INDST DIV         .0750         SP-6426-20         G0X         435.0         0.1/02         572         572         D 13           ATRESEARCH INDST DIV         .0750         SP-6426-20         G0X         1000.0         0.1/02         D 10         10           ATRESEARCH INDST DIV         .0750         SP-6426-20         G0X         16.00.0         0.1/02         D 10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | EMS-382            |                    | 0  | .0750           | SP-6926-17 | COX<br>COX    | 0.006  |     | 10/00 |              |            |     |   | XX1000       |
| AIRESEARCH INDST DIV       *0750       SP-6926-19       GDX       501.0       00/04       A 10         AIRESEARCH INDST DIV       SP-6926-20       GDX       435.0       0.1/02       572       572       0       13         AIRESEARCH INDST DIV       .0750       SP-6926-20       GOX       435.0       0.1/02       0       10       0       10         AIRESEARCH INDST DIV       .0750       SP-6926-20       GOX       1500.0       0.1/02       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       0       10       10       10       10       10       10       10       10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EMS-382            |                    | o  | •0150           | SP-6326-18 | ž             | 400.0  |     | 00/01 |              |            |     |   | XX 1000      |
| AIRESEARCH INOST DIV         SP-6926-2         60X         435.0         572         572         0         13           AIRESEARCH INOST DIV         .0750         SP-6926-20         60X         1000.0         01/02         0         10         0         10         0         10         0         10         0         10         0         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | EMS-382            |                    | 0  | •0750           | SP-6926-19 | 60 X          | 500.0  |     | 00/00 |              |            |     |   | 000 I XX     |
| ATRESEARCH INDST DIV         0750         SP-6926-20         G0X         1000.0         01/02         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D <thd< th="">         D         D         D</thd<> <th>EMS-362</th> <th></th> <th>٥</th> <th></th> <th>5P-6926-2</th> <th>Š</th> <th>435.0</th> <th></th> <th></th> <th>572</th> <th>572</th> <th></th> <th></th> <th>XX 1000</th>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EMS-362            |                    | ٥  |                 | 5P-6926-2  | Š             | 435.0  |     |       | 572          | 572        |     |   | XX 1000      |
| AIRESEARCH INDST DIV         #0750         SP-6926-21         G/nx         1500.0         04/04         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D         D </th <th>EMS-382</th> <th></th> <th>٥</th> <th>•0150</th> <th>5P-6926-20</th> <th>COX</th> <th>1000.0</th> <th></th> <th>01/02</th> <th></th> <th></th> <th></th> <th></th> <th>DIXX</th>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | EMS-382            |                    | ٥  | •0150           | 5P-6926-20 | COX           | 1000.0 |     | 01/02 |              |            |     |   | DIXX         |
| ATRESEARCH INDST DIV SP-6926-22 GDX 14.7 200 01/01 7 11 1<br>ATRESEARCH INDST DIV 0750 SP-6926-3 GDX 50.0 50 00/04 A 11 1<br>ATRESEARCH INDST DIV 0750 SP-6926-4 GDX 100.0 50 00/04 A 11 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | EMS-382            |                    | ٥  | •0750           | SP-6926-21 | CD X          | 1500.0 |     |       |              |            |     |   | DOD I X Y    |
| AIRESEARCH INDST DIV 0750 SP-6926-3 GDX 50.0 50 00/04 A 11 A 11 A 11 AIRESEARCH INDST DIV 0750 SP-6926-4 GDX 100.0 50 00/04 A 11 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ENS-382            |                    | ٥  |                 | SP-6926-22 | 60X           | 14.7   | 200 | -     |              |            |     | - | 000 I X X    |
| AIRESEARCH INDST DIV 0750 SP-6926-4 GDX 100.0 50 00/04 A 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | F#S-382            | I RE SEARCH        | 0  | .0750           | SP-6926-3  | X03           | 50.0   | 50  |       |              |            |     | _ | DOD 1 X X    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | EMS-382            | <b>IRESEARCH I</b> | 0  | .0750           | 5P-6926-4  | 50X           | 100.0  | 50  | 00/04 |              |            |     | - | 000 J X X    |

. .

ן גי

ļ 

Ş

y.

· TC 3

3.

| PAGE 14         | PROP WT R T MATI.<br>DISTLOSS I T CODE | -                    |           | -         | ,          | -                    | : =     | :0        | 1               |                 | 10              | 10              |                       | 2                                                   | 2:          |             | 2               | 10          | 13              | T 11        | D 13 AEBGGS                                            |                 | 9 N N       | 16              |                 | ;;                                                   | 12          |                 | 17              | Ξ               |                                                      | 25              | 0 13            | 0 13            | A 11        |              |                               | U 13 AEBLG | D 13 AFB.  | T 11 AEALG          |
|-----------------|----------------------------------------|----------------------|-----------|-----------|------------|----------------------|---------|-----------|-----------------|-----------------|-----------------|-----------------|-----------------------|-----------------------------------------------------|-------------|-------------|-----------------|-------------|-----------------|-------------|--------------------------------------------------------|-----------------|-------------|-----------------|-----------------|------------------------------------------------------|-------------|-----------------|-----------------|-----------------|------------------------------------------------------|-----------------|-----------------|-----------------|-------------|--------------|-------------------------------|------------|------------|---------------------|
|                 | FIRE<br>PT                             |                      |           |           |            |                      |         |           | 476             | )               |                 |                 |                       |                                                     |             |             |                 |             | 659             |             | 6055                                                   | 000             | ,<br>,      |                 |                 |                                                      |             |                 |                 |                 |                                                      |                 | 450             | 564             |             | 1            | 657                           | 100        | 327        | I                   |
| 1 72            | FLASH<br>POINT                         |                      |           |           |            |                      |         |           | 476             |                 |                 |                 |                       |                                                     |             |             |                 |             | 659             | 1           | 655<br>655<br>7                                        |                 |             |                 |                 |                                                      |             |                 |                 |                 |                                                      |                 | 450             | 565             |             | 1            | 169                           | 200        | 327        |                     |
| NAL IE          | NO OF<br>React                         | 00/00                | 00/04     | 10/10     | 01/01      | 10/10                | 00/04   | 00/04     |                 | \$0/00          | 01/02           | 01/03           | 04/04                 | 10/10                                               | 10/10       | 40/00       | 00/04           | 10/10       |                 | 01/02       |                                                        |                 | 00/04       | 00/n4           | 00/04           | 00/04                                                | 04/04       | 10/10           | 10/10           | 10/10           | 10/10                                                | 20/10           |                 |                 | 00/07       | 01/03        |                               |            |            | 01/02-              |
| AS OF           | I MP T<br>ENER                         | 50                   | 50        | 200       | 007        | 200                  | 205     |           |                 | <b>г</b> 0      |                 |                 |                       |                                                     | 2           | 2           | 50              |             |                 | 50          |                                                        |                 | 50          | 200             | 50              | 200                                                  | 002         | 200             |                 | 200             | 200                                                  |                 |                 |                 | 50          |              |                               |            |            | 50                  |
|                 | 16ST<br>TEMP                           |                      | _         |           |            | _                    |         | _         | _               | _               | _               | _               | _                     | -                                                   | _           |             | -               | _           | _               | _           | -                                                      |                 |             | _               | _               | _                                                    |             | _               | _               |                 |                                                      |                 |                 | _               | _           | _            |                               |            | _          | _                   |
| DESIGNATION     | TE ST<br>PRE SS                        | 150.0                | 200.0     | 40.0      | 100.0      | 1500-0               | 1500.0  | 1500.0    | 1565.0          | 2000.0          | 1500.0          | 2000.0          | 2500.0                | 3500.0                                              |             | 500.0       | 1500.0          | 1500.0      | 25.0            | 2500.0      | 50.0                                                   | 1000-0          | 14.7        | 14.7            | 1000.0          | 1000.0                                               | 500-0       | 1000.0          | 2000.0          | 3000 °          |                                                      | 1500.0          | 1000.0          | 1000.0          | 1500.0      | 1500.0       | 0.03<br>0.03                  | 950.0      | 950.0      | 5000.0              |
| Ś               | TES T<br>ENVR                          | хœ                   | 60X       | X QQ      | COX<br>COX | ×09                  | ×03     | ŝ         | COX             | ž               | KUS             | žg              | 200<br>200            | ŝ                                                   |             | ŝ           | Š               | GOX         |                 |             | X OS                                                   | ŝ               | LOX         | LOX             | X09             | ŝ                                                    | X DS        | COX             | ŝ               | X09             | ŝ                                                    | x ng            | 60X             | X<br>09         | X<br>C<br>C | Š            |                               | x og       | ŝ          | 20X                 |
| BY MANUFACTURER | TEST RPT NO.                           | SP-6:26-5            | SP-6926-6 | SP-6926-7 | SP-6926-8  | SP-6926-9            |         | 71-2269-1 |                 | 70-1768-1       | 70-1768-10      | 70-1768-11      | 70-1766-12            | 10-1168-13                                          |             | 70-1758-16  | 70-1768-17      | 70-1768-18  | 70-1768-19      | 70-1768-2   | 10-1168-20<br>76-1768-21                               | 70-1768-22      | 70-1768-23  | 70-1768-24      | 70-1768-25      | 70-1768-26                                           | 70-1768-4   | 70-1768-5       | 70-1768-6       | 70-1768-7       | 70-1768-8                                            | 70-2208         | 70-220° -1      | 70-2208-2       | 70-1774     | 70-1774      | 76-1776-1                     | 70-1774-10 | 70-1774-11 | 70-1774-12          |
| TEST DATA       | SPEC.<br>THICK.                        | .0750                | .0750     | .0750     | •0750      | .0750                |         |           |                 | .0050           |                 |                 |                       |                                                     |             |             |                 |             |                 | • 0050      |                                                        |                 |             |                 |                 | 0300                                                 | • 0050      | • 0050          | •0050           | • 0050          | 0400.                                                | . 6050          |                 |                 |             |              |                               |            |            |                     |
| MATERIAL        | MAMUFACTURER                           | AIRESEARCH INDST DIV | I NDS T   | INDST DI  | INDST DI   | AIRESEARCH INDST DIV | 8       |           | FURAME PLASTICS | FURANE PLASTICS | FURANE PLASTICS | FURANE PLASTICS | FURANE PLASTICS       | 931 FURANE PLASFILS INC.<br>031 Fubane blastics inc |             | PLASTICS    | FURANE PLASTICS | PLASTICS    | FURAME PLASTICS | PLASTICS    | 931 FURANE PLASIIUS INC.<br>031 Furant di Actific inc. | FURANE PLASTICS | PLASTICS    | FURANE PLASTICS | FURANE PLASTICS | 93] FURANE PLASTICS INC.<br>031 EURANE DIASTICS INC. | PLASTICS    | FURANE PLASTICS | FURANE PLASTICS | FURANE PLASTICS | 431 FURANE LEASTICS THUS<br>Dat fireame diactics int | FURAME PLASTICS | FURANE PLASTICS | FURANE PLASTICS | CHEMICAL    | CHEMICAL     | SHELL CHEMICAL CURY           | CHEMICAL   | CHENICAL   | SHELL CHEMICAL CORP |
|                 | MFGR 5 DESIGNATION                     | EMS-302              | EMS-382   | NS-382    | tS-382     | IS-382               | EMDOX 1 |           | 123/HARDNER     | 123/HARDNER     | 123/HARDNER     | 123/HARONER     | EPTBOND 173/HARDNER 9 |                                                     | 123/MADINER | 123/HARDNER | 1.23/HARDNER    | 123/HARDNER | 123/HARDtick    | 123/HARDNER | EPIDUMU 123/HAKUWER 9<br>FPIROND 123/HABDNFR 9         | 123/HARDNER     | 123/HARDNES | 123/HARDNER     | 123/HARDNER     | EPIBUNU 123/HARONER 9<br>Coterno 123/HARONES 0       | 123/HAPDNER | 123/44401 54    | 123/ 16:01 - 1  | 123/HAL         | EPIDUND 125/MUN. 5                                   | 123/1440        | 123/HARDNSR     | 123/HARDNER     | _           | EPOK 8/CAT A | CTUR S/CAL A<br>Can's s/Cal A | -          |            | PON B/CAT A         |

provide and on characteristic

and and the second s

And the second a second second

and the same

X

54

•

١, ٦

8. 19

The second se

and the second second

ţ .

| NFGR S DESIGNATION | MANUFAC TURER           | SPEC.<br>THICK. | TEST RPF NO. | TEST TE<br>Envr Pr | PREST TI | EMP E | MPT NO OI |              | FLASH F                       | TRE PRUP   | L NSS | а –<br>Т –          | HATL<br>CODE     |
|--------------------|-------------------------|-----------------|--------------|--------------------|----------|-------|-----------|--------------|-------------------------------|------------|-------|---------------------|------------------|
|                    | SHELL CHEMICAL CORP     |                 | 10-1774-13   | ¥                  | 00-00    | -     | 50 00'    | 407          |                               |            |       |                     |                  |
| EPON B/CAT A       | CHENICAL                |                 |              |                    | 0.00     |       | ,         |              |                               |            |       |                     |                  |
| CFON S/CAT         | CHENICAL                |                 | 70-1774-15   | x09                | 0.000    |       | 56        | 10/10        |                               |            |       |                     | AFBL             |
| FPON B/CAT A       | CHENICAL                |                 |              | •                  | 0-00     |       |           | 10           |                               |            |       |                     |                  |
| EPON B/CAT A       | CAL                     |                 |              |                    | 0.00     | 543   |           | 5            |                               |            |       |                     |                  |
| EPON B/CAT A       | C'ENICAL                |                 | 774-18       |                    |          | >     |           | 4            |                               |            |       |                     | AC DC            |
| EPCN 8/CAT A       | CHENTCAL                |                 | 774-2        |                    | 60°0     |       |           | n 4          |                               | 1          |       |                     | AFBL.            |
| EPON B/CAT A       | CHENICAL                |                 | 74-3         |                    |          |       |           | 0            |                               |            |       |                     |                  |
| ÉPON S/CAT A       | CHENICAL                |                 |              |                    |          |       |           | <b>1</b> 4   | 4 4 4 4<br>7 4 4 4<br>7 4 4 4 | 4 H S      |       |                     | AFBU             |
| EPON B/C F A       | CHEMICAL                |                 | 776-5        |                    |          |       |           |              |                               |            |       |                     |                  |
| EPON B/CAT A       | CHEMICAL                |                 |              |                    |          |       |           | <b>n</b> (   |                               | 20         |       | ີ<br>ລູ             | VEBLO            |
| EPON B/CAT A       | CHENTCAL                | -               |              |                    |          |       |           | • <b>1</b> ( |                               | 5          |       | 0                   | AC BL (          |
| EPON B/CAT A       | CHANICAL                |                 |              |                    |          |       |           | n í          |                               | 4          |       | 0                   | VEBL (           |
| EPON A/CAT A       | NEWTCAL                 | -               |              |                    |          |       |           | ~            |                               | 1          |       | 0                   | AEBLO            |
| EPDXY E-9405       | FIRENTE MERT COART CORD |                 |              |                    | 0.<br>00 |       |           | _            |                               | 87         |       | 0                   | AFBLO            |
|                    | T MEXT COAST COAST      |                 |              |                    |          |       |           | 4.0          |                               |            |       | A 1.                | BABCI            |
|                    |                         |                 |              |                    |          |       | 100       | <b>t</b>     |                               |            |       | A 10                | BABGO            |
| EPOXY E-9405       | HEST COAST COR          |                 | _            |                    |          | 112   |           | 1            |                               |            |       | 0                   | BABG             |
|                    | MECT FORGT FOR          |                 |              |                    | 2.0      |       |           | ~ `          |                               | 66         |       | 0                   | HABG)            |
| <u>ب</u> ا         |                         |                 |              |                    |          |       |           | νO i         | 65C 6                         | 650        |       | 6<br>0              | BABG)            |
| _                  | MEST COAST COR          |                 |              |                    |          |       |           | юч           |                               | 31         |       | 5                   | 13 A 8 G 7       |
| w                  | KEST COAST COR          | -               |              |                    |          |       |           |              |                               | 200        |       | 2.6                 | 3996             |
| EPOXY E-9405       | MEST COAST COR          |                 |              |                    |          |       |           | n r          |                               |            |       |                     | I A BIS          |
| POXY E-9405        | WEST COAST CORI         | •               |              |                    | 00.00    |       |           | 40           |                               | 2 C C      |       | 2:<br>- :           | 90V0             |
|                    | TE WEST COAST           |                 | 71-2265-18   | 20X                | 5050.0   |       | 50 00/0   |              |                               | 20         |       |                     | NADGAX<br>RARGYY |
| EPOXY E-9405       | MEST COAST COR!         | •               |              |                    | 000.0    |       |           | Î            | 95 0                          | 50         |       |                     |                  |
| _                  | FE WEST COAST COR!      | •               |              | -                  | 0.00     |       | 110       |              |                               |            |       |                     |                  |
| EPOKY E-9405       | TE WEST COAST CORI      | •               |              |                    | 3500-0   |       | 10/10     | 5            |                               |            |       |                     |                  |
|                    | WEST COAST CORI         |                 |              |                    | 0000     |       | ìà        | 55           |                               |            |       |                     |                  |
|                    | COAST COR!              |                 |              |                    | 2500.0   |       | 10        | 10           |                               |            |       |                     |                  |
|                    | MEST COAST COR!         | •               |              |                    | 2000.0   |       | 01/01     | 10           |                               |            |       |                     | AAACY            |
| EPOXY E-9405       | TE WEST COAST           |                 |              | -                  | 500.0    |       | 01/       | 10           |                               |            |       | · -                 | AAALY            |
| EPOXY E-9405       |                         |                 |              | -                  | 00.0     |       | CO/07     | 40           |                               |            |       | 10                  | BABGY            |
|                    | 5                       | •0150           |              | ~                  | 00.0     |       | 200       | 96           |                               |            |       | × 10                | F.JBCX           |
|                    |                         |                 |              | •                  | •500.0   |       | 10        | 40           |                               |            |       | T 10                | FJBGX            |
|                    |                         | ,               |              |                    | 00.0     |       |           | 4            |                               | <b>۴</b> ر |       | C 13                | F JBGX           |
|                    |                         | · .             |              | -                  | 0000     |       |           | ſ            |                               | 41         |       | 0 13                | FJBGX            |
| SHEET . L'VAR      | HYED LUKY               |                 | ~            | -                  | 000.0    |       |           | r.           |                               | 51         |       | 0 13                | FUBGX            |
| SWEET. TYNE        |                         | • - •           |              | ~                  | 150.0    |       |           | ŝ            |                               | 75         |       | 0 13                | FJBGX            |
| FORY CHEFT.TVEC 1  |                         | - •             | e i          | -                  | 00.0     |       |           | m.           | 345 3                         | 345        |       | D 13                | FJBGX            |
| SHEET , 7 YEE      |                         |                 | <u>_</u>     |                    | 000.0    | 1     |           |              |                               | 40         |       | D 13                | FJBGX            |
|                    |                         | -               | •            | n                  |          | ď     |           | č            |                               |            |       |                     |                  |
|                    |                         | •               | •            |                    | •        | •     |           | *            |                               |            |       | <b>1</b> 1 <b>v</b> | FJBGX            |

т. **г**. **г** 

**۲. ب** 

٠.

٦

ः }

•

こうちょうかいたいたいとうというないないないとないないない 、、いちないたいないないたいないで

ł

,

|                    |                | SPEC.<br>THICK. | TEST RPT ND. | TEST<br>ENVK | TEST<br>PRESS | TEST<br>TEMP | I NPT<br>Enfr | NO DF<br>REACT | FLASH<br>POINT | FIRE<br>PT       | PROP WT<br>DIST LOSS | 8 H<br>F H | CODE     |
|--------------------|----------------|-----------------|--------------|--------------|---------------|--------------|---------------|----------------|----------------|------------------|----------------------|------------|----------|
| EPOXY SHEET.TYPE 1 | HYSOL CORP     |                 | 70-2224-4    | š            | 1150.0        |              |               |                | 432            | 432              |                      |            |          |
|                    | _              |                 | 70-2224-5    | COX          | 3000.0        |              |               |                | 402            | 402              |                      |            |          |
|                    |                |                 | 70-2224-6    | A-50         | 824.0         | 510          |               |                |                |                  |                      |            |          |
|                    |                |                 | 70-2224-7    | A-50         | 826.0         | 513          |               |                |                |                  |                      | T 15       | 5 FJBGXX |
|                    |                |                 | 70-2224-8    | ŝ            | 50.0          |              |               |                | 560            | 560              |                      |            |          |
|                    | HASOL CORP     |                 | 70-2224-9    | COX<br>COX   | 100.0         |              |               |                | 557            | 55.7             |                      |            |          |
|                    | S INNUNS       |                 | 71-2719      | A-50         | 663.0         | 496          |               |                |                |                  |                      |            |          |
|                    |                |                 | 1-2719-1     | A-50         | 759.0         | 507          |               |                |                |                  |                      |            |          |
| EPUXY 250          | ST.            |                 | 71-2492      | A-50         | 663.0         | 480          |               |                |                |                  |                      |            |          |
|                    |                |                 | 71-2492-1    | A-50         | 776.0         | 507          |               |                |                |                  |                      |            | BABGXX   |
| EPOXALITE 5302     |                |                 | 71-2313      | Š            | 2000.0        |              |               | 20/10          |                |                  |                      |            |          |
|                    | EPOXYLITE CORP |                 |              | 60X          | 1500.0        |              |               |                | 417            | 417              |                      |            | _        |
| EPOX7LITE 6001-16  | EPOXYLITE      |                 | _            | A-50         | 7.85.0        | 503          |               |                |                |                  |                      |            |          |
| EPOXYLITE 6001-16  | EPOXYLITE      |                 |              | 4-50         | 785.0         | 506          |               |                |                |                  |                      |            |          |
| EPOXVLITE 6001-16  | EPOXYLITE CORP | .0050           |              | XOS          | 2000-0        |              |               | 01/05          |                |                  |                      |            |          |
| EPOXYLITE 6001-16  | EPDXYLITE CORP |                 |              | 60 X         | 1400-0        |              |               |                | 303            | 105              |                      |            |          |
| EPOXYLI?E 6001-16  |                |                 | 0            | Š            | 500.0         |              |               |                | 32 5           | 121              |                      |            |          |
| -                  | EPOXYLITE CORP |                 | 70-2169-11   | GOX          | 1000.0        |              |               |                | 310            | 310              |                      |            | -        |
|                    |                |                 | 70-2169-12   | Š            | 1500.0        |              |               |                | 265            | 265              |                      |            |          |
|                    |                |                 | 70-2169-13   | GOX          | 2000.0        |              |               |                | 282            | 282              |                      |            |          |
|                    | 175            |                 | 70-2169-14   | š            | 1400.0        | 260          |               |                |                |                  |                      |            |          |
| -                  | -              |                 | 70-2169-15   | 6C X         | 20            |              |               |                | د ژ، ۲         | :)<br>F          |                      |            | -        |
| 6001-1             |                |                 | 70-2169-16   | GOX          | 50.0          |              |               |                | a   c          | -   -<br>-       |                      |            | 5 A38GA1 |
| 6001-1             |                |                 | 70-2169-2    | GUX          | 5 000.0       |              | 50            | 40/00          |                |                  |                      |            | APBGXK   |
| E 6001-1           |                |                 | 70-2169-3    | С<br>С<br>С  | 2500.0        |              |               | 10/10          |                |                  |                      |            | ٩        |
| E 6001-1           |                |                 | 70-2169-4    | 60X          | 1000.0        |              | -             | 10/10          |                |                  |                      |            |          |
| 1-1009             |                |                 | 10-2169-5    | ŝox          | 500.0         |              |               | 00/07          |                |                  |                      |            |          |
| -                  |                |                 | 77-2159-6    | A-50         | 785.0         | 503          |               |                |                |                  |                      |            |          |
| ш,                 |                |                 | 71-2169-7    | A-50         | 785.0         | 505          |               |                |                |                  |                      | 115        | 5 AUBUXA |
| -                  |                |                 | 70-2169-8    | SC S         | 50.0          |              |               |                | 314            | 316              |                      |            |          |
|                    |                |                 | 70-2169-9    | × C          | 100.0         |              |               |                | 39.2           | 2 o E            |                      |            |          |
|                    |                |                 | 12-21 70     | X 29         | 1500.0        |              |               | 00/04          |                |                  |                      |            | -        |
|                    |                |                 | 1-0112-01    | Š            | 1600.0        |              |               |                | 450            | 5<br>1<br>1<br>1 |                      |            |          |
| -                  |                |                 | 1-0112-01    | 60X          | 2000.0        |              |               | 70/00          |                |                  |                      |            |          |
|                    |                |                 | 70-2170-10   | Š            | 1500.0        |              |               |                | 466            | イナン              |                      |            | 3 BABJGS |
|                    |                |                 | 70-2170-11   | 80X          | 2000.0        |              |               |                | 452            | 472              |                      |            |          |
|                    |                |                 | 70-2170-12   | ŝŌX          | 3000.0        | 415          |               |                |                |                  |                      |            |          |
| 16                 | Ë              |                 | 70-2170-13   | 60 X         | 1 200.0       | 480          |               |                |                |                  |                      |            | -        |
|                    | H              |                 | 70-2170-1-   | ŝ            | 50.0          |              |               |                | 714            | 714              |                      |            |          |
|                    | EPOXYL.TE CURP |                 | 70-2170-15   | 602          | 25.0          |              |               |                | 109            | 70 A             |                      |            | BABJGS   |
|                    | EPOXYLITE CORP |                 | 70-2170-2    | CO X         | 1400.0        |              |               |                | 472            | 472              |                      |            |          |
|                    | EPOXYLITE      |                 | 70-2170-2    | COX<br>COX   | 4500.0        |              | -             | 01/03          |                |                  |                      |            | _        |
|                    | EPOXYLITE CORP |                 | 70-2170-3    | X09          | 3000-0        |              |               |                | 407            | 407              |                      |            |          |
|                    |                |                 |              |              | ~             |              |               |                | ,              | ::;              |                      |            |          |

PAGE 16

·

×,

ŝ

h

ð l

.

• •

- -

51

;;

1

And A LOUGH

BORNARGENANDIN AND RUNAL AN DERAG

17. 17.

.

MAYERIAL TEST DATA BY MANUFACTURER S DESIGNATION AS OF 31 JAN 72

| FLASH FIRE PROP WT R T MATL<br>POINT PT DIST COSS I T CODE | T 15      |                | 620 0.13            | 497 D 13       | 44) D 13       |              | 4 4     | n . | 12        | 5         |               |               | 15        | 5             |           |     | 1 | <u>ີ</u> | 11    | A 10            | <b>61</b>       | 10                    | 77                  | 15            | 15        |            |                   | N999 R 13 | N999 A 13 | D 13      | A LO DIMDMI | 11        | 11        | 20        | 11        | 15        | 15        |                  | 2                | 11 FI  | A 10      | 13 F I     | A 11        | 2           |             | ירם ארט א |
|------------------------------------------------------------|-----------|----------------|---------------------|----------------|----------------|--------------|---------|-----|-----------|-----------|---------------|---------------|-----------|---------------|-----------|-----|---|----------|-------|-----------------|-----------------|-----------------------|---------------------|---------------|-----------|------------|-------------------|-----------|-----------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|------------------|--------|-----------|------------|-------------|-------------|-------------|-----------|
| NO OF<br>REACT                                             |           | ·              |                     |                |                | 70700        |         |     |           |           |               |               |           |               |           |     |   |          | 00/04 | 00/04           |                 | 0C/04                 | 00/07               |               |           | 00/04      |                   | ž         | ž         |           | 00/04       | 00/04     | 00/04     | Ŭ         | 00/04     |           |           |                  |                  | 00/04  | 00/07     |            |             | 00/04       |             |           |
| ST LMPT<br>MP ENER                                         | 90        |                |                     |                |                | C U          |         |     | 27        | 51        | 491           | 451           | 496       | 52            | 487       | - 4 |   |          | 20    |                 |                 |                       | 50                  | 10            | 512       |            | 50                | 000       | 000       |           |             | 50        | 50        |           | 200       | 480       | 508       | 492              |                  | 50     |           |            | 50          |             |             |           |
| TEST TEST<br>PRESS TEMP                                    | ŝ         | 50.0           | 100.0               | 500.0          | 1400-0         |              | 207 0 4 |     |           |           |               |               | -         | 544.0 41      |           |     |   |          | 200.0 | 500.0           | 100.0           | 500.0                 | 500.0               |               |           |            | 1500.0            | -         | 6.2 10    | 16.5      | 500.0       | 500.0     | 1500.0    | 1500.0    | 1500.0    |           |           |                  |                  | 1500.0 | 1500.0    | 1000.0     | 1500.0      | 1500.0      | 1000-0      | A • A A A |
| TEST<br>ENVR                                               | A-50      | 60X            | XOS                 | COX<br>COX     | Š              |              |         |     | A-50      | A-50      | A-50          | A-50          | INN       | I             | INN       |     |   |          | Š     | COX<br>COX      | ð               | COX<br>COX            | ŝ                   | A-50          | A-50      | 60X        | š                 | 60X       | Š         | X O S     | Š           | 60X       | š         | ×09       | ŝ         | A-50      | A-50      | INN              | I                | 60X    | ŝ         | COX<br>COX | <b>50X</b>  | 60 X        | 20X         | ŝ         |
| TEST RPT NO.                                               | 70-2170-5 | 70-2170-6      | 70-2170-7           | 70-2170-8      | 70-2170-0      | 70-2100      | 70-1055 |     | 1-6661-02 | 70-1955-2 | 70-1955-3     | 70-1955-4     | 70-1955-5 | 70-1955-6     | 70-1055-7 |     |   |          |       |                 |                 | 70-2213               | 70-2213-1           | 71-2603       | 71-2603-1 | 70-1689-1  | 70-1889-2         | 70-1884-3 | 70-1947   | 70-1947-2 | 70-2212     | 70-2212-1 | 71-2501   | 71-2501-1 | 71-2501-2 | 71-2501-3 | 71-2501-4 | 71-2501-5        | 91/              | 75 -10 | 70-2100-1 | 70-2100-2  | 70-2101     | 210]        | 70-2101-2   |           |
| SPEC.<br>THICK.                                            |           |                |                     |                |                |              |         |     |           |           |               |               |           |               |           |     |   |          |       |                 |                 |                       |                     |               |           |            |                   |           |           |           | •0150       |           |           |           |           |           |           |                  |                  | -      |           |            |             |             |             |           |
| MANUFACTURER                                               |           |                | EPOXYLITE CORP      | EPOXYLITE CORP | EPOXVITTE CORF | CONVITE COPP |         | 5   | I SONI    | INDST DI  | INDST DI      | -             | 0         |               | TADAT OF  |     |   |          |       | BLH ELECTRONICS | BLH ELECTRONICS | HANDY AND HARMON      | HANDY AND HARMON    | EUTECTIC CORP |           |            | FLUXEVTECTIC CORP |           | ST.       |           |             | ~         | MR DOWNEY |           |           |           |           | NR DONNEY        |                  |        |           |            | BENOL CORP  | BENOL CORP  |             |           |
| MFGR S DESIGNATION                                         |           | EPOXM.ITE 6203 | <b>DXYLITE 6203</b> |                |                |              |         |     |           |           | EPR ELASTONER | EPR ELASTOMER |           | EPR ELASTONER |           |     |   |          |       | EPY-400 CENENT  |                 | ER-560 AG BRAZE ALLOY | -560 AG BRAZE ALLOY | EUTECTIC 1000 | 1800      | 1001-10018 | 1001-10018        | 10019     | TRANSFER  | RANSFER   | STEEL       | STEEL     |           |           |           |           |           | FERROUS CHLORIDE | FERNOUS CHLURIDE | _      |           | -          | FEUROL-W AN | FEURULON AN | FEUROLON AN |           |

P 46E 17

.

.

•

.

ij,

An is an in the sec

\*\* \* ·

•

...\*

•

•

•

\_\_\_\_

\_·

۱\_

Ş

÷

Check and the second

F.

.

MATERIAL TEST DATA BY MANUFACTURER S DESIGNATION AS DF 31 JAN 72 Sr spec. Test rpt no. test test test impt no df flash fire prop wi

| MFGA S DESIGNATION | MANUFACTURER            | SPEC.<br>Thick. | TEST RPT NO. | TEST<br>Envr | TEST<br>PRESS | TEST<br>TEMP | I MPT | NO DF F<br>REACT P | FLASH F<br>POINT P | FIRE PROP WT<br>PT DIST LOSS | 8 F F      | MA IL<br>CODE | 2 2       |
|--------------------|-------------------------|-----------------|--------------|--------------|---------------|--------------|-------|--------------------|--------------------|------------------------------|------------|---------------|-----------|
| FEURDLON C         | BENOL CORP              |                 | 10-2102-1    | Š            | 1500.0        |              | 5     | \$0/00             |                    |                              | 4          | _             | DKSMGU    |
| FEUROLON C         | -                       |                 | 2102-        | COX          | 1000.0        |              |       |                    | 752                | 752                          | 0          | 3 DK          | DK-NGU    |
| FEUROLON C         | BEMOL CURP              |                 | 70-2103      | Š            | 1500.0        |              | 50    | 00/04              |                    | I                            |            | _             | DKFNGU    |
| FEUROLON C         |                         |                 |              | 60 X         | 1500.0        |              | -     | 00/04              |                    |                              |            | _             | DKFMGU    |
|                    | CORP                    |                 |              | š            | 1000.0        |              |       |                    | 596                | 5-06                         |            |               | DKFNGU    |
| -                  | CORNING                 |                 | 70-1996      | GOX          | 500.0         |              | 50    | 00/04              |                    |                              |            |               | FJFVXX    |
|                    | CORNING FBRGL           |                 | 70-1996      | ŝ            | 500.0         |              | -     | 40/00              |                    |                              |            |               | FJFVXX    |
| _                  | CORNING FBRGL           |                 | 1-9661-02    | ×09          | 1500.0        |              | -     | 10/10              |                    |                              |            | -             | ××>17 J   |
|                    | CORNING                 |                 | 70-1996-1    | Š            | 1500.0        |              | 50    | 40/00              |                    |                              |            |               | FJFVXX    |
|                    | DWENS CORNING FBRGLS    |                 | 70-1996-2    | 60X          | 80.0          |              |       |                    | 669                | 699                          |            |               | FJFVXX    |
|                    | GAC '                   |                 | 71-2596      | A-50         | 782.0         | 516          |       |                    |                    |                              |            |               | FJFVCK    |
|                    |                         |                 | 71-2596-1    | A-50         | 758.0         | 518          |       |                    |                    |                              |            |               | FJFVCK    |
|                    | MARKON FA               |                 | 1642-11      | A-50         | 797.0         | 508          |       |                    |                    |                              |            |               | DZFWXX    |
|                    |                         |                 | 71-2491-1    | A-50         | 682.0         | 484          |       |                    |                    |                              |            | _             | OZFWXX    |
| •                  | MARRO                   |                 | 71-2491-2    | A-50         | 478.0         | 440          |       |                    |                    |                              |            |               | DZFWXX    |
|                    | CLARK & DI              |                 | 71-2707      | A-50         | 784.0         | 517          |       |                    |                    |                              |            |               | ר XX      |
|                    | LARK & DAN              |                 | 71-2707-1    | A-50         | 769.0         | 516          |       |                    |                    |                              |            |               | FJFL XX   |
| <b>ب</b>           |                         |                 | 69-1410      | 60X          | 5.0           | 1000         |       |                    | 741 7              | 066N                         |            |               | DVDEXX    |
| •••                | MANHATTAN               |                 | 69-1410-1    | Š            | 25.0          |              |       |                    | 760                | 851                          |            |               | DVDEXX    |
| Ξ.                 | MANHATTAN I             |                 | 69-1410-2    | ХOS          | 50.0          |              |       |                    | 703                | 798                          |            | -             | DVDEXX    |
| FLUOREL L-3583-2   |                         |                 | 69-1410-3    | ŝ            | 50.0          |              |       |                    | 555                | 555                          |            |               | OVDE XX   |
| -                  | MANHATTAN I             |                 | 69-1410-4    | S0X          | 100.0         |              |       |                    | 520                | 520                          |            |               | DVDEXX    |
| -                  | NATANNAN                |                 | 69-1410-5    | ŝ            | 51.0.0        |              |       |                    | 449                | 449                          |            |               | DVDEXX    |
|                    | MANNATTAN               |                 | 69-1410-6    | X09          | 1000.0        |              |       |                    | 451                | 451                          |            | _             | OVDEXX    |
| -                  | KANHATTAN               |                 | 69-1410-7    | ŝ            | 1500.0        |              |       |                    | 451                | 451                          |            |               | DVDEXX    |
| L-3583-2           | -                       |                 | 69-1410-8    | SOX<br>SOX   | 2000.0        |              | •     |                    | 418                | 418                          |            | _             | DVDEXX    |
|                    | ET.                     |                 | 71-2588      | š            | <b>6</b> •2   |              |       |                    | 836                | 892                          |            |               | DUDEXX    |
|                    |                         |                 | 70-1624      | 60 X         | 25.0          |              |       |                    | 637                | H4C                          |            | -             | DUDEXX    |
|                    | F -                     |                 | 70-1624-1    | Š            | 50.0          |              |       |                    | 670                | 826                          |            |               | DUDEXX    |
|                    | -                       |                 | 70-1624-10   | X OS         | 500.0         |              |       |                    | 598                | 59A                          |            |               | DODEXX    |
|                    | F1.                     |                 | 70-1624-11   | ŝ            | 1000.0        |              |       |                    | 549                | 549                          |            |               | DUDEXX    |
|                    | F 1 c                   |                 | 70-1624-12   | ×09          | 1500.0        |              |       |                    | 570                | 570                          |            |               | DIDEXX    |
|                    |                         |                 | 70-1624-13   | ŝ            | 2000-0        |              |       |                    | 547                | 547                          |            |               | DIDEXX    |
|                    | * • • 1 • •             |                 | 2-4291-01    | 203          | 20.0          |              |       |                    | 616                | 616                          |            | _             | DUDEXX    |
|                    | FT.                     |                 | 70-1624-3    | ž            | 62.0          |              |       |                    | 836                | 859                          | 0          |               | DODE X X  |
|                    | 54.                     |                 | 70-1624-4    | Š            | 165.0         |              |       |                    | 685                | 860                          |            | -             | DODEXX    |
|                    | FT.                     | •0150           | 70-1624-5    | ŝ            | 2000.0        |              |       | 00/07              |                    |                              |            |               | X > 30C 0 |
|                    | FT. 4                   | .0750           | 70-1624-6    | 60 X         | 2500.0        |              | -     | 10/10              |                    |                              |            | -             | D-DEXX    |
|                    |                         | -0750           | 70-1624-7    | ŝ            | 3000.0        |              | -     | 04/04              |                    |                              |            |               | DODEXX    |
|                    |                         | •0750           | 70-1624-8    | GOX          | 2000.0        |              | 200   | 00/04              |                    |                              |            | _             | DJDEXX    |
|                    | •• FT•                  |                 | 70-1624-9    | Š            | 100.0         |              |       |                    | 686                | 686                          |            |               | DODEXX    |
|                    |                         | • 0750          | 70-1019      | COX<br>COX   | 500.0         |              | 00    | 10/00              |                    |                              | <b>4</b> · |               | DVDEXX    |
|                    | #<br>•  <br>•           | 06/0.           | -6181        | X DS         | 3000.0        |              |       | 10/00              |                    |                              | <b>A</b> 1 |               | DVDEXX    |
| FLUOREL 1079-K     | MOSITES+G-A++ FT+ WORTH | •0750           | 70-1819-2    | COX          | 3500.0        |              |       | 10/00              |                    |                              | 4          | _             | DVDEXX    |

ł

. . . . .

•

المعادية، حرف من غارية جربات عرفة علام المالية ، المعامة، المعاولية، ها المرامة عنه المرامة العالمة ا

. . . . . . . .

PAGE 18

6

**`**, ⊧

is n

;

ন

1.

\_\_\_\_\_\_

0

:, ,

PAGE 19

AREF Q

| 72               |  |
|------------------|--|
| NAU              |  |
| 31.              |  |
| Ľ                |  |
| AS               |  |
| S DESIGNATION AS |  |
| Ψ,               |  |
| Y MANUFACTURER   |  |
| B∕               |  |
| DATA BY          |  |
| TEST             |  |
| MATERIAL TEST    |  |

| FLUOREL 1079-K MOSITES-6-A., FT. V.<br>FLUOREL 1079-K MOSITES-6-A., FT. WO<br>FLUOREL 1079-K MOSITES-6-A., FT. WO<br>FLUOREL 1079-K MOSITES-6-A., FT. WO<br>FLUOROBESTOS LS-9225 RAYBESTOS MANHATTAN<br>RLUOROBESTOS LS-9225 RAYBESTOS MANHATTAN<br>RLUOROBESTOS LS-9225 RAYBESTOS MANHATTAN<br>RLUOROBESTOS LS-9225 RAYBESTOS MANHATTAN<br>RLUOROBESTOS LS-9225 RAYBESTOS MANHATTAN<br>RLUOROCARBON CTD GLS TRODODGE INDUSTRIES-INC<br>RLUOROCARBON CTD GLS TRODODGE INDUSTRIES-INC<br>RLUOROCARBON CTD GLS TRODODGE INDUSTRIES-INC<br>RLUOROFLEX-T BLK R500-4 RESISTOFLEX CORP<br>RLUOROFLEX-T BLK R500-4 RESISTOFLEX CORP<br>RLUOROFLEX-T MIT R500-4 RESISTOFLEX CORP<br>RLU | MDSITES+6+A++ FT+ ' )#TH<br>MDSITES+6+A++ FT+ '+.19TH<br>MDSITES+6+A++ FT+ WDRTH |        |           |             |        | TEMP  |          |                |        |             |   | -          |       |               |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------|-----------|-------------|--------|-------|----------|----------------|--------|-------------|---|------------|-------|---------------|---|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ITES+6+A++ FT+ 4-10TH                                                            | -0750  | 70-1813   | X UZ        | 4000-0 |       | 5        | 10/00          |        |             |   | •          |       | UVDE Y Y      |   |
| 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1765+6+4+ FT. MORTH                                                              |        |           |             |        |       |          |                |        |             |   |            |       |               |   |
| 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1 765+6+A++ F1+ W041H                                                            | 0610+  | 10-1814-4 |             | 4200-0 |       | 2        | 10/00          |        |             |   | ۹.         | -     | DVDEXX        |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                  | 0410.  | 10-1819-5 | KO2         | 0.000  |       |          | 00/00          |        |             |   |            |       | DVDEXX        |   |
| 22222222222222222222222222222222222222                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ITES.G.A. FT. WORTH                                                              | •0750  | 70-1819-0 | X C U       | 3000.0 |       | -        | 00/04          |        |             |   |            | -     | DVDEXX        |   |
| 11111111111111111111111111111111111111                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | RAYBESTOS MANHATTAN 14C.                                                         |        | 71-2405   | Š           | 250.0  |       |          | 40/00          |        |             |   | •          |       | DTDFFL        |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RAY BESTOS MANHATTAN INC.                                                        |        | 71-2405-1 | N N         | 75.0   | 1000  |          |                | 1 000N | 0000        |   |            |       | DIDEEL        |   |
| NN999999999                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | TRANCOGE IMOUSTRIES.INC.                                                         |        | 71-2387   | ž           | 500.0  | •     | 50       | 00/00          |        |             |   |            |       | EDC NGO       |   |
| LUONDELEX-T BLK R500-4 RES<br>LUONDELEX-T WHT R500-4 RES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                  |        | 71-2367-1 |             |        |       | ,        |                |        |             |   |            |       |               |   |
| LUONDFLEX-T BLK R500-4 RES<br>LUONDFLEX-T MHT R500-4 RES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | C INUCAINICATING                                                                 |        | 1-1063-11 |             |        | 000.  | -        |                |        |             |   |            |       | EULNU         |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | STATES INTONIALES INC.                                                           |        | 11-2381-2 | ŝ           | 100.0  | 1000  |          | _              | - 555N | 666N        |   |            |       | EDC NGU       |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                  |        | 71-2661   | X09         | 2000.0 |       | 20<br>20 | 00/04          |        |             |   |            |       | EFCOXX        |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RESISTOFLEX CORP                                                                 |        | 71-2661-1 | Š           | 2000.0 |       |          | 01/03          |        |             |   |            |       | FCOXX         |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RESISTUFLEX CORP                                                                 |        | 71-2661-2 | ¥09         | 1500.0 |       | -        | 10/10          |        |             |   |            |       | EFCOXX        |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RESISTOFLEX CORP                                                                 |        | 71-2661-3 | ŝ           | 1000.0 |       |          | 40/00          |        |             |   |            |       | EFCOXX        |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RESISTOFLEX CORP                                                                 |        | 71-2662   | 50 X        | 2000.0 |       | 205      | 90/14          |        |             |   |            |       | FCOXX         |   |
| 1005                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                  |        | 71-2652-1 | Š           | 1000.0 |       |          | 40/00          |        |             |   |            |       | EFCOXX        |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RESISTIGELEX CORP                                                                |        | 71-2662-2 | XOS         | 1500-0 |       | -        | 10/10          |        |             |   | 0          |       | EFCOXX        |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                  |        | 71-2251   | XOS         | 500.0  |       | 20       | 40/00          |        |             |   |            |       | BEGEM         |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | HODYZR CHENICAL                                                                  |        | 71-2251-1 | 60X         | 500-0  |       |          | 40/00          |        |             |   | 4          |       | DREGEN        |   |
| -160                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | MDFKER CHEMICAL                                                                  |        | 71-2251-2 | ŝ           | 100.0  |       |          |                | 69 0   | 690         |   |            |       | DBEGEM        |   |
| SK 81370-4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | HAMILTON STAMDARD                                                                |        | 71-2268   | XOS         | 2000.0 |       | -        | 40/00          |        |             |   |            |       | DVDEXX        |   |
| 5X 81370-4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | HANTLTON STANDARD                                                                |        | 71-2268-1 | Ň           | 1500-0 |       |          |                | 501    | 501         |   |            |       | VDFXX         |   |
| •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | - 22                                                                             |        | 71-2372   | 60X         | 1500-0 |       | 50       | 00/07          | •      | 8<br>)<br>) |   | •          |       | FL DWXX       | 1 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | JOHNSON MEG CO.                                                                  |        | 71-2372-1 | ×09         | 1500.0 |       |          | 40/00          |        |             | • |            |       | FLOWXX        |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                  |        | 71-2372-2 | X QS        | 1000-0 | 1000  |          |                | 1 000N | 000N        |   |            |       | FL DHXX       |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                  |        | 70-1926   | EOX         | 1500-0 |       |          | 00/04          |        |             |   | >          |       | R XXXX        |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ENTECTIC CORP                                                                    |        | 70-1426-1 | COX         | 1500-0 |       | 50       | 90/00          |        |             |   |            | _     | FI XXX        |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                  |        | 70-1524-2 |             | 1500-0 | 1000  | 2        |                | 0000   | 0000        |   |            |       | ****          |   |
| 0 -E -ABOT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                  |        | 70-1026   | 202         |        | 2224  | 60       | . 90700        | -      |             |   |            |       |               | : |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                  |        | 70-1026   |             |        |       |          | 10.00          |        |             |   |            |       |               |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                  |        | 70-1925-1 |             |        | 1 000 |          |                | 0000   | 0000        |   | • >        |       |               |   |
| ų                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                  |        | 70-2314   |             |        | 2227  |          |                |        |             |   |            |       |               |   |
| CONTED FOR MIRE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                  |        | 1         |             |        |       |          |                |        |             |   | "          |       |               |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                  |        |           |             |        | 0001  | 2        | ,<br>+ 2 / 2 0 |        |             |   | •          |       |               |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | EX INTERNATIONAL                                                                 |        | 10-2210-2 | ŝ           | 100.0  | 1000  |          |                | 666N   | 666N        |   | ≻ .        |       | EL PICHS      | ` |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                  |        |           | K<br>N<br>N | 0-00cT |       | Š        | 40/00          |        |             |   | •          |       | DCKXX         |   |
| COMPOUND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | CORMING CORP                                                                     |        | 1-5106-12 | ŝ           | 1500.0 |       |          | 10/10          |        |             |   | -          |       | DOCKXX        |   |
| C CHIP UUND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | CORMING CORP.                                                                    |        | 71-3015-2 | X DO        | 1500.0 |       |          | 10/00          |        |             |   | •          |       | BCKXX         |   |
| . ZZO CELLUBE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                  | •0050  | 19-73     | Š           | 5000.0 |       | 50       | 40/00          |        |             |   | •          | 2     | DCXXXX        |   |
| 220 CELLUBE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                  |        | 10-73-1   | Š           | 2000.0 |       |          | 00/01          |        |             |   | <          |       | DCXXXX        |   |
| . 220 CELLUBE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                  | 0,30   | 10-73-10  | õ           | 4500-0 |       |          | 01/02          |        |             |   | <u>م</u>   |       | <b>DCXXXX</b> |   |
| 220 CELLUC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                  | • 0050 | 10-73-11  | X OS        | 5000.0 |       | -        | 01/02          |        |             |   | 0          | 000   | CXXXX         |   |
| 220 CELLUBE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                  | •0650  | 10-73-12  | š           | 2500.0 |       |          | 10/10          |        |             |   |            | 10 01 | DCXXXX        |   |
| 220 CELLUBE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | STAUTTER CHENICAL                                                                |        | 10-73-13  | X09         | 2000.0 |       | -        | 10/10          |        |             |   | -          | _     | DCYXXX        |   |
| FYROOUEL 220 CELLUBE STA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | STAUFFER CHEMICAL                                                                |        | 10-73-14  | ž           | 1500.0 |       |          | 10/10          |        |             |   | . <b>a</b> |       | DCXXXX        |   |
| FYRDQUEL 220 CELLUBE STA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | STAUFFER CHEMICAL                                                                |        | 10-73-15  | اردار       | 1000.0 |       | -        | 00/04          |        |             |   | •          |       |               |   |

••

| S DEGLEMATION         AMMERATINE         SEC.         TEST INT         TEST INT <thtest int<="" th=""></thtest>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | C C C C C C C C C C C C C C C C C C C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | S DESIGNATION         AMUFACTOREX         SPEC.<br>Intermediation         TES.<br>Intermediation         T |                                                       |                        |                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------|----------------------|
| Rf. 200 GLUNG         STMFFE (CARTICAL<br>CARTING         CONTINUE         Control         St         St <th< th=""><th>Mill 250 CELLURE         STATFRE CERTICAL         0000 1277-3         500 0001         500 0001         500 0001           Mill 250 CELLURE         STATFRE CERTICAL         0000 1277-3         600 1077-3         500 0001         500 0001         500 0001           Mill 250 CELLURE         STATFRE CERTICAL         00000 1277-3         600 1077-3         500 0001         500 0001         500 0001           Mill 250 CELLURE         STATFRE CERTICAL         0000 1277-3         600 1077-3         600 10702         01702         01702           Mill 250 CELLURE         STATFRE CERTICAL         0000 1277-3         600 1077-3         600 10702         01702         01702           Mill 250 CELLURE         STATFRE CERTICAL         0000 1277-3         600 1077-3         01702         01702         01702         01702         01702         01702         01702         01702         01702         01703         01702         01703         01702         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         &lt;</th><th>Ref         220 CELLONE         STANFFR CHERICAL         00050         10-15-2         GUA         90.0         50           DEL         200 CELLONE         STANFFR CHERICAL         00050         10-17-2         GUA         90.0         50           DEL         200 CELLONE         STANFFR CHERICAL         00050         10-17-3         GUA         9000.0         50           DEL         200 CELLONE         STANFFR CHERICAL         00050         10-17-3         GUA         9000.0         50           DEL         200 CELLONE         STANFFR CHERICAL         00050         10-17-3         GUA         9000.0         50           DEL         200 CELLONE         STANFFR CHERICAL         00050         10-17-3         GUA         9000.0         50           DEL         STANFFR CHERICAL         00050         10-17-3         GUA         9000.0         200           DEL         STANFFR CHERICAL         00050         10-17-3         GUA         9000.0         200           DEL         STANFFR         CHERI MALL         00750         10-19-1-3         GUA         9000.0         200           DEL         CHERI MALL         DET         00750         10-19-1-3         GUA         9000.</th><th>TEST RPT NO. TEST TEST IMPT<br/>. ENVR PRESS TEMP ENER</th><th>FLASH FIRE<br/>Point Pt</th><th>R T MATL<br/>I T CODE</th></th<>                                                                                                                                                                                                                                                                                                                                             | Mill 250 CELLURE         STATFRE CERTICAL         0000 1277-3         500 0001         500 0001         500 0001           Mill 250 CELLURE         STATFRE CERTICAL         0000 1277-3         600 1077-3         500 0001         500 0001         500 0001           Mill 250 CELLURE         STATFRE CERTICAL         00000 1277-3         600 1077-3         500 0001         500 0001         500 0001           Mill 250 CELLURE         STATFRE CERTICAL         0000 1277-3         600 1077-3         600 10702         01702         01702           Mill 250 CELLURE         STATFRE CERTICAL         0000 1277-3         600 1077-3         600 10702         01702         01702           Mill 250 CELLURE         STATFRE CERTICAL         0000 1277-3         600 1077-3         01702         01702         01702         01702         01702         01702         01702         01702         01702         01703         01702         01703         01702         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         01703         <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Ref         220 CELLONE         STANFFR CHERICAL         00050         10-15-2         GUA         90.0         50           DEL         200 CELLONE         STANFFR CHERICAL         00050         10-17-2         GUA         90.0         50           DEL         200 CELLONE         STANFFR CHERICAL         00050         10-17-3         GUA         9000.0         50           DEL         200 CELLONE         STANFFR CHERICAL         00050         10-17-3         GUA         9000.0         50           DEL         200 CELLONE         STANFFR CHERICAL         00050         10-17-3         GUA         9000.0         50           DEL         200 CELLONE         STANFFR CHERICAL         00050         10-17-3         GUA         9000.0         50           DEL         STANFFR CHERICAL         00050         10-17-3         GUA         9000.0         200           DEL         STANFFR CHERICAL         00050         10-17-3         GUA         9000.0         200           DEL         STANFFR         CHERI MALL         00750         10-19-1-3         GUA         9000.0         200           DEL         CHERI MALL         DET         00750         10-19-1-3         GUA         9000.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TEST RPT NO. TEST TEST IMPT<br>. ENVR PRESS TEMP ENER | FLASH FIRE<br>Point Pt | R T MATL<br>I T CODE |
| III 230 CRLUGE TAWFER CHERICAL<br>230 CRLUGE TAWFER CHERICAL<br>246 CRF MTL DEFT<br>230 CRLUGE TAWFER CHERICAL<br>230 CRLUGE TAWFER CHERICAL<br>246 CRF MTL DEFT<br>230 CRLUGE TAWFER CHERICAL<br>246 CRF MTL DEFT<br>200 CRLUGE TAWFER CHERICAL<br>200 CRLUGE T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | RIL 230 CELLURE STAURFER CHERICAL<br>230 CELLURE STAURFER CHERICAL<br>244 CELLURE STAURFER CHERICAL<br>2                                                                                                                                                                                                                                                                                                                                        | Link         Zoo         Clink         State         St                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 73-16 GOX                                             | 27 52                  | 0 13 00.8888         |
| III CAR CHURGE<br>STAURFER CHEMICAL<br>CONSTITUTION         ODS05<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1)<br>(C-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | III CAR CHUNE         TAWFER CHEMICAL<br>CREATE         0000<br>CREATE         COM 1000<br>CREATE         COM 10000<br>CREATE         COM 100000<br>CREATE <thcom 10000<br="">CREATE</thcom>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | L         Z20         CELLUME         STANFER         CHENTICAL         00050         IC-T35         GGX         4000.0         50           DEL         Z20         CELLUME         STANFER         CHENTICAL         00050         IC-T35         GGX         2000.0         500           DEL         Z20         CELLUME         STANFER         CHENTICAL         00050         IC-T35         GGX         2000.0         500         2000.0         200           DEL         Z20         CELLUME         STANFER         CHENTICAL         00050         IC-T35         GGX         2000.0         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10-73-2 GOX 3000.0 50                                 |                        |                      |
| NIL         STAURTAN         CHENCL         CODE         International                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | MIL       220       CELUNE       FAWFER       CHENCL       00050       10-71-5       600       10/02         MIL       220       CELUNE       FAWFER       CHENCL       00050       10-71-5       600       10/02         MIL       220       CELUNE       FAWFER       CHENCL       00050       10-71-5       600       10/02         2010       CELUNE       FAWFER       CHENCL<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | NIL     220 CELLURE     STANFER ACTERICAL     .00550     10-73-4     GDX     1500.00       NIL     220 CELLURE     STANFER ACTERICAL     .00550     10-73-4     GDX     2500.00       NIL     220 CELLURE     STANFER ACTERICAL     .00550     10-73-4     GDX     2500.00       NIL     220 CELLURE     STANFER ACTERICAL     .00550     10-73-9     GDX     2500.00       NIL     DEF     ATAFER ACTERICAL     .00550     10-73-9     GDX     2500.00       NIL     DEF     ATAFER ACTERICAL     .00550     10-73-9     GDX     4000.00       NIL     DEF     ATA     ATAFER ACTERICAL     .00550     10-74-1     GDX     4000.00       2010     GEE     CHE MAIL DEFT     .07550     10-94-1     GDX     5000.00     200       2010     GEE     CHE MAIL DEFT     .07550     10-94-1     GDX     5000.00     200       2010     GEE     CHE MAIL DEFT     .07550     10-94-1     GDX     5000.00     200       2010     GEE     CHE MAIL DEFT     .07550     10-94-1     GDX     5000.00     200       2010     GEE     CHE MAIL DEFT     .07550     10-94-1     GDX     5000.00     200       2010<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 10-73-3 60X 4000.0 50                                 | 0/01                   | 11 DC YEA            |
| III 220 CELLORE         STANFERT CHERICAL         00050         ID-T1-5         Gux         200000         01/02           III 220 CELLORE         STANFERT CHERICAL         00050         ID-T1-5         Gux         200000         01/02           III 220 CELLORE         STANFERT CHERICAL         00050         ID-T1-5         Gux         200000         01/02           III 220 CELLORE         STANFERT CHERICAL         00050         ID-T1-5         Gux         200000         01/02           III 220 CELLORE         STANFERT CHERICAL         00500         ID-T1-5         Gux         200000         01/02           2010         Gux         STANFERT CHERICAL         00500         ID-T1-5         Gux         200000         01/02           2010         Gux         STANFERT CHERICAL         00750         ID-T1-5         Gux         200000         01/02           2010         Gux         STANFERT CHERICAL         00750         ID-T1-5         Gux         200000         01/02           2010         Gux         STANFERT         00750         ID-T1-5         Gux         200000         01/02           2010         Gux         STANFERT         07750         ID-T1-5         Gux         200000         01/                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | III 220 CELLORE         STANFERT CHERICAL         00050         ID-T1-5         GGX         200000         01/02           III 220 CELLORE         STANFERT CHERICAL         00050         ID-T1-5         GGX         200000         01/02           III 220 CELLORE         STANFERT CHERICAL         00050         ID-T1-5         GGX         200000         01/02           III 220 CELLORE         STANFERT CHERICAL         00050         ID-T1-5         GGX         200000         01/02           III 220 CELLORE         STANFERT CHERICAL         00550         ID-T1-5         GGX         20000         01/02           III 220 CELLORE         STANFERT CHERICAL         00550         ID-T1-5         GGX         20000         01/02           III 220 CELLORE         STANFERT CHERICAL         00750         ID-T1-5         GGX         20000         01/02           III 220 CELLORE         STANFERT CHERICAL         00750         ID-T1-5         GGX         20000         01/02           III 220 CELLORE         CHER MALL DEFT         07750         ID-T1-5         GGX         20000         01/02           III 220 CELLORE         CHER MALL DEFT         07750         ID-T1-5         GGX         2000         01/02           III 22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | International         Construct                                                                                                                                                                                                                                                                                                                                                       | 10-73-4 G0X 1500.0                                    | 40/04                  | _                    |
| R. Z20 CELLUGE         STANFFER CHERICAL         .0000         IC-71+-0         Gax         3500.0         01/02           R. Z20 CELLUGE         STANFFER CHERICAL         .0000         IC-71+-0         Gax         3500.0         01/02           R. Z20 CELLUGE         STANFFER CHERICAL         .0000         IC-71+-1         Gax         3500.0         01/02           R. Z20 CELLUGE         STANFFER CHERICAL         .0070         IC-71+-1         Gax         3500.0         01/02           R. Z20 CELLUGE         STANFFER CHERICAL         .0070         IC-71+-1         Gax         3500.0         01/02           R. Z20 CELLUGE         STANFFER CHERICAL         .0070         IC-71+-1         Gax         3500.0         01/02           R. Z20 CELLUGE         STANFFER CHERICAL         .0770         IC-71+-1         Gax         3500.0         01/03           R. Z20 CELLUGE         STANFFER CHERICAL         .0770         IC-71+-1         Gax         2000         01/03           R. Z20 CELLUGE         STANFFER CHERICAL         .0770         IC-71+-1         Gax         2000         01/03           R. Z20 CELLUE         MULL DEFT         .0770         IC-91+-1         Gax         2000         01/03           R. Z20 C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | RF         Z20         CELLURE         STANFER         CHERICAL         0000         IC-71-5         GGX         2500.00         01/02           RL         Z20         CELLURE         STANFER         CHERICAL         0000         IC-71-5         GGX         2000.00         01/02           RL         Z20         CELLURE         STANFER         CHERICAL         0000         10/02         01/02         01/02           RL         Z20         CELLURE         STANFER         CHERICAL         0000         10/02         01/02         01/02           RL         CELLURE         STANFER         CHERICAL         0000         10/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | URL 220 CELLURE         STAFFER CHERICAL         00050         IC-T3-7         GDX         2000-0           URL 220 CELLURE         STAFFER CHERICAL         00050         IC-T3-7         GDX         3900-0           2010         CFELURE         STAFFER CHERICAL         00050         IC-T3-7         GDX         3900-0           2010         CFELURE         STAFFER CHERICAL         00050         IC-T3-7         GDX         3900-0           2010         CFELURE         STAFFER CHERICAL         00750         IC-T3-7         GDX         4000-0           2010         CFE         CHER MALL DEFT         07750         IC-T3-7         GDX         5000-0           2010         CFE         CHER MALL DEFT         07750         IC-T3-7         GDX         5000-0           2010         CFE         CHER MALL DEFT         07750         IC-T3-7         GDX         5000-0           2010         CFE         CHER MALL DEFT         07750         IC-T4-1         GDX         5000-0           2010         CFE         CHER MALL DEFT         07750         IC-T4-1         GDX         5000-0           2010         CFE         CHER MALL DEFT         07750         IC-T4-1         GDX         5000-0<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 10-73-5 GOX 2000.0                                    | 11/03                  | 2                    |
| Mile         State         Constrain         Constrain <thconstrain< th=""> <thconstrain< th=""><th>R. ZZO CELLUGE         STANFER CHERICAL         -0050         IC-T3-7         Gax         3000.0         01/02           R. ZZO CELLUGE         STANFER CHERICAL         0050         IC-T3-7         Gax         3000.0         01/02           R. ZZO CELLUGE         STANFER CHERICAL         0050         IC-T3-7         Gax         4000.0         01/02           Z010         G-G-CHER MAIL DEFT         0750         IC-T4-1         Gax         4000.0         01/03           Z010         G-G-CHER MAIL DEFT         0750         IC-T4-1         Gax         4000.0         01/03           Z010         G-G-CHER MAIL DEFT         0750         IC-T4+1         Gax         4000.0         01/03           Z010         G-G-CHER MAIL DEFT         0750         IC-T4+1         Gax         4000.0         01/03           Z010         G-G-CHER MAIL DEFT         0770         IC-T4+1         Gax         4000.0         01/03           Z010         G-G-CHER MAIL DEFT         0770         IC-T4+1         Gax         4000.0         01/03           Z010         G-G-CHER MAIL DEFT         0770         IC-T4+1         Gax         4000.0         01/03           Z010         Gax         GHE MAIL DEFT         0770</th><th>Let         Z20 CELLUGE         STANFER CHENICAL         -0050         IC-73-7         GGX         3000.0           2010         C-ELLUGE         STANFER CHENICAL         -0050         IC-71-9         GDX         3900.0           2010         C-ELLUGE         STANFER CHENICAL         -0050         IC-71-9         GDX         3900.0           2010         C-EC         CHEN MAIL DEFT         -01750         IC-94-1         GDX         4900.0           2010         C-EC         CHEN MAIL DEFT         -01750         IC-94-1         GDX         5000.0         200           2010         C-EC         CHEN MAIL DEFT         -01750         IC-94-1         GDX         5000.0         200           2010         C-EC         CHEN MAIL DEFT         -01750         IC-94-1         GDX         5000.0         200           2010         G-EC         CHEN MAIL DEFT         -01750         IC-94-1         GDX         5000.0         200           2010         G-EC         CHEN MAIL DEFT         -01750         IC-94-1         GDX         5000.0         200           2010         G-EC         CHEN MAIL DEFT         -01750         IC-94-1         GDX         5000.0         200</th><th>10-73-6 GOX 2500.0</th><th>1/02</th><th>2</th></thconstrain<></thconstrain<>                                                                                                                                                                                                                                                                            | R. ZZO CELLUGE         STANFER CHERICAL         -0050         IC-T3-7         Gax         3000.0         01/02           R. ZZO CELLUGE         STANFER CHERICAL         0050         IC-T3-7         Gax         3000.0         01/02           R. ZZO CELLUGE         STANFER CHERICAL         0050         IC-T3-7         Gax         4000.0         01/02           Z010         G-G-CHER MAIL DEFT         0750         IC-T4-1         Gax         4000.0         01/03           Z010         G-G-CHER MAIL DEFT         0750         IC-T4-1         Gax         4000.0         01/03           Z010         G-G-CHER MAIL DEFT         0750         IC-T4+1         Gax         4000.0         01/03           Z010         G-G-CHER MAIL DEFT         0750         IC-T4+1         Gax         4000.0         01/03           Z010         G-G-CHER MAIL DEFT         0770         IC-T4+1         Gax         4000.0         01/03           Z010         G-G-CHER MAIL DEFT         0770         IC-T4+1         Gax         4000.0         01/03           Z010         G-G-CHER MAIL DEFT         0770         IC-T4+1         Gax         4000.0         01/03           Z010         Gax         GHE MAIL DEFT         0770                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Let         Z20 CELLUGE         STANFER CHENICAL         -0050         IC-73-7         GGX         3000.0           2010         C-ELLUGE         STANFER CHENICAL         -0050         IC-71-9         GDX         3900.0           2010         C-ELLUGE         STANFER CHENICAL         -0050         IC-71-9         GDX         3900.0           2010         C-EC         CHEN MAIL DEFT         -01750         IC-94-1         GDX         4900.0           2010         C-EC         CHEN MAIL DEFT         -01750         IC-94-1         GDX         5000.0         200           2010         C-EC         CHEN MAIL DEFT         -01750         IC-94-1         GDX         5000.0         200           2010         C-EC         CHEN MAIL DEFT         -01750         IC-94-1         GDX         5000.0         200           2010         G-EC         CHEN MAIL DEFT         -01750         IC-94-1         GDX         5000.0         200           2010         G-EC         CHEN MAIL DEFT         -01750         IC-94-1         GDX         5000.0         200           2010         G-EC         CHEN MAIL DEFT         -01750         IC-94-1         GDX         5000.0         200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10-73-6 GOX 2500.0                                    | 1/02                   | 2                    |
| Mile 270 Chluke         State Control         Objection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Mile         Zato Chluke         Final Final Cherk         Obsolution         Constrained for the constrain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Mile         Z20 CELLUSE         STAUFER CHERICAL         .0050         IC-73-9         GOX         3500.0           2010         C-6-6         CHEN MAIL CELT         .0050         IC-74-9         GOX         4000.0           2010         C-6-6         CHEN MAIL CELT         .0050         IC-74-9         GOX         4000.0           2010         C-6-6         CHEN MAIL CELT         .00750         IC-94-1         GOX         4000.0           2010         C-6-6         CHEN MAIL CELT         .00750         IC-94-1         GOX         4000.0           2010         C-6-6         CHEN MAIL CELT         .00750         IC-94-1         GOX         4000.0         200           2010         C-6-6         CHEN MAIL CELT         .00750         IC-94-5         GOX         4000.0         200           2010         C-6-6         CHEN MAIL CELT         .00750         IC-94-5         GOX         4000.0         200           2010         C-6-6         MAIL CELT         00750         IC-94-5         GOX         4000.0         200           2010         C-6-6         MAIL CETT         00750         IC-94-5         GOX         4000.0         200           2010         C-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10-73-7 GOX 3000.0                                    |                        |                      |
| MIL         Z700         Cittude         State CHILL         Constrait         Constrait <thconstrait< th="">         Constrait         <thconstrait< <="" th=""><th>MIL         Z700         Cittude         State Cittude         St</th><th>NEL         220 CELLUGE         STMFFER CHEMICAL         0050         10-71-9         600         4000.0           2010         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3500.0           2010         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3500.0           2010         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3500.0           2010         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3500.0           2010         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3000.0         200           2010         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3000.0         200           2010-0103         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3000.0         200           2010-0103         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3000.0         200           2010-0103         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3000.0         200           2010-0103         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3000.0         200</th><th>10-73-8 GOX 3500-0</th><th></th><th></th></thconstrait<></thconstrait<> | MIL         Z700         Cittude         State Cittude         St                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | NEL         220 CELLUGE         STMFFER CHEMICAL         0050         10-71-9         600         4000.0           2010         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3500.0           2010         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3500.0           2010         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3500.0           2010         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3500.0           2010         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3000.0         200           2010         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3000.0         200           2010-0103         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3000.0         200           2010-0103         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3000.0         200           2010-0103         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3000.0         200           2010-0103         G-E- CHEN MAIL DEFT         07750         10-94-1         600         3000.0         200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10-73-8 GOX 3500-0                                    |                        |                      |
| 2010         CEF. CHEN MUT DEFT         0750         10-94-1         CON         00000           2010         CEF. CHEN MUT DEFT         0750         10-94-1         CON         00000           2010         CEF. CHEN MUT DEFT         0750         10-94-1         CON         00000           2010         CEF. CHEN MUT DEFT         0750         10-94-5         CON         00000           2010         CEF. CHEN MUT DEFT         0750         10-94-5         CON         00000           2010         CEF. CHEN MUT DEFT         0750         10-94-5         CON         00000           2010         CEF. CHEN MUT DEFT         0750         10-94-5         CON         00000           2010         CEF. CHEN MUT DEFT         0750         10-94-5         CON         00000           2010         CEF. CHEN MUT DEFT         0750         10-94-5         CON         00000           2010         CEF. CHEN MUT DEFT         0750         10-94-5         CON         00000           2010         CEF. CHEN MUT DEFT         0750         10-94-5         CON         00000           2010         CEF. CHEN MUT DEFT         0750         10-94-5         CON         000000           2010 </th <th>2010         566         CHEN MUT DEFT         0750         10-94-1         600         35000         00004           2010         646         CHEN MUT DEFT         0750         10-94-1         600         35000         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         200         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         200         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         200         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         200         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         200         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         200         00004           2010</th> <th>2010         Core         Chen         MTL         Def         Offse         Def         <thdef< th=""> <thdef< th=""> <thdef< th=""></thdef<></thdef<></thdef<></th> <th></th> <th></th> <th></th>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2010         566         CHEN MUT DEFT         0750         10-94-1         600         35000         00004           2010         646         CHEN MUT DEFT         0750         10-94-1         600         35000         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         200         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         200         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         200         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         200         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         200         00004           2010         646         CHEN MUT DEFT         0750         10-94-5         600         200         00004           2010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2010         Core         Chen         MTL         Def         Offse         Def         Def <thdef< th=""> <thdef< th=""> <thdef< th=""></thdef<></thdef<></thdef<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                       |                        |                      |
| 2010         Core         Core <th< th=""><th>2010         Correct Correct Mart DEF7         0770         D-9+-1         Correct Mart DE77         0770         D-9+-1         Correct Mart DE77         D1/03         T         D1/03         <thd1 03<="" th=""> <thd1 03<="" th="">         D1/03</thd1></thd1></th><th>2010         Control         <thcontrol< th=""> <thcontrol< th=""> <thcont< th=""><th></th><th></th><th>39</th></thcont<></thcontrol<></thcontrol<></th></th<>                                                                                                                                                                                                                                      | 2010         Correct Correct Mart DEF7         0770         D-9+-1         Correct Mart DE77         0770         D-9+-1         Correct Mart DE77         D1/03         T         D1/03         D1/03 <thd1 03<="" th=""> <thd1 03<="" th="">         D1/03</thd1></thd1>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2010         Control         Control <thcontrol< th=""> <thcontrol< th=""> <thcont< th=""><th></th><th></th><th>39</th></thcont<></thcontrol<></thcontrol<>                                                                                                                                                                                                                                                                                                                             |                                                       |                        | 39                   |
| 2010         Control         Control <thcontrol< th=""> <thcontrol< th=""> <thcont< th=""><th>2010         Control         <thcontrol< th=""> <thcontrol< th=""> <thcont< th=""><th>2010         645         CHER MAIL DEFT         0770         10-44-5         CMX         4000.0         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200</th><th></th><th>•</th><th>3</th></thcont<></thcontrol<></thcontrol<></th></thcont<></thcontrol<></thcontrol<>                                                                                                                                                                                        | 2010         Control         Control <thcontrol< th=""> <thcontrol< th=""> <thcont< th=""><th>2010         645         CHER MAIL DEFT         0770         10-44-5         CMX         4000.0         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200</th><th></th><th>•</th><th>3</th></thcont<></thcontrol<></thcontrol<> | 2010         645         CHER MAIL DEFT         0770         10-44-5         CMX         4000.0         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                       | •                      | 3                    |
| 2010         565         CHEN MATL DEFT         -7750         10-94-1         500         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03         01/03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2010         Control         C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2010         645         646         646         647         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         775                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                       |                        | 29                   |
| 2010         Control         Control <thcontrol< th=""> <thcontrol< th=""> <thcont< th=""><th>2010         Corr         2010         Corr         <th< th=""><th>2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         <th< th=""><th></th><th>•</th><th></th></th<></th></th<></th></thcont<></thcontrol<></thcontrol<>                                                                                                                                                                                                                                                                                | 2010         Corr         Corr <th< th=""><th>2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         <th< th=""><th></th><th>•</th><th></th></th<></th></th<>                                                                                         | 2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010 <th< th=""><th></th><th>•</th><th></th></th<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                       | •                      |                      |
| 2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010 <th< th=""><th>2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         <th< th=""><th>2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         <th< th=""><th></th><th></th><th>2:</th></th<></th></th<></th></th<>                                                                                                                                                                                                                                                                                                                                                                                                                        | 2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010 <th< th=""><th>2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         <th< th=""><th></th><th></th><th>2:</th></th<></th></th<>                                                                                        | 2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010         2010 <th< th=""><th></th><th></th><th>2:</th></th<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                       |                        | 2:                   |
| 2010-0103         Corr         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750         7750                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2010-0103         Corr         2000-0103         2000-0103         2000-0103         2000-0103         2000-0103         2000-0103         2000-0103         2000-0103         2000-0103         2000-0103         2000-0103         2000-0103         2000-0103         2000-0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2010-0103       6.6. CHEN MAT DEFT       0750       10-95-10       6000.00       200         2010-0103       6.6. CHEN MAT DEFT       0750       10-95-10       6000.00       200         2010-0103       6.6. CHEN MAT DEFT       0750       10-95-10       6000.00       200         2010-0103       6.6. CHEN MAT DEFT       0750       10-95-10       6000.00       200         2010-0103       6.6. CHEN MAT DEFT       0750       10-95-3       6000.00       200         2010-0103       6.6. CHEN MAT DEFT       0750       10-95-4       6000.00       200         2010-0103       6.6. CHEN MAT DEFT       0750       10-95-4       6000.00       200         2010-0103       6.6. CHEN MAT DEFT       0750       10-95-4       6000.00       200         2010-0103       6.6. CHEN MAT DEFT       0750       10-95-4       6000.00       200         2010-0103       6.6. CHEN MAT DEFT       0750       10-95-4       6000.00       200         2010-0103       6.6. CHEN MAT DEFT       0750       10-95-4       6000.00       200         2010-0103       6.6. CHEN MAT DEFT       0750       10-95-4       6000.00       200         2010-0103       6.6. CHEN MAT DEFT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                       |                        |                      |
| 2010-0103         6.67         CHEN MAIL DEFT         07750         10-95-1         COX         4000.0         200         2000.0         200<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2010-0103         6.65         CHEN MIL DEFT         0775         10-95-1         COX 4000.0         200 00.0           2010-0103         6.65         CHEN MIL DEFT         0775         10-95-1         COX 4000.0         200         00/04           2010-0103         6.65         CHEN MIL DEFT         0775         10-95-4         COX 2000.0         200         00/04           2010-0103         6.65         CHEN MIL DEFT         0775         10-95-4         COX 2000.0         200         00/01           2010-0103         6.65         CHEN MIL DEFT         0775         10-95-4         COX 2000.0         200         00/01           2010-0103         6.65         CHEN MIL DEFT         0775         10-95-4         COX 200         00/01           2010-0103         6.65         CHEN MIL DEFT         0775         10-95-4         COX 200         00/01           2010-0103         6.65         CHEN MIL DEFT         0775         10-95-4         COX 1000.0         200         00/01           2010-0103         6.65         CHEN MIL DEFT         0775         10-95-4         COX 1000.0         200         00/01           2010-0103         6.65         CHEN MIL DEFT         0775         10-95-4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2010-0103       645       CHER MATL DEFT       0750       10-95-1       600       200         2010-0103       646       CHER MATL DEFT       0750       10-95-1       600       200         2010-0103       646       CHER MATL DEFT       0750       10-95-2       600       200         2010-0103       646       CHER MATL DEFT       0750       10-95-4       600       200         2010-0103       646       CHER MATL DEFT       0750       10-95-4       600       200         2010-0103       646       CHER MATL DEFT       0750       10-95-4       600       200       200         2010-0103       646       CHER MATL DEFT       0750       10-95-4       600       200       200         2010-0103       646       CHER MATL DEFT       0750       10-95-4       600       200       200         2010-0103       646       CHER MATL DEFT       0750       10-95-4       600       200       200         2010-0103       646       CHER MATL DEFT       0750       10-95-4       600       200       200         2010-0103       646       CHER MATL DEFT       0750       10-96-4       600       200       200       200 <th></th> <th></th> <th>::</th>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |                        | ::                   |
| 2010-0103         6-15         CHEN MAIL DEPT         -0750         10-95-10         200         00/01           2010-0103         6-15         CHEN MAIL DEPT         -0750         10-95-2         6/17         -0750         0         0/103         0/103         0/103           2010-0103         6-15         CHEN MAIL DEPT         -0750         10-95-5         6/17         -1/102         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103         0/103                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2010-0103         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10         6-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2010-0103         Get.         CHEN         MATL         DEPT         0750         10-95-10         GCX         5000-0         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                       |                        | 29                   |
| 2010-0103         6-16         CHEN MATL DEFT         -0750         10-95-5         CAX         5000-0103         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02         01/02<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2010-0103       6-10       700       0000       200       0000         2010-0103       6-10       700       0000       200       0000       200       0000         2010-0103       6-10       700       0000       200       0000       200       0000         2010-0103       6-10       700       0000       200       0000       200       0000         2010-0103       6-10       700       10-95-5       600       200       0000       200       0000         2010-0103       6-10       700       10-95-5       600       200       0000       200       0000         2010-0103       6-10       700       10-95-5       600       200       0000       200       0000         2010-0103       6-10       700       10-95-5       600       200       0000       200       0000         2010-0103       6-10       700       10-95-5       600       200       0000       200       0000         2010-0103       6-10       700       10-95-5       600       200       0000       200       0000       200       0000       200       0000       200       0000       200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2010-0103       6-6       CHEM MATL DEPT       0750       10-95-2       CKX 4500.0       200         2010-0103       6-6       CHEM MATL DEPT       0750       10-95-4       GUX 22000.0       200         2010-0103       6-6       CHEM MATL DEPT       0750       10-95-4       GUX 22000.0       200         2010-0103       6-6       CHEM MATL DEPT       0750       10-95-4       GUX 22000.0       200         2010-0103       6-6       CHEM MATL DEPT       0750       10-95-6       GUX 22000.0       200         2010-0103       6-6       CHEM MATL DEPT       0750       10-95-7       GUX 25000.0       200         2010-0103       6-6       CHEM MATL DEPT       0750       10-95-7       GUX 45000.0       200         2010-0103       6-6       CHEM MATL DEPT       0750       10-95-7       GUX 45000.0       200         2012-10125       6-6       CHEM MATL DEPT       0750       10-95-7       GUX 45000.0       200         2012-10125       6-6       CHEM MATL DEPT       0750       10-95-7       GUX 45000.0       200         2012-10125       6-6       CHEM MATL DEPT       0750       10-96-9       GUX 45000.0       200         2012-10125<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                       |                        | 2:                   |
| 2010-0103         Get:         CHH         DFT         0770         1-95-3         500         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         201         0001         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2010-0103         Get:         CHH         DFF         -0750         10-95-5         500         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         200         0001         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201         201                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2010-0103         Get:         CHEN MATL         DEPT         0750         10-95-5         GUX         2000-0         200           2010-0103         Get:         CHEN MATL         DEPT         0750         10-95-5         GUX         2000-0         200           2010-0103         Get:         CHEN MATL         DEPT         0750         10-95-5         GUX         2000-0         200           2010-0103         Get:         CHEN MATL         DEPT         0750         10-95-5         GUX         2000-0         200           2010-0103         Get:         CHEN MATL         DEPT         0750         10-95-7         GUX         2000-0         200           2010-0103         Get:         CHEN MATL         DEPT         0750         10-95-7         GUX         4000-0         200           2010-0103         Get:         CHEN MATL         DEPT         07750         10-95-7         GUX         4000-0         200           2010-0103         Get:         CHEN MATL         DEPT         07750         10-95-7         GUX         4000-0         200           2012-10125         Get:         CHEN MATL         DEPT         07750         10-96-7         GUX         4000-0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                       |                        | 3                    |
| Z010-0103         G.C. CHEN NATL DEFT         OT50         IO-95-5         G.X. 2000.0         200         00/01           Z010-0103         G.C. CHEN NATL DEFT         OT50         IO-95-5         G.X. 2500.0         200         00/01           Z010-0103         G.C. CHEN NATL DEFT         OT50         IO-95-5         G.X. 2500.0         200         00/01           Z010-0103         G.C. CHEN NATL DEFT         OT50         IO-95-6         G.X. 2500.0         200         00/01           Z010-0103         G.C. CHEN NATL DEFT         OT50         IO-95-6         G.X. 4500.0         200         00/01           Z012-01125         G.C. CHEN NATL DEFT         OT50         IO-95-9         G.X. 4500.0         200         00/01           Z012-01125         G.C. CHEN NATL DEFT         OT750         IO-95-9         G.X. 4500.0         200         00/01           Z012-01125         G.C. CHEN NATL DEFT         OT750         IO-96-1         G.X. 4500.0         200         00/01           Z012-01125         G.C. CHEN NATL DEFT         OT750         IO-96-2         G.X. 4500.0         200         00/01           Z012-01125         G.C. CHEN NATL DEFT         OT750         IO-96-2         G.X. 4500.0         200         00/01      <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Z010-0103         G.C. CHEN MATL DEFT         OT50         IO-95-5         G.OX         Z000-0103         G.C. CHEN MATL DEFT         OT50         IO-95-6         G.OX         Z000-0103         G.C. CHEN MATL DEFT         OT50         IO-95-7         G.OX         Z000-0103         G.C. CHEN MATL DEFT         OT50         IO-95-9         G.OX         Z000-0103         G.C. CHEN MATL DEFT         OT50         IO-95-9         G.OX         Z000-0103         Z00         Z00011           Z012-00125         G.C. CHEN MATL DEFT         OT70         IO-96-7         GOX         Z000-00         Z00         Z00         Z00         Z00         Z00101         Z01         Z012         Z012 <th>Z010-0103         Get:         CHEM         MTL         DEFT         GTS0         10-95-6         GUX         2500.00         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200</th> <th></th> <th></th> <th>2</th>                                                            | Z010-0103         Get:         CHEM         MTL         DEFT         GTS0         10-95-6         GUX         2500.00         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                       |                        | 2                    |
| Z010-0103         Get         CHEM         MTL         DEFT         OT50         IC-95-5         GOX         2000-010         Z00         00/01           2010-0103         Get         CHEM         MTL         DEFT         OT50         IC-95-5         GOX         2000-010         Z00         00/01           2010-0103         Get         CHEM         MTL         DEFT         OT50         IC-95-5         GOX         2000-010         Z00         00/01           2010-0103         Get         CHEM         MTL         DEFT         OT50         IC-95-5         GOX         2000-010         Z00         00/01           2012-0125         Get         CHEM         MTL         DEFT         OT50         IC-95-5         GOX         2000-00         Z00         00/01           2012-0125         Get         CHEM         MTL         DEFT         IC-95-5         GOX         1000-0         Z00         00/01         484           2012-0125         Get         CHEM         MTL         DEFT         IC-95-5         GOX         2000-0         Z00         00/01         421           2012-0125         Get         CHEM         MTL         DEFT         IC-95-5         GO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Z010-0103         Get         CHER         MTL         DEF         OT50         10-95-5         GOX         2000-010         200         00/01           2010-0103         Get         CHER         MTL         DEF         -0750         10-95-6         GOX         2000         00/01           2010-0103         Get         CHER         MTL         DEF         -0750         10-95-6         GOX         3000.0         200         00/01           2010-0103         Get         CHER         MTL         DEF         -0750         10-95-6         GOX         400.0         200         00/01           2011-0103         Get         CHER         MTL         DEFT         -0750         10-95-6         GOX         400.0         200         00/01           2011-0103         Get         CHER         MTL         DEFT         -0750         10-95-6         GOX         4500.0         200         00/01         484           2011-0103         Get         CHER         MTL         DEFT         -0750         10-95-6         GOX         4500.0         200         00/01         421           2011-0125         Get         CHER         MTL         DEFT         -0750                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Z010-0103         Gete         CHEM         MATL         DEPT         -0750         10-95-5         Gute         Z00000         Z0000         Z00000         Z00000         Z00000                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                       |                        | 2:                   |
| 2010-0103       6.6. CHEN MATL DEPT       .0750       10-95-6       300       200       00/01         2010-0103       6.6. CHEN MATL DEPT       .0750       10-95-6       300       200       00/01         2010-0103       6.6. CHEN MATL DEPT       .0750       10-95-6       300       200       00/01         2010-0103       6.6. CHEN MATL DEPT       .0750       10-95-9       60X       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-95-7       60X       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-95-7       60X       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-7       60X       100000       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-7       60X       100000       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-7       60X       100000       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-7       60X       2000       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-7       60X <t< th=""><th>2010-0103       6-6       CHEN MATL DEPT       -0750       10-95-6       500       00/01         2010-0103       6-6       CHEN MATL DEPT       -0750       10-95-6       500       200       00/01         2010-0103       6-6       CHEN MATL DEPT       -0750       10-95-6       500       200       00/01         2012-0103       6-6       CHEN MATL DEPT       -0750       10-95-6       500       200       00/01         2012-0125       6-6       CHEN MATL DEPT       -0750       10-95-7       600       200       00/01         2012-10125       6-6       CHEN MATL DEPT       -0750       10-95-7       600       200       00/01         2012-10125       6-6       CHEN MATL DEPT       -0750       10-96-7       600       200       00/01         2012-10125       6-6       CHEN MATL DEPT       -0750       10-96-7       600       200       00/01         2012-10125       6-6       CHEN MATL DEPT       -0750       10-96-7       600       200       00/01         2012-10125       6-6       CHEN MATL DEPT       -0750       10-96-7       600       200       00/01         2012-10125       6-6       CHEN MATL DEPT</th><th>2010-0103       6.6. CHEN MATL DEPT       .0750       10-95-6       300.00       200         2010-0103       6.6. CHEN MATL DEPT       .0750       10-95-6       300.00       200         2010-0103       6.6. CHEN MATL DEPT       .0750       10-95-6       300.00       200         2010-0103       6.6. CHEN MATL DEPT       .0750       10-95-9       60X       1900.00       200         2012-10125       6.6. CHEN MATL DEPT       .0750       10-95-9       60X       1900.00       200         2012-10125       6.6. CHEN MATL DEPT       .0750       10-95-9       60X       1900.00       200         2012-10125       6.6. CHEN MATL DEPT       .0750       10-95-1       60X       1900.00       200         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-2       60X       4900.00       200         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-5       60X       4900.00       200         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-5       60X       4900.00       200         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-5       60X       4900.00       200         2012-10125       6.6. CHEN MATL DEP</th><th></th><th></th><th></th></t<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2010-0103       6-6       CHEN MATL DEPT       -0750       10-95-6       500       00/01         2010-0103       6-6       CHEN MATL DEPT       -0750       10-95-6       500       200       00/01         2010-0103       6-6       CHEN MATL DEPT       -0750       10-95-6       500       200       00/01         2012-0103       6-6       CHEN MATL DEPT       -0750       10-95-6       500       200       00/01         2012-0125       6-6       CHEN MATL DEPT       -0750       10-95-7       600       200       00/01         2012-10125       6-6       CHEN MATL DEPT       -0750       10-95-7       600       200       00/01         2012-10125       6-6       CHEN MATL DEPT       -0750       10-96-7       600       200       00/01         2012-10125       6-6       CHEN MATL DEPT       -0750       10-96-7       600       200       00/01         2012-10125       6-6       CHEN MATL DEPT       -0750       10-96-7       600       200       00/01         2012-10125       6-6       CHEN MATL DEPT       -0750       10-96-7       600       200       00/01         2012-10125       6-6       CHEN MATL DEPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2010-0103       6.6. CHEN MATL DEPT       .0750       10-95-6       300.00       200         2010-0103       6.6. CHEN MATL DEPT       .0750       10-95-6       300.00       200         2010-0103       6.6. CHEN MATL DEPT       .0750       10-95-6       300.00       200         2010-0103       6.6. CHEN MATL DEPT       .0750       10-95-9       60X       1900.00       200         2012-10125       6.6. CHEN MATL DEPT       .0750       10-95-9       60X       1900.00       200         2012-10125       6.6. CHEN MATL DEPT       .0750       10-95-9       60X       1900.00       200         2012-10125       6.6. CHEN MATL DEPT       .0750       10-95-1       60X       1900.00       200         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-2       60X       4900.00       200         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-5       60X       4900.00       200         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-5       60X       4900.00       200         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-5       60X       4900.00       200         2012-10125       6.6. CHEN MATL DEP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                       |                        |                      |
| 2010-0103         6-6-         CHER MATL         DEPT         -0750         10-95-79         GUX         3500.0         200         00/01           2010-0103         G-6-         CHER MATL         DEPT         -0750         10-95-79         GUX         3500.0         200         00/01           2012-10125         G-6-         CHER MATL         DEPT         -0750         10-96-7         GUX         1500.0         200         00/01           2012-10125         G-6-         CHER MATL         DEPT         -0750         10-96-7         GUX         1500.0         200         00/01           2012-10125         G-6-         CHER MATL         DEPT         -0750         10-96-7         GUX         1500.0         200         00/01           2012-10125         G-6-         CHER MATL         DEPT         -0750         10-96-7         GUX         4500.0         200         00/01           2012-10125         G-6-         CHER MATL         DEPT         -0750         10-96-7         GUX         4500.0         200         00/01           2012-10125         G-6-         CHER MATL         DEPT         -0750         10-96-7         GUX         4500.0         200         00/01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2010-0103         6.6.6         CHEN MAIL DEPT         .0750         10-95-70         6.0X         3500.0         200         00/01           2010-0103         6.6.6         CHEN MAIL DEPT         .0750         10-95-9         6.0X         4000.0         200         00/01           2012-10125         6.6.6         CHEN MAIL DEPT         .0750         10-96-7         6.0X         4000.0         200         00/01           2012-10125         6.6.6         CHEN MAIL DEPT         .0750         10-96-7         6.0X         4000.0         200         00/01           2012-10125         6.6.6         CHEN MAIL DEPT         .0750         10-96-7         6.0X         4000.0         200         00/01           2012-10125         6.6.6         CHEN MAIL DEPT         .0750         10-96-7         6.0X         4000.0         200         00/01           2012-10125         6.6.6         CHEN MAIL DEPT         .0750         10-96-7         6.0X         4000.0         200         00/01           2012-10125         6.6.6         CHEN MAIL DEPT         .0750         10-96-7         6.0X         4000.0         200         00/01           2012-10125         6.6.6         CHEN MAIL DEPT         .0750 <t< th=""><th>2010-0103         G.E.         CHEN         MATL         DEPT         .0750         10-95-7         GDX         3500.0         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200</th><th>10-95-6 30X 3000-0 200</th><th></th><th>:2</th></t<>                                                                                                              | 2010-0103         G.E.         CHEN         MATL         DEPT         .0750         10-95-7         GDX         3500.0         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 10-95-6 30X 3000-0 200                                |                        | :2                   |
| 2010-0103       6-6. CHEN MATL DEPT       -0750       10-95-0       60X       4000.0       200       00/01         2012-01125       6-6. CHEN MATL DEPT       -0750       10-95-0       60X       4500.0       200       00/01         2012-01125       6-6. CHEN MATL DEPT       -0750       10-96-1       60X       4500.0       200       00/01         2012-10125       6-6. CHEN MATL DEPT       10-96-1       60X       1500.0       200       00/01         2012-10125       6-6. CHEN MATL DEPT       10-96-1       60X       2000.0       200       00/01         2012-10125       6-6. CHEN MATL DEPT       0750       10-96-5       60X       4000.0       200       00/01         2012-10125       6-6. CHEN MATL DEPT       0750       10-96-5       60X       4000.0       200       00/01         2012-10125       6-6. CHEN MATL DEPT       0750       10-96-5       60X       4000.0       200       00/01         2012-10125       6-6. CHEN MATL DEPT       0750       10-96-5       60X       4000.0       200       00/01         2012-10125       6-6. CHEN MATL DEPT       0750       10-96-5       60X       4000.0       200       00/01         2012-10125 <th>2010-0103       6.6. CHEN MATL DEPT       .0750       10-95-8       6.0X       4000.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-1       6.0X       4500.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-1       6.0X       4500.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       10-96-1       6.0X       1000.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       10-96-2       6.0X       4000.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-3       6.0X       4000.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-5       6.0X       4000.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-5       6.0X       4000.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-5       6.0X       4000.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-5       6.0X       4000.0       200       00/01         <t< th=""><th>2010-0103       G.ef. CHEN MATL DEPT       .0750       10-95-9       G.0X       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-95-9       G.UX       4500.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-95-9       G.UX       4500.0       200         2012-10125       G.ef. CHEN MATL DEPT       10-96-1       G.OX       1500.0       200         2012-10125       G.ef. CHEN MATL DEPT       10-96-2       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       10-96-3       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-96-3       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-96-4       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-96-4       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-96-4       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-96-4       G.OX       4000.0       200         2012-10125       G.ef. C</th><th>10-95-7 GDX 3500.0 200</th><th></th><th>:=</th></t<></th>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2010-0103       6.6. CHEN MATL DEPT       .0750       10-95-8       6.0X       4000.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-1       6.0X       4500.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-1       6.0X       4500.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       10-96-1       6.0X       1000.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       10-96-2       6.0X       4000.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-3       6.0X       4000.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-5       6.0X       4000.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-5       6.0X       4000.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-5       6.0X       4000.0       200       00/01         2012-10125       6.6. CHEN MATL DEPT       .0750       10-96-5       6.0X       4000.0       200       00/01 <t< th=""><th>2010-0103       G.ef. CHEN MATL DEPT       .0750       10-95-9       G.0X       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-95-9       G.UX       4500.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-95-9       G.UX       4500.0       200         2012-10125       G.ef. CHEN MATL DEPT       10-96-1       G.OX       1500.0       200         2012-10125       G.ef. CHEN MATL DEPT       10-96-2       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       10-96-3       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-96-3       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-96-4       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-96-4       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-96-4       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-96-4       G.OX       4000.0       200         2012-10125       G.ef. C</th><th>10-95-7 GDX 3500.0 200</th><th></th><th>:=</th></t<>                                                                                                                                                                                   | 2010-0103       G.ef. CHEN MATL DEPT       .0750       10-95-9       G.0X       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-95-9       G.UX       4500.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-95-9       G.UX       4500.0       200         2012-10125       G.ef. CHEN MATL DEPT       10-96-1       G.OX       1500.0       200         2012-10125       G.ef. CHEN MATL DEPT       10-96-2       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       10-96-3       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-96-3       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-96-4       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-96-4       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-96-4       G.OX       4000.0       200         2012-10125       G.ef. CHEN MATL DEPT       .0750       10-96-4       G.OX       4000.0       200         2012-10125       G.ef. C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10-95-7 GDX 3500.0 200                                |                        | :=                   |
| 2010-0103         6-6         CMEN         MATL         DEPT         -0750         10-95-0         GUX         4500.0         200         0701           2012-10125         G-66         CHEN         MATL         DEPT         10-96-1         GOX         1500.0         392           2012-10125         G-66         CHEN         MATL         DEPT         10-96-1         GOX         1000.0         392           2012-10125         G-66         CHEN         MATL         DEPT         10-96-3         GOX         4000.0         392           2012-10125         G-66         CHEN         MATL         DEPT         10750         10-96-3         GOX         4000.0         00/01           2012-10125         G-66         CHEN         MATL         DEPT         07750         10-96-5         GOX         4500.0         00/01           2012-10125         G-66         CHEN         MATL         DEPT         07750         10-96-5         GOX         4500.0         00/01           2012-10125         G-66         CHEN         MATL         DEPT         07750         10-96-5         GOX         4000.0         00/01           2012-10125         G-66         CHEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2010-0103         6-6         CMEN         MATL         DEPT         -0750         10-95-9         GUX         4500.0         200         00/01           2012-10125         6-6         CMEN         MATL         DEPT         10-96-1         GUX         4500.0         200         00/01           2012-10125         6-6         CMEN         MATL         DEPT         10-96-1         GUX         4500.0         200         00/01           2012-10125         6-6         CMEN         MATL         DEPT         10-96-3         GUX         4500.0         00/01           2012-10125         6-6         CMEN         MATL         DEPT         0750         10-96-3         GUX         4500.0         00/01           2012-10125         6-6         CMEN         MATL         DEPT         0750         10-96-5         GUX         4500.0         00/01           2012-10125         6-6         CMEN         MATL         DEPT         0750         10-96-7         GUX         4500.0         00/01           2012-10125         6-6         CMEN         MATL         DEPT         0750         10-96-7         GUX         4500.0         00/01           2012-10125         6-6 <th>2010-0103         6-6         CHEN MATL DEPT         -0750         10-95-9         GUX         4500.0         200           2012-10125         G.E.E. CHEN MATL DEPT         10-96-1         GOX         1000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         10-96-1         GOX         1000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         10-96-1         GOX         2000.0         2000.0           2012-10125         G.E.E. CHEN MATL DEPT         10-96-1         GOX         4000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         0750         10-96-3         GOX         4000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         0750         10-96-5         GOX         4000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         0750         10-96-5         GOX         4000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         0750         10-96-5         GOX         4000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         0750         10-96-5         GOX         4000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         0750         10-96-7</th> <th>10-95-8 GOX 4000.0 200</th> <th></th> <th></th>                                                                                                                | 2010-0103         6-6         CHEN MATL DEPT         -0750         10-95-9         GUX         4500.0         200           2012-10125         G.E.E. CHEN MATL DEPT         10-96-1         GOX         1000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         10-96-1         GOX         1000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         10-96-1         GOX         2000.0         2000.0           2012-10125         G.E.E. CHEN MATL DEPT         10-96-1         GOX         4000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         0750         10-96-3         GOX         4000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         0750         10-96-5         GOX         4000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         0750         10-96-5         GOX         4000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         0750         10-96-5         GOX         4000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         0750         10-96-5         GOX         4000.0         200           2012-10125         G.E.E. CHEN MATL DEPT         0750         10-96-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 10-95-8 GOX 4000.0 200                                |                        |                      |
| 2012-L0125       C.G. CHEN MATL DEPT       10-96       G.O.X       1000.0       484         2012-L0125       G.G.E. CHEN MATL DEPT       10-96-1       G.O.X       1500.0       392         2012-L0125       G.G.E. CHEN MATL DEPT       10-96-3       G.O.X       1500.0       00/01         2012-L0125       G.G.E. CHEN MATL DEPT       0750       10-96-3       G.O.X       4000.0       00/01         2012-L0125       G.G.E. CHEN MATL DEPT       0750       10-96-4       G.O.X       4500.0       00/01         2012-L0125       G.G.E. CHEN MATL DEPT       0750       10-96-4       G.O.X       4000.0       00/01         2012-L0125       G.E. CHEN MATL DEPT       0750       10-96-4       G.O.X       4000.0       00/01         2012-L0125       G.E. CHEN MATL DEPT       0750       10-96-7       G.O.X       4000.0       00/01         2012-L0125       G.E. CHEN MATL DEPT       0750       10-96-7       G.O.X       4000.0       00/01         2012-L0125       G.E. CHEN MATL DEPT       0750       10-96-7       G.O.X       4000.0       00/01         2012-L0125       G.E. CHEN MATL DEPT       0750       10-96-7       G.O.X       4000.0       00/01         2012-L0125 <th>2012-L0125       G.G.C. CHEN MATL DEPT       10-96-5       G.O.X       1000.0       484         2012-L0125       G.G.C. CHEN MATL DEPT       10-96-7       G.O.X       1500.0       992         2012-L0125       G.G.C. CHEN MATL DEPT       10-96-7       G.O.X       1500.0       992         2012-L0125       G.G.C. CHEN MATL DEPT       10750       10-96-7       G.O.X       1500.0       907/01         2012-L0125       G.G.C. CHEN MATL DEPT       .0750       10-96-7       G.O.X       4500.0       007/01         2012-L0125       G.G.C. CHEN MATL DEPT       .0750       10-96-7       G.O.X       4500.0       007/01         2012-L0125       G.G.C. CHEN MATL DEPT       .0750       10-96-7       G.O.X       4900.0       007/01         2012-L0125       G.G.C. CHEN MATL DEPT       .0750       10-96-7       G.O.X       4000.0       007/01         2012-L0125       G.G.C. CHEN MATL DEPT       .0750       10-96-7       G.O.X       4000.0       007/01         2012-L0125       G.G.C. CHEN MATL DEPT       .0750       10-96-7       G.O.X       4000.0       007/01         2012-L0125       G.G.C. CHEN MATL DEPT       .0750       10-96-7       G.O.X       4000.0       007/01      &lt;</th> <th>2012-L0125       C-6: CHEN MATL DEPT       10-96       GDX 1000.0         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-1       GDX 1500.0         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-2       GDX 4500.0         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-3       GDX 4500.0         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4500.0         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4500.0         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4500.0         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4500.0       200         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4500.0       200         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4900.0       200         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4900.0       200         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4900.0       200         2012-L0125       G-6: CHEN MATL DEPT       0750       10-97-7       GDX 4900.0       200</th> <th>10-95-9 GUX 4500.0 200 0</th> <th>10/</th> <th>A 11 DLCDGF</th>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2012-L0125       G.G.C. CHEN MATL DEPT       10-96-5       G.O.X       1000.0       484         2012-L0125       G.G.C. CHEN MATL DEPT       10-96-7       G.O.X       1500.0       992         2012-L0125       G.G.C. CHEN MATL DEPT       10-96-7       G.O.X       1500.0       992         2012-L0125       G.G.C. CHEN MATL DEPT       10750       10-96-7       G.O.X       1500.0       907/01         2012-L0125       G.G.C. CHEN MATL DEPT       .0750       10-96-7       G.O.X       4500.0       007/01         2012-L0125       G.G.C. CHEN MATL DEPT       .0750       10-96-7       G.O.X       4500.0       007/01         2012-L0125       G.G.C. CHEN MATL DEPT       .0750       10-96-7       G.O.X       4900.0       007/01         2012-L0125       G.G.C. CHEN MATL DEPT       .0750       10-96-7       G.O.X       4000.0       007/01         2012-L0125       G.G.C. CHEN MATL DEPT       .0750       10-96-7       G.O.X       4000.0       007/01         2012-L0125       G.G.C. CHEN MATL DEPT       .0750       10-96-7       G.O.X       4000.0       007/01         2012-L0125       G.G.C. CHEN MATL DEPT       .0750       10-96-7       G.O.X       4000.0       007/01      <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2012-L0125       C-6: CHEN MATL DEPT       10-96       GDX 1000.0         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-1       GDX 1500.0         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-2       GDX 4500.0         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-3       GDX 4500.0         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4500.0         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4500.0         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4500.0         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4500.0       200         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4500.0       200         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4900.0       200         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4900.0       200         2012-L0125       G-6: CHEN MATL DEPT       0750       10-96-4       GDX 4900.0       200         2012-L0125       G-6: CHEN MATL DEPT       0750       10-97-7       GDX 4900.0       200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10-95-9 GUX 4500.0 200 0                              | 10/                    | A 11 DLCDGF          |
| 2012-L0125       G-6       CHEN MATL DEPT       30-96-1       G0X       1500.0       392         2012-L0125       G-6       CHEN MATL DEPT       0750       10-96-3       G0X       4000.0       00/04         2012-L0125       G-6       CHEN MATL DEPT       0750       10-96-3       G0X       4500.0       00/04         2012-L0125       G-6       CHEN MATL DEPT       0750       10-96-3       G0X       4500.0       00/04         2012-L0125       G-6       CHEN MATL DEPT       0750       10-96-5       G0X       4500.0       00/04         2012-L0125       G-6       CHEN MATL DEPT       0750       10-96-5       G0X       4000.0       00/04         2012-L0125       G-6       CHEN MATL DEPT       0750       10-96-7       G0X       4000.0       00/01         2012-L0125       G-6       CHEN MATL DEPT       0750       10-96-7       G0X       4000.0       00/01         2012-L0125       G-6       CHEN MATL DEPT       0750       10-96-7       G0X       4000.0       00/01         2012-L0125       G-6       CHEN MATL DEPT       0750       10-97-7       G0X       4000.0       00/01         2012-L0125       G-6       CH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2012-L0125       6-6       CHEN MATL DEP7       30-96-1       60X       1500.0       392         2012-L0125       6-6       CHEN MATL DEP7       0750       10-96-3       60X       4000.0       00/04         2012-L0125       6-6       CHEN MATL DEP7       0750       10-96-3       60X       4500.0       00/04         2012-L0125       6-6       CHEN MATL DEP7       0750       10-96-4       60X       4500.0       00/04         2012-L0125       6-6       CHEN MATL DEP7       0750       10-96-4       60X       4000.0       00/04         2012-L0125       6-6       CHEN MATL DEP7       0750       10-96-5       60X       4000.0       00/04         2012-L0125       6-6       CHEN MATL DEP7       0750       10-96-7       60X       4000.0       00/01         2012-L0125       6-6       CHEN MATL DEP7       0750       10-96-7       60X       4000.0       00/01         2012-L0125       6-6       CHEN MATL DEP7       0750       10-96-7       60X       4000.0       00/01         2012-L0125       6-6       CHEN MATL DEP7       0750       10-97-7       60X       4000.0       00/01         2012-L0125       6-6       CH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2012-L0125       6-6       CHEN MATL DEP7       30-96-1       60X       1500.0         2012-L0125       6-6       CHEN MATL DEP7       0750       10-96-2       60X       2000.0         2012-L0125       6-6       CHEN MATL DEP7       0750       10-96-3       60X       4000.0         2012-L0125       6-6       CHEN MATL DEP7       0750       10-96-3       60X       4000.0         2012-L0125       6-6       CHEN MATL DEP7       0750       10-96-5       60X       4000.0         2012-L0125       6-6       CHEN MATL DEP7       0750       10-96-5       60X       4000.0       200         2012-L0125       6-6       CHEN MATL DEP7       07750       10-96-7       60X       4000.0       200         2012-L0125       6-6       CHEN MATL DEP7       07750       10-96-7       60X       4000.0       200         2012-L0125       6-6       CHEN MATL DEP7       07750       10-96-7       60X       4000.0       200         2012-L0125       6-6       CHEN MATL DEP7       07750       10-96-7       60X       4000.0       200         2010       6-6       CHEN MATL DEP7       07750       10-97-2       60X       4000.0       20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | GOX 1000.0                                            | 484 484                | 6                    |
| 2012-10125       6-6       CHEN MATL DEPT       10-96-2       60X       2000.0       4/21         2012-10125       6-6       CHEN MATL DEPT       0750       10-96-3       CUX       4000.0       00/01         2012-10125       6-6       CHEN MATL DEPT       0750       10-96-5       CUX       4000.0       00/01         2012-10125       6-6       CHEN MATL DEPT       0750       10-96-5       CUX       4000.0       00/01         2012-10125       6-6       CHEN MATL DEPT       0750       10-96-5       CUX       4000.0       01/02         2012-10125       6-6       CHEN MATL DEPT       0750       10-96-5       CUX       4000.0       01/02         2012-10125       6-6       CHEN MATL DEPT       0750       10-96-7       CUX       4000.0       01/02         2012-10125       6-6       CHEN MATL DEPT       0750       10-96-7       GUX       4000.0       01/01         2012-10125       6-6       CHEN MATL DEPT       0750       10-96-7       GUX       4000.0       0/01         2010       6-6       CHEN MATL DEPT       0750       10-97-9       GUX       4000.0       0/01         2010       6-6       CHEN MATL DEPT<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2012-L0125       6-6       CHEN MATL DEPT       10-96-2       60X       2000.0       4.21         2012-L0125       6-6       CHEN MATL DEPT       0750       10-96-5       GUX       4000.0       00/01         2012-L0125       6-6       CHEN MATL DEPT       0750       10-96-5       GUX       4000.0       00/01         2012-L0125       6-6       CHEN MATL DEPT       0750       10-96-5       GUX       4000.0       00/01         2012-L0125       6-6       CHEN MATL DEPT       0750       10-96-5       GUX       4000.0       00/01         2012-L0125       6-6       CHEN MATL DEPT       0750       10-96-5       GUX       4000.0       00/01         2012-L0125       6-6       CHEN MATL DEPT       0750       10-96-7       GUX       4000.0       00/01         2012-L0125       6-6       CHEN MATL DEPT       0750       10-97-7       GUX       4000.0       00/01         2012-L0125       6-6       CHEN MATL DEPT       0750       10-97-7       GUX       4000.0       00/01         2012       6-6       CHEN MATL DEPT       0750       10-97-7       GUX       4000.0       00/01         2010       6-6       CHEN MATL DEP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2012-L0125       6-6       CHEN MATL DEPT       10-96-2       60X       2000.0         2012-L0125       6-6       CHEN MATL DEPT       0750       10-96-3       COX       4000.0         2012-L0125       6-6       CHEN MATL DEPT       0750       10-96-4       COX       4000.0       200         2012-L0125       6-6       CHEN MATL DEPT       0750       10-96-4       COX       4000.0       200         2012-L0125       6-6       CHEN MATL DEPT       0750       10-96-4       GOX       4000.0       200         2012-L0125       6-6       CHEN MATL DEPT       0750       10-96-7       GOX       4000.0       200         2012-L0125       6-6       CHEN MATL DEPT       0750       10-96-7       GOX       4000.0       200         2012-L0125       6-6       CHEN MATL DEPT       0750       10-96-7       GOX       4000.0       200         2012-L0125       6-6       CHEN MATL DEPT       0750       10-97-9       GOX       4000.0       200         2010       6-6       CHEN MATL DEPT       0750       10-97-9       GOX       4000.0       200         3010       6-6       CHEN MATL DEPT       0750       10-97-9       <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 20X                                                   | 392                    | 5                    |
| 2012-L0125       G-6       CHEN MATL DEPT       -0750       10-96-3       C0X       4000.0       00/01         2012-L0125       G-6       CHEN MATL DEPT       -0750       10-96-4       G0X       4900.0       00/01         2012-L0125       G-6       CHEN MATL DEPT       -0750       10-96-4       G0X       4900.0       00/01         2012-L0125       G-6       CHEN MATL DEPT       -0750       10-96-6       G0X       4000.0       200       00/01         2012-L0125       G-6       CHEN MATL DEPT       -0750       10-96-6       G0X       2000.0       200       00/01         2012-L0125       G-6       CHEN MATL DEPT       -0750       10-96-7       G0X       2000.0       200       00/01         2012-L0125       G-6       CHEN MATL DEPT       -0750       10-97-7       G0X       2000.0       200       00/01         3010       G-6       CHEN MATL DEPT       -0750       10-97-2       G0X       4000.0       00/01         3010       G-6       CHEN MATL DEPT       -0750       10-97-2       G0X       4000.0       00/01         3010       G-6       CHEN MATL DEPT       -0750       10-97-2       G0X       2000.0       <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-3       C0X       4000.0       00/01         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-4       G0X       4900.0       01/02         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-4       G0X       4900.0       01/02         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-6       G0X       4000.0       01/02         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-6       G0X       4000.0       01/02         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-6       G0X       4000.0       01/02         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-7       G0X       5000.0       01/02         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-97-7       G0X       5000.0       01/01         2010       6-6       CHEN MATL DEPT       -0750       10-97-7       G0X       5000.0       01/01         3010       6-6       CHEN MATL DEPT       -0750       10-97-7       G0X       5000.0       01/01         3010       6-6 <th>2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-3       COX       4000.0         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-4       GOX       4500.0       200         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-4       GOX       4500.0       200         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-4       GOX       4000.0       200         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-7       GOX       5000.0       200         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-7       GOX       5000.0       200         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-97-7       GOX       5000.0       200         3010       6-6       CHEN MATL DEPT       -0750       10-97-2       GOX       4000.0       200         3010       6-6       CHEN MATL DEPT       -0750       10-97-2       GOX       4000.0       200         3010       6-6       CHEN MATL DEPT       -0750       10-97-2       GOX       4000.0       200         3010       6-6       CHEN MATL DEPT       -07</th> <th>10-96-2 GOX</th> <th>421</th> <th>5</th>                                                                                                                                                                                                                                                                              | 2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-3       COX       4000.0         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-4       GOX       4500.0       200         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-4       GOX       4500.0       200         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-4       GOX       4000.0       200         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-7       GOX       5000.0       200         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-96-7       GOX       5000.0       200         2012-L0125       6-6       CHEN MATL DEPT       -0750       10-97-7       GOX       5000.0       200         3010       6-6       CHEN MATL DEPT       -0750       10-97-2       GOX       4000.0       200         3010       6-6       CHEN MATL DEPT       -0750       10-97-2       GOX       4000.0       200         3010       6-6       CHEN MATL DEPT       -0750       10-97-2       GOX       4000.0       200         3010       6-6       CHEN MATL DEPT       -07                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 10-96-2 GOX                                           | 421                    | 5                    |
| 2012-10125       6-E       CHEN MATL DEPT       -0750       10-96-4       G0X       4500.0       00/04         2012-10125       6-E       CHEN MATL DEPT       -0750       10-96-5       G0X       4500.0       01/02         2012-10125       6-E       CHEN MATL DEPT       -0750       10-96-5       G0X       4000.0       200       00/04         2012-10125       6-E       CHEN MATL DEPT       -0750       10-96-7       G0X       5000.0       200       00/04         2010       6-E       CHEN MATL DEPT       -0750       10-96-7       G0X       2000.0       200       00/04         3010       6-E       CHEN MATL DEPT       -0750       10-97-1       G0X       2000.0       00/01         3010       6-E       CHEN MATL DEPT       -0750       10-97-4       G0X       2000.0       00/01         3010       6-E       CHEN MATL DEPT       -0750       10-97-4       G0X       2000.0       00/01         3010       6-E       CHEN MATL DEPT       -0750       10-97-4       G0X       2000.0       00/01         3010       6-E       CHEN MATL DEPT       -0750       10-97-4       60X       5000.0       00/01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | CULCT-LOILS       CHE MAIL DEPT       0750       10-96-4       GOX       4500.0       00/04         2012-LOILS       G.E.E. CHEM MAIL DEPT       0750       10-96-5       GOX       5000.0       01/02         2012-LOILS       G.E.E. CHEM MAIL DEPT       0750       10-96-5       GOX       5000.0       01/01         2012-LOILS       G.E.E. CHEM MAIL DEPT       0750       10-96-5       GOX       5000.0       00/01         2012-LOILS       G.E.E. CHEM MAIL DEPT       0750       10-96-7       GOX       2000.0       00/01         2010       G.E.E. CHEM MAIL DEPT       0750       10-96-7       GOX       2000.0       00/01         3010       G.E.E. CHEM MAIL DEPT       0750       10-97-2       GOX       2000.0       00/01         3010       G.E.E. CHEM MAIL DEPT       0750       10-87-2       GOX       2000.0       00/01         3010       G.E.E. CHEM MAIL DEPT       0750       10-87-2       GOX       2000.0       00/01         3010       G.E.E. CHEM MAIL DEPT       0750       10-87-4       GOX       2000.0       00/01         3010       G.E.E. CHEM MAIL DEPT       0750       10-87-4       GOX       2000.0       01/03         3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2012-10125       6-6       CHEN MATL DEPT       -0750       10-96-4       GDX       4500.0         2012-10125       6-6       CHEN MATL DEPT       -0750       10-96-5       GDX       4000.0       200         2012-10125       6-6       CHEN MATL DEPT       -0750       10-96-5       GDX       5000.0       200         2012-10125       6-6       CHEN MATL DEPT       -0750       10-96-5       GDX       5000.0       200         2012-10125       6-6       CHEN MATL DEPT       -0750       10-96-7       GDX       5000.0       200         3010       6-6       CHEN MATL DEPT       -0750       10-97-2       GDX       5000.0       200         3010       6-6       CHEN MATL DEPT       -0750       10-97-2       GDX       4000.0       200         3010       6-6       CHEN MATL DEPT       -0750       10-97-2       GDX       4000.0       200         3010       6-6       CHEN MATL DEPT       -0750       10-97-2       GDX       4000.0       200         3010       6-6       CHEN MATL DEPT       -0750       10-97-4       GDX       4000.0       200         3010       6-6       CHEN MATL DEPT       -0750                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 10-96-3 COX 4000.0                                    |                        | 2                    |
| 2012-L0125       6-E       CMEM MAIL DEPT       -0750       10-96-5       60X       5000.0       01/02         2012-L0125       6-E       CMEM MAIL DEPT       -0750       10-96-7       60X       5000.0       200       00/01         2012-L0125       6-E       CMEM MAIL DEPT       -0750       10-96-7       60X       5000.0       200       00/01         2012       6-E       CMEM MAIL DEPT       -0750       10-96-7       60X       2000.0       200       00/01         3010       6-E       CMEM MAIL DEPT       -0750       10-97-1       60X       2000.0       00/01         3010       6-E       CMEM MAIL DEPT       -0750       10-97-2       60X       4000.0       00/01         3010       6-E       CMEM MAIL DEPT       -0750       10-97-2       60X       4000.0       00/01         3010       6-E       CMEM MAIL DEPT       -0750       10-87-2       60X       4500.0       00/01         3010       6-E       CMEM MAIL DEPT       -0750       10-87-5       60X       4500.0       00/01         3010       6-E       CMEM MAIL DEPT       -0750       10-87-5       60X       4500.0       00/01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2012-10125       6-E       CMM ATL DEPT       -0750       10-96-5       60X       5000.0       01/02         2012-10125       6-E       CMM ATL DEPT       -0750       10-96-7       60X       5000.0       200       00/01         2012-10125       6-E       CHEN MATL DEPT       -0750       10-96-7       60X       5000.0       200       00/01         2012-10125       6-E       CHEN MATL DEPT       -0750       10-97-7       60X       2000.0       00/01         3010       6-E       CHEN MATL DEPT       -0750       10-97-1       60X       2000.0       00/01         3010       6-E       CHEN MATL DEPT       -0750       10-97-2       60X       4000.0       00/01         3010       6-E       CHEN MATL DEPT       -0750       10-97-2       60X       4000.0       00/01         3010       6-E       CHEN MATL DEPT       -0750       10-97-2       60X       4000.0       00/01         3010       6-E       CHEN MATL DEPT       -0750       10-97-2       60X       4000.0       00/01         3010       6-E       CHEN MATL DEPT       -0750       10-97-4       60X       4500.0       01/03         3010       <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ZULZ-LOIZS       G.C.E. CHER MATL DEPT       .0750       IO-96-5       G.OX       5000.0       200         ZOIZ-LOIZS       G.E.E. CHER MATL DEPT       .0750       IO-96-6       G.UX       4000.0       200         ZOIZ-LOIZS       G.E.E. CHER MATL DEPT       .0750       IO-96-6       G.UX       4000.0       200         ZOIZ-LOIZS       G.E.E. CHER MATL DEPT       .0750       IO-96-7       G.OX       2000.0       200         ZOIZ-LOIZS       G.E.E. CHER MATL DEPT       .0750       IO-97-7       G.OX       2000.0       200         JOIO       G.E.E. CHER MATL DEPT       .0750       IO-97-2       G.OX       2000.0       200         JOIO       G.E.E. CHER MATL DEPT       .0750       IO-87-2       G.OX       4000.0       200         JOIO       G.E.E. CHER MATL DEPT       .0750       IO-87-2       G.OX       4000.0       200         JOIO       G.E.E. CHER MATL DEPT       .0750       IO-87-4       G.OX       4000.0       200         JOIO       G.E.E. CHER MATL DEPT       .0750       IO-87-4       G.OX       4000.0       200         JOIO       G.E.E. CHER MATL DEPT       .0750       IO-87-4       G.OX       4000.0       200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10-96-4 COX 4500.0                                    |                        | 10                   |
| 2012-10125       6-6       CHEN MATL DEP7       -0750       10-96-7       60X       4000.0       200       00/01         2012       6-6       CHEN MATL DEP7       -0750       10-96-7       60X       5000.0       200       00/04         2010       6-6       CHEN MATL DEP7       -0750       10-96-7       60X       5000.0       200       00/04         3010       6-6       CHEN MATL DEP7       -0750       10-91-1       60X       3000.0       00/01         3010       6-6       CHEN MATL DEP7       -0750       10-91-1       60X       3000.0       00/01         3010       6-6       CHEN MATL DEP7       -0750       10-91-2       60X       4000.0       00/01         3010       6-6       CHEN MATL DEP7       -0750       10-91-2       60X       4000.0       00/01         3010       6-6       CHEN MATL DEP7       -0750       10-87-5       60X       4500.0       00/01         3010       6-6       CHEN MATL DEP7       -0750       10-87-5       60X       4500.0       01/03         3010       6-6       CHEN MATL DEP7       -0750       10-87-5       60X       4500.0       01/03         3010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2012-10125       6-6       CHEN MAIL DEPT       -0750       10-96-6       60X       4000.0       200       00/01         2012       6-6       CHEN MAIL DEPT       -0750       10-96-7       60X       5000.0       200       00/01         2010       6-6       CHEN MAIL DEPT       -0750       10-96-7       60X       5000.0       200       00/01         3010       6-6       CHEN MAIL DEPT       -0750       10-97-7       60X       5000.0       00/01         3010       6-6       CHEN MAIL DEPT       -0750       10-97-7       60X       5000.0       00/01         3010       6-6       CHEN MAIL DEPT       -0750       10-97-2       60X       4000.0       00/01         3010       6-6       CHEN MAIL DEPT       -0750       10-87-4       60X       4500.0       00/01         3010       6-6       CHEN MAIL DEPT       -0750       10-87-4       60X       4500.0       00/01         3010       6-6       CHEN MAIL DEPT       -0750       10-87-4       60X       4500.0       00/01         3010       6-6       CHEN MAIL DEPT       -0750       10-87-4       60X       4500.0       00/01         3010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | COLCTION         Gate         Mail         Dept         0750         10-96-6         GUX         4000.0         200           2012         Gate         CHEN         MATL         DEPT         0750         10-96-7         GUX         4000.0         200           2012         Gate         CHEN         MATL         DEPT         0750         10-97-7         GUX         2000.0         200           3010         Gate         CHEN         MATL         DEPT         0750         10-97-1         GUX         2000.0         200           3010         Gate         CHEN         MATL         DEPT         0750         10-97-2         GUX         4000.0         200           3010         Gate         CHEN         MATL         DEPT         0750         10-97-2         GUX         4900.0         200           3010         Gate         CHEN         MATL         DEPT         0750         10-97-4         GUX         5000.0         200           3010         Gate         CHEN         MATL         DEPT         0750         10-87-4         GUX         5000.0         200           3010         Gate         CHEN         MATL         DEPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | I0-96-5 GOX 5000.0                                    |                        | 2                    |
| Contention         Description         OT50         IO-96-7         GOX         5000.0         200         00/04           3010         Gee         CHER MAIL DEPT         0750         IO-97         GOX         2000.0         200         00/04           3010         Gee         CHER MAIL DEPT         0750         IO-97         GOX         2000.0         00/01           3010         Gee         CHER MAIL DEPT         0750         IO-97-2         GOX         2000.0         00/01           3010         Gee         CHER MAIL DEPT         0750         IO-97-2         GOX         5000.0         00/01           3010         Gee         CHER MAIL DEPT         0750         IO-97-2         GOX         5000.0         00/01           3010         Gee         CHER MAIL DEPT         0750         IO-87-5         GOX         5000.0         01/03           3010         Gee         CHER MAIL DEPT         0750         IO-87-6         GOX         5000.0         200         01/03           3010         Gee         CHER MAIL DEPT         0750         IO-87-6         GOX         5000.0         200         01/03           3010         Gee         CHER MAIL DEPT         0750<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3010       6-6       CMER MATL DEPT       -0750       10-96-7       60X       5000.0       200       00/04         3010       6-6       CMER MATL DEPT       -0750       10-97-7       60X       5000.0       00/01         3010       6-6       CMER MATL DEPT       -0750       10-97-1       60X       5000.0       00/01         3010       6-6       CMER MATL DEPT       -0750       10-97-2       60X       5000.0       00/01         3010       6-6       CMER MATL DEPT       -0750       10-97-2       60X       5000.0       00/01         3010       6-6       CMEM MATL DEPT       -0750       10-97-2       60X       5000.0       00/01         3010       6-6       CMEM MATL DEPT       -0750       10-97-5       60X       5000.0       00/01         3010       6-6       CMEM MATL DEPT       -0750       10-87-5       60X       5000.0       01/03         3010       6-6       CMEM MATL DEPT       -0750       10-87-5       60X       5000.0       200       01/03         3010       6-6       CMEM MATL DEPT       -0750       10-87-5       60X       5000.0       200       01/03         3010 <t< th=""><th>COLC         Cold         <th< th=""><th>10-96-6 GUX 4000-0 200</th><th></th><th>11</th></th<></th></t<>                                                                                                                                                                           | COLC         Cold         Cold <th< th=""><th>10-96-6 GUX 4000-0 200</th><th></th><th>11</th></th<>                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10-96-6 GUX 4000-0 200                                |                        | 11                   |
| 3010         6-c. CHEN MATL DEPT         -0750         10-97         60X         2000.0         00/01           3010         6-c. CHEN MATL DEPT         -0750         10-97-1         60X         2000.0         00/01           3010         6-c. CHEN MATL DEPT         -0750         10-97-1         60X         3000.0         00/01           3010         6-c. CHEN MATL DEPT         -0750         10-97-2         60X         4500.0         00/01           3010         6-c. CHEN MATL DEPT         -0750         10-87-2         60X         5000.0         00/01           3010         6-c. CHEN MATL DEPT         -0750         10-87-4         60X         5000.0         00/01           3010         6-c. CHEN MATL DEPT         -0750         10-87-6         60X         5000.0         01/03           3010         6-c. CHEN MATL DEPT         -0750         10-87-6         60X         5000.0         01/03           3010         6-c. CHEN MATL DEPT         -0750         10-87-6         60X         5000.0         01/03           3010         6-c. CHEN MATL DEPT         -0750         10-87-6         60X         5000.0         01/03           3010         6-c. CHEN MATL DEPT         -0750         10-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3010         6+E         CHEM MATL DEPT         -0750         10-87         GOX         2000.0         00/01           3010         6+E         CHEM MATL DEPT         -0750         10-87-2         GOX         2000.0         00/01           3010         6+E         CHEM MATL DEPT         -0750         10-87-2         GOX         4000.0         00/01           3010         6+E         CHEM MATL DEPT         -0750         10-87-2         GOX         4000.0         00/01           3010         6+E         CHEM MATL DEPT         -0750         10-87-4         GOX         4000.0         00/01           3010         6-E         CHEM MATL DEPT         -0750         10-87-4         GOX         4500.0         01/03           3010         6-E         CHEM MATL DEPT         -0750         10-87-4         GOX         4500.0         01/03           3010         6-E         CHEM MATL DEPT         -0750         10-87-5         GOX         4500.0         01/03           3010         6-E         CHEM MATL DEPT         -0750         10-87-7         GOX         5000.0         200         01/03           3010         6-E         CHEM MATL DEPT         -0750         10-87-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | JOLU         Sec CHEN MAIL DEPT         0750         10-87         GOX         2000.0           3010         G.E. CHEN MAIL DEPT         0750         10-87-2         GOX         2000.0           3010         G.E. CHEN MAIL DEPT         0750         10-87-2         GOX         4000.0           3010         G.E. CHEN MAIL DEPT         0750         10-87-2         GOX         4000.0           3010         G.E. CHEN MAIL DEPT         0750         10-87-3         GOX         5000.0           3010         G.E. CHEN MAIL DEPT         0750         10-87-4         GOX         5000.0           3010         G.E. CHEN MAIL DEPT         0750         10-87-5         GOX         5000.0         200           3010         G.E. CHEN MAIL DEPT         0750         10-87-5         GOX         5000.0         200           3010         G.E. CHEN MAIL DEPT         0750         10-87-5         GOX         500.0         200           3010         G.E. CHEN MAIL DEPT         0750         10-87-5         GOX         500.0         200           3010         G.E. CHEN MAIL DEPT         0750         10-87-6         GOX         500.0         200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10-96-7 60X 5000.0 200                                |                        | 11                   |
| 3010         Gene         CHEM MATL         DEP7         0.0750         IO-07-1         GOX         3000.0         00/01           3010         Gene         CHEM MATL         DEP7         .0750         IO-97-2         GOX         4000.0         00/01           3010         Gene         CHEM MATL         DEP7         .0750         IO-87-2         GOX         4000.0         00/01           3010         Gene         CHEM MATL         DEP7         .0750         IO-87-4         GOX         5000.0         01/03           3010         Gene         CHEM MATL         DEP7         .0750         IO-87-4         GOX         5000.0         01/03           3010         Gene         CHEM MATL         DEP7         .0750         IO-87-4         GOX         5000.0         01/03           3010         Gene         CHEM MATL         DF77         .0750         IO-87-4         GOX         5000.0         200         01/03           3010         Gene         CHEM MATL         DF77         .0750         IO-87-7         GOX         5000.0         200         01/03           3010         Gene         CHEM MATL         DF77         .0750         IO-87-7         GOX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 3010         Gete CHEM MATL DEPT         0750         10-07-1         GOX         3000         00/01           3010         Gete CHEM MATL DEPT         0750         10-07-2         GOX         4000.0         00/01           3010         Gete CHEM MATL DEPT         0750         10-07-2         GOX         4000.0         00/01           3010         Gete CHEM MATL DEPT         0750         10-07-2         GOX         4000.0         00/04           3010         Gete CHEM MATL DEPT         0750         10-07-4         GOX         4000.0         01/03           3010         Gete CHEM MATL DEPT         0750         10-07-6         GOX         4000.0         01/03           3010         Gete CHEM MATL DEPT         0750         10-07-6         GOX         4000.0         01/03           3010         Gete CHEM MATL DEPT         0750         10-07-6         GOX         4000.0         200         01/03           3010         Gete CHEM MATL DEPT         0750         10-07-6         GOX         4500.0         200         01/03           3010         Gete CHEM MATL DEPT         0750         10-07-7         GOX         5000.0         200         01/03           3010         Gete CHEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 3010         6-E-<br>6-E-<br>5-E-<br>3010         6-E-<br>5-E-<br>5-E-<br>5-E-<br>5-E-<br>5-E-<br>5-E-<br>5-E-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 10-87 COX 2000.0                                      |                        | 10                   |
| 3010         Gete CHEM MATL DEPT         40750         10-B7-2         GOX         4000.0         00/01           3010         Gete CHEM MATL DEPT         -0750         10-B7-3         GOX         4500.0         00/01           3010         Gete CHEM MATL DEPT         -0750         10-B7-4         GOX         4500.0         00/01           3010         Gete CHEM MATL DEPT         -0750         10-B7-4         GOX         5000.0         01/03           3010         Gete CHEM MATL DEPT         -0750         10-B7-4         GOX         5000.0         200         01/03           3010         Gete CHEM MATL DFPT         -0750         10-B7-6         GOX         5000.0         200         00/01           3010         Gete CHEM MATL DFPT         -0750         10-B7-7         GOX         5000.0         200         00/03           3010         (656LASS)         Gete CHEM MATL DFPT         -0750         10-B7-7         GOX         2500         01/03           3010         (656LASS)         Gete CHEM MATL DFPT         -0750         10-B7-7         GOX         2500         01/03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3010         Gete CHEM MATL DEPT         40750         10-87-2         GOX         4000.0         00/01           3010         Gete CMEM MATL DEPT         -0750         10-87-3         GOX         4500.0         00/04           3010         Gete CMEM MATL DEPT         -0750         10-87-4         GOX         4500.0         01/03           3010         Gete CMEM MATL DEPT         -0750         10-87-4         GOX         4500.0         01/03           3010         Gete CMEM MATL DEPT         -0750         10-87-4         GOX         4500.0         01/03           3010         Gete CMEM MATL DEPT         -0750         10-87-5         GOX         4500.0         200         01/03           3010         Gete CMEM MATL DEPT         -0750         10-87-5         GOX         4500.0         200         01/03           3010         Gete CMEM MATL DEPT         -0750         10-87-7         GOX         5000.0         200         01/03           3010         Gete CMEM MATL DEPT         -0750         10-87-7         GOX         5000.0         200         01/03           3010         Gete CMEM MATL DEPT         -0750         10-87-7         GOX         5000.0         200         01/03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | JUID         Gene         CHEN MATL DEPT         -0750         10-87-2         GOX         4000.0           3010         Gene         CHEN MATL DEPT         -0750         10-87-3         GOX         500.0           3010         Gene         CHEN MATL DEPT         -0750         10-87-4         GOX         500.0           3010         Gene         CHEN MATL DEPT         -0750         10-87-4         GOX         4000.0         200           3010         Gene         CHEN MATL DEPT         -0750         10-87-6         GOX         4000.0         200           3010         Gene         CHEN MATL DEPT         -0750         10-87-6         GOX         4500.0         200           3010         Gene         CHEN MATL DEPT         -0750         10-87-6         GOX         4500.0         200           3010         Gene         CHEN MATL DEPT         -0750         10-87-7         GOX         4500.0         200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 10-87-1 GOX 3000.0                                    |                        | 2                    |
| 3010         Gee CMEM MATL DEPT         00750         10-87-3         GOX         4500.0         00/04           3010         Gee CMEM MATL DEPT         0750         10-87-4         GOX         5000.0         01/03           3010         Gee CMEM MATL DEPT         0750         10-87-4         GOX         5000.0         01/03           3410         Gee CMEM MATL DEPT         0750         10-87-6         GOX         5000.0         200         00/04           3410         Gee CMEM MATL DEPT         0750         10-87-6         GOX         5000.0         200         00/04           3410         Gee CMEM MATL DEPT         0750         10-87-6         GOX         5000.0         200         00/04           3710         Gee CMEM MATL DEPT         0750         10-87-6         GOX         2000         01/03           3010         (e65GLASS)         Gee CMEM MATL DEPT         70-1769         GOX         25.0         01/03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3010         6-6-6         MATL         DEPT         -0750         10-87-3         60X         4500.0         00/04           3010         6-5-5         CMEM         MATL         DEPT         -0750         10-87-4         60X         5000.0         01/03           3010         6-5-5         CMEM         MATL         DEPT         -0750         10-87-4         60X         5000.0         01/03           3016         6-5-5         CHEM         MATL         DFPT         -0750         10-87-5         60X         5000.0         200         00/04           3410         G-5-5         CHEM         MATL         DFPT         -0750         10-87-5         60X         5000.0         200         00/04           3410         G-5-5         CHEM         MATL         DFPT         -0750         10-87-7         G0X         5000.0         200         00/04           3510         (-5-5         CHEM         MATL         DFPT         -0750         10-87-7         G0X         5000.0         200         01/03           3610         (-5-5         CHEM         MATL         DFPT         -0750         10-87-7         G0X         5000.0         200         01/03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3010         6.e. CMEN MATL DEPT         0.750         10-87-3         G0X         4500.0           3010         6.e. CHEN MATL DEPT         0750         10-87-4         6.0X         5000.0           3016         6.e. CHEN MATL DEPT         0750         10-87-4         6.0X         5000.0           3016         6.e. CHEN MATL DEPT         0750         10-87-4         6.0X         5000.0           3016         6.e. CHEN MATL DEPT         0750         10-87-5         6.0X         4500.0         200           3010         6.e. CHEN MATL DEPT         0750         10-87-6         6.0X         4500.0         200           3010         (.6.56LASS)         6.e. CHEN MATL DEPT         0750         10-87-7         6.0X         37.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10-87-2 GOX 4000.0                                    |                        | 10                   |
| JOID         Gese CHEM MATL DEPT         -0750         10-87-4         G0.4         5000.0         01/03           3016         Gese CHEM MATL DEPT         -0750         10-87-5         G0.4         5000.0         00/01           3010         Gese CHEM MATL DEPT         -0750         10-87-6         G0.4         5000.0         200         00/01           3010         Gese CHEM MATL DEPT         -0750         10-87-6         G0.4         5000.0         200         00/01           3010         Gese CHEM MATL DEPT         -0750         10-87-6         G0.4         5000.0         200         00/04           3010         (.65GLASS)         G.6.6.         CHEM MATL DEPT         -0750         10-87-7         G0.4         5000.0         200         01/03           3010         (.65GLASS)         G.6.6.         CHEM MATL DEPT         70-1769         G0.4         25.0         01/03         768                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3010         Ges Chem Marl DEPT         0750         10-87**         G0X         5000.0         01/03           3016         Ges Chem Marl DEPT         0750         10-87**         G0X         5000.0         200         00/01           3010         Ges Chem Marl DEPT         0750         10-87*5         G0X         5000.0         200         00/01           3010         Ges Chem Marl DFT         0750         10-87*6         G0X         4500.0         200         00/04           3010         Ges Chem Marl DFT         0750         10-87*7         G0X         5000.0         200         00/04           3610         (+65GLASS)         Ges Chem Marl DFT         0750         10-87*7         G0X         5000.0         200         01/03         768                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | JOIU         G-S         CHEM MAIL         DEPT         -0750         10-87-4         G0X         5000.0           JOIC         G-S         CHEM MAIL         DEPT         -0750         10-87-4         G0X         4000.0         200           JOID         G-S         CHEM MAIL         D770         10-87-5         G0X         4000.0         200           JOID         G-S         CHEM MAIL         D771         -0750         10-87-6         G0X         4500.0         200           JOID         G-S         CHEM MAIL         D770         10-87-7         G0X         500.0         200           JOID         (+65GLASS)         G-S         CHEM MAIL         0770         10-17.0         200         200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10-87-3 GOX 4500.0                                    |                        | A 10 DLCCGF          |
| 3010         6.66         Chem Matl DEPT         0750         10-87-5         6.0X         4000.0         2.00         00/01           3410         6.65         CHEM MATL DVPT         0750         10-87-6         6.0X         4500.0         200         00/04           3410         6.65         CHEM MATL DVPT         0750         10-87-6         6.0X         4500.0         200         00/04           3C10         (.656LASS)         6.65         CHEM MATL DEPT         .0750         10-87-7         6.0X         5000.0         2/0         01/03           3010         (.656LASS)         6.65         CHEM MATL DEPT         .0750         10-87-7         6.0X         25.0         01/03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3010         6.6         CHEM MATL DEPT         0750         10-87-5         6.0X         4000.0         200         00/01           34)10         6.6         CHEM MATL D.PT         0750         10-87-6         G.0X         4500.0         200         00/04           34)10         6.6         CHEM MATL D.PT         0750         10-87-6         G.0X         4500.0         200         00/04           3C10         (.656LASS)         6.6         CHEM MATL DEPT         07-1769         6.0X         27.0         01/03           3010         (.456LASS)         6.6         CHEM MATL DEPT         76.8         76.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 3010 6-6- CHEN MATL DEPT -0750 10-87-5 60X 4000.0 200<br>3410 6-6- CHEN MATL D7PT -0750 10-87-6 60X 4500.0 200<br>3710 6-6- CHEN MATL D6PT -0750 10-87-7 60X 4500.0 200<br>3010 (-656LASS) 6-6- CHEN MATL D6PT -0750 10-87-7 500.0 200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 10-874 604 5000-0                                     |                        | 10                   |
| 34210 G.E. CHEN MATL DUPT -0750 10-87-6 GOX 4500.0 200 00/04<br>3C10 G.E. CHEN MATL DEPT -0750 10-87-7 GOX 5000.0 200 01/03<br>3010 (+65GLASS) G.E. CHEN MATL DEPT -0750 10-87-7 GOX 25.0 200 01/03<br>768                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 34710 6.65 CMEM MATL DEPT -0750 10-87-6 GOX 4500.0 200 00/04<br>3C10 6.656LASS) 6.65 CMEM MATL DEPT -0750 10-87-7 GOX 5000.0 2/0 01/03<br>3010 (.656LASS) 6.65 CMEM MATL DEPT -0750 10-87-9 GOX 25.0 2/0 01/03<br>3610 (.656LASS) 6.65 CMEM MATL DEPT -0.750 10-87-8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 34210 G.E. CHEM MATL DEPT 0750 10-87-6 GOX 4500.0 200<br>3610 (656LASS) G.E. CHEM MATL DEPT 0750 10-87-7 GOX 4500.0 200<br>3010 (656LASS) G.E. CHEM MATL DEPT 70-1760 COX 250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10-87-5 60X 4000.0 200                                |                        | 11                   |
| 3CIO 656LASS) 6.6. CHEN MATL DEPT . 0750 10-87-7 GOX 5000.0 2/0 01/03<br>13010 (.656LASS) 6.6. Chen Matl Dept 70-1769 GOX 25.0 768                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3CIO 6656LASS 6-E- CHEM MATL DEPT -0750 10-87-7 GOX 5000.0 2/0 01/03<br>3010 (-656LASS) 6-E- CHEM MATL DEPT -0750 10-1769 GOX 25.0 2/0 01/03<br>3610 (-4656LASS) 6-E- CHEM MATL DEPT -0.1769 GOX 25.0 2/0 01/03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3CIO 6.656LÅSS) 6.60 CHEM MATL DEPT 0750 10-87-7 60X 5000.0 200<br>3010 (4.656LÅSS) 6.60 CHEM MATL DEPT 70-1740 60X 24.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | I0-87-6 GOX 4500.0 200                                |                        | 11                   |
| 3010 (655LASS) 6.6. CHEM MATL DEPT 70-1769 60X 25.0 768                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | - 3010 (-6556LASS) 6-E- CHEM MATL DEPY 70-1769 60X 25.0 768<br>2610 (-4564 456) 6-E- Fuem Mat Deby 25.0 25.0 768                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 3010 (+656LASS) 6.6- CHEM MATE DEPT 70-1740 CDY 24.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 50 10-87-7 GOX 5000.0 210                             |                        |                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2610 / 456 1561 6.6. FUEN MAT NEWS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 60X 25.                                               | 191                    | 10                   |
| 1 3010 (•656LASS) G.E. CHEM MATL DEPT 10-1769-1 GDX 50.0 614                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | G-E- CHEM MATL DEPT 70-1769-1 GDX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -1 GOX 50.                                            | 614                    | 13                   |

.

| AFGA S   | DES IGNATION      | NAMU   | MANUFAC TURER   |            | SPEC.<br>THICK. | TEST RPT ND. | . TEST<br>ENVR | TEST<br>PRESS | TEMP | ENER 5 | PEACT P | POINT | FIRE PROP<br>PT DIST | OP WT<br>ST LOSS | μ.<br>α | MATL<br>CODE | 2.4     |
|----------|-------------------|--------|-----------------|------------|-----------------|--------------|----------------|---------------|------|--------|---------|-------|----------------------|------------------|---------|--------------|---------|
| CENON 3  | 3010 (.65GLASS)   | ) G.E. | . CHEM MATI     | L DEPT     | .0750           | 10-1769-10   | X03            | 3500.0        |      |        | 00/04   |       |                      |                  |         |              | CD1A    |
| GENON 3  | (.65GLAS          | 6.E.   | CHEM            | L DEPT     | • 0750          | 10-1769-11   | 60X            | 4000+0        |      | Ũ      | 01/03   |       |                      |                  |         |              | D. CPIA |
|          |                   |        | CHEM            |            | •0750           | 70-1769-12   | KO3            | 4500.0        |      | -      | 01/03   |       |                      |                  |         |              | VI0:    |
|          |                   | 6.E.   | CHEN            | L DEPT     | • 0150          | ~            | COX<br>COX     |               |      |        | 74/04   |       |                      |                  |         |              | VIQ:    |
| SERON 1  |                   |        | . CHEN NATL     |            | •0750           |              | ž              |               | •••  | 200    | 40/0C   |       |                      |                  |         |              | VIN.    |
|          | -                 | G.E    | CHER            |            |                 | ~            | COX            |               |      |        |         |       | 848                  |                  |         |              | CIA     |
| _        |                   |        | CHEM            |            |                 |              | ŝ              |               | 1000 |        |         |       | 066N                 |                  |         |              | VIQ:    |
| _        |                   | 9.6    | CHEN            |            |                 |              | XO9.           | 100.0         |      |        |         |       | 608                  |                  |         |              | CIA     |
| -        | -                 | 6.E.   | CHEN            | L DEPT     |                 |              | Š              |               |      |        |         |       | 837                  |                  |         |              | A10:    |
| _        | 3010 (.65GLASS)   | 9.9    | CHEN            |            |                 |              | 60X            |               |      |        |         |       | 503                  |                  |         |              | VI0     |
|          |                   | ) 6.E. | CHER            |            |                 |              | š              | -             |      |        |         |       | 507                  |                  |         |              | VI0:    |
|          | 3010 (.656LASS)   |        |                 |            |                 | 70-1769-8    | ¥09            | 1500.0        |      |        |         | 396   | 396                  |                  |         |              | VIQ:    |
|          |                   | ů      | CHEN            |            |                 |              | ž              |               |      |        |         |       | 916                  |                  |         |              | VI0     |
| _        | 3010-0096         | 6.6.   |                 |            |                 |              | 60X            |               | 1000 |        |         |       | 7994                 |                  |         |              | VI0     |
|          | 3010-0096         | 6.E.   | CHEM            |            | •0750           |              | ×03            | <b>G</b> 1    |      | •      | 10/00   |       |                      |                  |         |              | DIA     |
| _        | 3010-00%          | 6•Ë•   | CHEN            |            | .0750           |              | 60X            | •             |      | Ŭ      | 0/04    |       |                      |                  |         |              | VIQ:    |
|          | 3010-0096         | G.E.   | CHEN MA         | L DEPT     | •0150           |              | ŝ              | 4500.0        |      | -      | 01/02   |       |                      |                  |         |              | DIA     |
| CENCY    | 30100096          | 6.6.   | CHER            | L DEPT     | •0750           |              | 80X            | ŝ             |      | Ĭ      | 01/02   |       |                      |                  |         |              | A10     |
| _        | 3010-0096         | 6.5.   | CHEM            |            | •0750           |              | Š              | •             |      | 200    | 10/00   |       |                      |                  |         |              | VIA:    |
|          | 3010-0096         | 6•E•   | CHEN            |            | · 0750          |              | 60 X           | ŝ             |      |        | 00/04   |       |                      |                  |         |              | DIA     |
|          | <b>30</b> 10-0096 | 6.E.   | CHEN            |            |                 | 10-101-2     | Š              |               |      |        |         | 633   | 669                  |                  |         |              | . ÅIQ.  |
|          | 3010-0096         | 6-6-   | CHEM            |            |                 |              | 60X            |               |      |        |         | 763   | 763                  |                  |         |              | DIA     |
|          | 9600-0106         |        |                 |            |                 |              | ž              |               |      |        |         | 734   | 734                  |                  |         |              | 01V     |
| CONCIN . | 3010-00%          | 6.E.   | CHEN            |            |                 |              | X09            |               |      |        |         | 656   | 656                  |                  |         |              | VIQ:    |
|          | 3010-00%          |        | · CHEN          |            |                 |              | ×09            |               |      |        |         | 657   | 657                  |                  |         |              | VIQ:    |
|          | 3010-00%          | 6.E.   | CHEN            |            |                 |              | ×og            | 1500.0        |      |        |         | 418   | 418                  |                  |         |              | VIQ.    |
|          | 3010-0096         | 6.E.   | CER             |            |                 |              | Š              |               |      |        |         | 369   | 369                  |                  |         |              | 01 A    |
|          | ۰.                | 6.6.   | 0               | L DEPT     | • 0750          |              | X09            |               |      | -      | 10/00   |       |                      |                  |         |              | ¥10:    |
|          |                   | NONEN  |                 | Ś          | -0750           | 10-98        | X<br>CO        | 4             |      | -      | 10/00   |       |                      |                  |         |              | XXV     |
| CLASS    |                   | NUAEN  |                 | •          | • 0150          |              | COX            | 4             |      |        | 10/00   |       |                      |                  |         |              | XX      |
|          |                   | MOVEN  | EN PRODUCIS     | <u>.</u>   | 0410*           |              | ŝ              |               |      |        | 40/00   |       |                      |                  |         |              | XXV     |
|          | FAB 3-01F         |        | EN PRODUCT      | <b>م</b> ۲ | 0610+           |              | Š              |               |      |        |         |       |                      |                  |         |              | XXX     |
|          |                   |        | LOUUNT NO       | 0          | 0610.           |              |                |               | 207  |        |         |       |                      |                  |         |              |         |
|          |                   |        |                 |            |                 |              |                |               |      |        |         |       |                      |                  |         |              |         |
|          | FR1 -             |        | CORNING GLASS   |            |                 | 71-2701-2    |                | 797.0         |      |        |         |       |                      |                  |         |              |         |
|          | TAPE 1180140      | INSU   | INSULECTRO CORP | 2          |                 |              | I              |               |      |        |         |       |                      |                  |         |              | XXOS    |
|          | TAPE 1180140      | INSU   | INSULECTRO CORP | 2          |                 |              | INI            |               |      |        |         |       |                      |                  |         |              | XXO     |
|          | ľ.                | 9 e E  | CHEN MATL       | L DEPT     |                 | 71-2671      | A-50           |               |      |        |         |       |                      |                  |         |              | XXO     |
| GL YPTAL | L 1201            | 6.F.   | CHEN            |            |                 | 71-2671-1    | A-50           |               |      |        |         |       |                      |                  |         |              | ATADXX  |
| EL VPTAL |                   | 6.6.   | CHEM            | L DEPT     |                 | 71-2671-2    | Ĩ              |               |      |        |         |       |                      |                  |         |              | NO X X  |
| GL VPTAL |                   | 6.5.   | CHEM            | L DEPT     |                 | 71-2671-3    | INN            | 7' 1.0        | 522  |        |         |       |                      |                  |         |              | ATADXX  |
| EOLD A   | ALLOY 561         | AUNAH  |                 | NON        |                 | 70-2139      | Š              | 45 30.0       |      | Ī      | 00/04   |       |                      |                  |         |              | 10MR    |
| GOLD AI  | ALLOY 581         | HANDY  | DY AND HARMON   | NON        |                 | 70-2139-1    | A-50           | RU1.0         | 513  |        |         |       |                      |                  |         |              | AUMR    |
|          |                   |        |                 |            |                 |              |                |               |      |        |         |       |                      |                  |         |              |         |

<u>،</u>

÷.

-----

:

÷.

3

•\*\*••

:

•

· **--**·

.

· ·

1

\$

3

この おころもの いろう

......

۰.

.

• •

- rr, **1** 

1

•

.

۰,

7 . I. (

1

|                                          | MATERIAL TE                               | TEST DATA       | BY MANUFACTURER | Ś            | DESIGNATION   |              | AS OF          | 31 JAN         | 22                |              |                |            | P AGE       | 2            | 2           |
|------------------------------------------|-------------------------------------------|-----------------|-----------------|--------------|---------------|--------------|----------------|----------------|-------------------|--------------|----------------|------------|-------------|--------------|-------------|
| MFGR S DESIGNATION                       | · HANUFACTURER                            | SPEC.<br>THICK. | TEST RPT NO.    | TEST<br>ENVR | TEST<br>PRESS | TEST<br>TEMP | I MP T<br>ENER | NO OF<br>React | FL A SH<br>PU INT | FIRE  <br>PT | PR0P<br>D1ST 1 | HT<br>LOSS | я н<br>Н Н  | MATL<br>CODE | ي ب         |
| GOLD ALLUY 501                           | HANDY AND HARMON                          |                 | 70-2139-2       | A-50         | 0.693         | 487          |                |                |                   |              |                |            | T 15        | FKMUM        | UMR         |
| TEFLON WIRE                              |                                           |                 | ···-1750        | 60 X         | 5.0           | 1000         |                |                | 605               | 666N         |                |            | R 13        |              | EPCNGJ      |
| TEFLON WIRE                              |                                           |                 | 70-1750-1       | Ň            | 25.0          | 1000         |                |                | 016               | 666N         |                |            | ~           |              | EPCNGJ      |
| TEFLON WIRE                              |                                           |                 | 70-1750-10      | COX<br>COX   | 16.5          | 1000         |                |                | 666N              | 656N         |                |            | -           | EPCNGJ       | NGJ         |
| TEPLON NIRE                              |                                           |                 | 70-1750-2       | ŝ            | 50-0          |              |                |                | 652               | 652          |                |            | -           |              | EPCNGJ      |
| TER.ON WIRE                              |                                           |                 | 70-1750-3       | 60X          | 100.0         |              |                |                | 654               | 654          |                |            | -           |              | L DN.       |
| TERLON WIRE                              |                                           |                 | 70-1750-4       | ŝ            | 500.0         |              |                |                | 634               | 634          |                |            | D 13        |              | NGJ         |
| TER                                      |                                           |                 | 70-1750-5       | COX<br>COX   | 1000.0        |              |                |                | 621               | 621          |                |            | -           |              | <b>NGJ</b>  |
| TERLON WIRE                              |                                           |                 | 70-1750-6       | Š            | 1500.0        |              |                |                | 735               | 735          |                |            | -           |              | NGJ         |
| COLD TEPLUN WIRE INSUL                   |                                           |                 | 10-1150-1       | 60X          | 2000-0        |              |                |                | 101               | 101          |                |            | -           |              | NGJ         |
|                                          |                                           |                 | 30-1-02         | ŝ            | 0.00          |              |                |                | 904               | 646          |                |            | -           |              | 7 9 N       |
|                                          |                                           |                 | 70-2125-1       | 6UX<br>4-50  | 747.0         | 1000         |                |                | 666.              | 666N         |                |            | 4 13<br>1 2 | EPCNGJ       | 792 J       |
| COL D.F INE                              |                                           |                 | 70-2125-2       |              | 764.0         | 1.0          |                |                |                   |              |                |            |             |              |             |
| GOLD .FINE                               |                                           |                 | 70-2125-3       | I            | 767.0         | 521          |                |                |                   |              |                |            |             |              |             |
| GOL D. F ] 4E                            | •                                         |                 | 70-2125-4       | IXX          | 807.0         | 527          |                |                |                   |              |                |            |             |              |             |
| •FINE                                    | GAC .                                     |                 | 70-2125         | XOS          | 2000.0        |              |                | 70,00          |                   |              |                |            |             |              | хх<br>С X   |
| CP-2 DAMPING SHEET                       | SOUND COAT CO. INC                        |                 | 71-2346         | 60 X         | 6.2           | 609          |                |                | N600              | N600         |                |            |             |              | <b>THF</b>  |
| H-11 PYRONAT                             | CARPENTER TECH CORP                       |                 | 71-2376         | š            | 500.0         |              | 50             | 00/04          |                   |              |                |            |             |              | XXI         |
| TANDAY IL                                | CARPENTER TECH CURP                       |                 | 71-2376-1       | XOS          | 500.0         |              |                | 00/04          |                   |              |                |            |             |              | XXI         |
| TANDAT II-TI                             | CARPENIER IELM LUKP<br>Fabryted teru rado |                 | 71-2376-2       |              | 828.0         | 716          |                |                |                   |              |                |            | 12          | EXMIXX       | XX          |
|                                          | LANTENIER IEU COAL                        |                 | 71-25/0-2       |              |               | 110          | 2              |                |                   |              |                |            |             |              | XXI         |
| MASTELLUT-B<br>MASTELLOT-B               | NAMES SIELLIE UU<br>Manmes stellite fo    |                 | 71-2500-1       |              | 1200.0        |              | 20             | 40/00          |                   |              |                |            | 11 e        |              |             |
| HAVES STELLITE NO. 3                     | 3.5111                                    |                 | 70-2171         |              |               |              | 2              | *0/00          |                   |              |                |            |             |              |             |
| 25-HTLA                                  | HAVNES ALLOV CORP.                        |                 | 71-2240         |              | 20000         | 503          | 20             |                |                   |              |                |            |             |              |             |
|                                          | HAVNES ALLOY CORP                         |                 | 71-2340-1       |              | 141.0         |              |                |                |                   |              |                |            |             |              |             |
| P INSULATION                             | MIN-KFANSTEEL CORP                        |                 | 71-2363         | 202          | 500-0         |              | 50             | 00/04          |                   |              |                |            | ) _<br>- •  | _            |             |
| INSULATION                               | MIN-KFANSTEEL CORP                        |                 | 71-2363-1       | ×09          | 500.0         |              |                | 00/04          |                   |              |                |            |             |              | XXD         |
|                                          | MIN-KFANSTEEL CORP                        |                 | 71-2363-2       | 60 X         | 1000.0        | 1000         |                |                | 666N              | 666N         |                |            |             | CKGUXX       | XXD         |
|                                          | KFANSTEEL CORP                            |                 | 71-2363-3       | ŝ            | 100.0         | 1000         |                |                |                   | 666N         |                |            | A 13        |              | ۲XX:        |
| MIGH VACUUM GREASE                       | CORNING                                   |                 | 71-2766         | ×09          | 500 ° 0       |              | 20             | 40/00          |                   |              |                |            |             |              | XXX         |
| HIVE VALUUN UKEASE<br>He-248-2 ANS-55.68 | CUR CURNING CURP                          |                 | 70-2148-1       | ŝ            | 00000         |              |                | 40/60          |                   |              |                |            |             |              | DBCKYS      |
| HS-248-2 AMS-55.08                       | GAC                                       |                 | 70-2148-1       | 505          | 0.000         |              | 50             | 10/00          |                   |              |                |            |             |              |             |
| HS-248-41 AHS-5508                       | GAC                                       |                 | 70-2146         | XOS          | 2000-0        |              | 2              | 40/00          |                   |              |                |            |             |              | SHOULD      |
| HS-248-41 AMS-5508                       | GAC                                       |                 | 70-2146-1       | ŝ            | 2000.0        |              | 50             | 00/04          |                   |              |                |            |             |              | DTMDH5      |
| POLYTUBE                                 | FRANK +                                   |                 | 71-2250         | 60X          | 1000.0        |              |                |                | 290               | 290          |                |            | - El<br>- O |              | EXXXX       |
| POLYTUBE                                 |                                           |                 | 71-2250-1       | хоу          | 1500.0        |              | 50             | 00/04          |                   |              |                |            |             |              | AMBGXX      |
| ž                                        | L. FRANK +                                |                 | 71-2250-2       | COX<br>COX   | 1500.0        |              |                | 10/10          |                   |              |                |            |             | •            | AMBGXX      |
|                                          |                                           |                 | 71-2499         | Š            | 1000.0        | 1000         |                |                | 666N              | 666Z         |                |            |             |              | AKBGXX      |
|                                          | HYSOL CORP<br>Lyson Corp                  |                 | 71-2499-1       | × 00         | 1500.0        |              | 0              | 00/04          |                   |              |                |            | -           |              | AKEGXX      |
|                                          |                                           |                 | 20-1344         | 6 U A        |               | 531          |                | 10/10          |                   |              |                |            | - F<br>- F  |              | A X Y Y Y Y |
|                                          |                                           |                 |                 | )<br>\<br>1  |               | Ś            |                |                |                   |              |                |            | -           | L            |             |

• •

-

• .

è

• • • • ١ ł

-----

-----

. . . . . . . . .

•

11.

おうちょうしん ちょうちょう あんちょう しょうかい ひょうちょう ちょうちょう しょうしょう しょうしょう ちょうちょう かんちょう かんちょう かいかい かんちょう かいろう かいちょう かいろう かいろう かいろう かいろう ひょうしょう

• · •

- 1

i i

المراجع المراجع المراجع

-. ¥

\_

·

.

Ă

| HFGR S DESIGNATION | MANUFACTURER             | SPEC.<br>THICK. | TEST RPT NO. | TEST<br>ENVR | TEST<br>PRESS   | TEAP E | I MPT | NO DF 1<br>REACT 1 | FLASH<br>POINT | FIRF F<br>PT | PRIID WT | œ –        | MATL<br>CODE                           |
|--------------------|--------------------------|-----------------|--------------|--------------|-----------------|--------|-------|--------------------|----------------|--------------|----------|------------|----------------------------------------|
| HYSOL EPCXY        | HYSOL CORP               |                 | 70-1964-1    | 4-50         | 480.0           | 465    |       |                    |                |              |          | ⊢          |                                        |
|                    | MYSOL CORP               |                 | 70-1964-2    | A-50         | 640-0           | 533    |       |                    |                |              |          |            | 15 FJBA                                |
|                    |                          |                 | 70-1964-3    | A-50         | 806.0           | 629    |       |                    |                |              |          | ⊷          | C FJBAXX                               |
|                    |                          |                 | 20-1964-4    | A-50         | 265.0           | 401    |       |                    |                |              |          | ۲          | -                                      |
| HYSOL K7-5223      | HYSOL CORP               |                 | 70-2127      | ŝ            | 8 °7            | 1000   |       |                    | 666N           | 066N         |          |            |                                        |
| INCONEL ALLOY 706  | VAL NICKEL               |                 | 71-2498      | 60X          | 1500.0          |        | 50    | 00/04              |                |              |          |            |                                        |
| INCONEL ALLOY 706  | INTERNATIONAL MICKEL CO. |                 | 71-2498-1    | COX          | 1500.0          |        | -     | 00/04              |                |              |          |            | 10 DMM INC                             |
| -                  |                          | •               | 71-2390      | A-50         | 570.0           | 463    |       |                    |                |              |          |            | S DHMD X                               |
| FILLER             | NICKEL                   | ,               | 71-2390-1    | A-50         | 775.0           | 494    |       |                    |                |              |          |            |                                        |
| FILLER             | NICKEL                   | •               | 71-2390-2    | A-50         | 768.0           | 512    |       |                    |                |              |          |            | S DHHDXX                               |
| FILLER             | NICKEL                   | •               | 71-2390-3    | IWW          | 774.0           | 523    |       |                    |                |              |          |            |                                        |
|                    | NICKEL                   | •               | 71-2390-4    |              | 816.0           | 532    |       |                    |                |              |          |            | XXOMMO 4                               |
|                    | NICKEL                   | •               | 70-2032      | A-50         | 144.0           | 508    |       |                    |                |              |          |            | XXXMED 5                               |
|                    | -                        |                 | 70-2032-1    | A-50         | 803.0           | 5 2 R  | -     |                    |                |              |          | - •        | 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 |
|                    | NICKEL                   | •               | 70-2144      | K ng         | 0.0000          |        |       | 40/04              |                |              |          |            | XXNHHO O                               |
|                    | NICKEL                   | •               | 70-2144-1    | S S          | 6800.0          |        | •     | 40/00              |                |              |          | α ۲        |                                        |
|                    |                          | •               | 2-5412-0/    |              | 0.4401          | 200    |       |                    |                |              |          | - •        |                                        |
|                    | ERNATIONAL NICKEL        |                 | 70-2144-3    | A-50         | 689.0           | 165    | 0     |                    |                |              |          | - •        |                                        |
|                    | 6AC                      | •0750           | 70-2142      | Xag          | 2000.0          |        | 50    | 00/04              |                |              |          | ۹.         | XXNMMU II                              |
|                    | GAC                      |                 | 70-2142-1    | XOS          | 0.0003          |        | -     | 00/04              |                |              |          | ۹ •        | -                                      |
|                    | GAC                      |                 | 2-2412-01    | Š            | 6800°0          |        |       | +0/00              |                |              |          | ۹.         | XXNHHA AT                              |
|                    |                          |                 | 20-2142-3    |              | 0.0000          | 0001   | 2     | <b>†</b>           | 0000           | 0000         |          | ₫ >        |                                        |
| BISHUTH AND        |                          |                 | 70-2043      | ŝ            | •               | 1900   |       |                    | 5552           | 5552         |          | ⊦,         |                                        |
| M BISNUTH AND      |                          | 0100            | 10-2043-1    | 202          | 10.0            | 1000   | -     |                    | ***            | アナアス         |          | - 4        |                                        |
|                    | PKT STEEL                | 0510.           |              |              | 1-00-0          |        |       | * 0 / 0 /          |                |              |          | <b>a</b> . |                                        |
|                    | ALLEN FRY STEEL CO.      | • 0750          | 70-2206-1    | K ng         | 1500.0          |        | 20    | 50/00              |                |              |          | 4          |                                        |
|                    | GAC                      | •0150           | 2012-01      | X S          | 2500 <b>.</b> 0 |        |       | 00/04              |                |              |          | ۹. (       |                                        |
| RED FIBER          |                          |                 | SP-69-11-15  | X 09         | 100.0           |        |       |                    | 304            | 2.54         |          | 2          | _                                      |
|                    |                          |                 | SP-6931-16   | X DO         | 500.0           |        |       |                    | 265            | 265          |          | ۵ ۵        | 13 CRRGXX<br>13 CRRGXX                 |
| ED FIBER           |                          |                 | SP-6931-17   | X DS         | 20.0            |        |       |                    | 124            | 124          |          | 5          | -                                      |
|                    | KE 'AN AMETAL            | •0150           | 70-2217      | X DS         | 1500.0          |        | 4     | 40/00              |                |              |          | 4.         | LU UMMUXY                              |
|                    |                          |                 | 1-1122-01    |              | 0.0041          |        | 2     | 40/00              |                |              |          | 4 <        | XX0000 11                              |
|                    | kennametal<br>Kennametal |                 | 71-2266      |              | 1200°0          |        | 50    | 10/00              |                |              |          | 4 - 4      |                                        |
| K-BUL SIEFL        |                          |                 | 71-2266-1    |              |                 | •••    |       |                    |                |              |          | ( >-       |                                        |
|                    |                          |                 | 71-2266-2    | X09          | 1000-0          | -      |       | 10/00              |                |              |          | • •        | -                                      |
|                    | KENNAR' TAL              |                 | 71-2266-3    | X OS         | 1500.0          |        | 50    | 00/10              |                |              |          | 4          |                                        |
|                    |                          |                 | 71-2266-4    | 60 X         | 3000-0          |        | 50    | 00/03              |                |              |          | ⊲          | 11 DMMDXX                              |
|                    | KENNANETAL               |                 | 71-2266-5    | ğ            | 500.0           |        | 200   | 02/05              |                |              |          | -          |                                        |
|                    | KENNAME TAL              |                 | 71-2266-6    | X u S        | 1000.0          |        | 200   | 01/05              |                |              |          | 1          | _                                      |
|                    | X FINN AME TAL           |                 | 71-2266-7    | rox          | 14.7            |        | 50    | 00/04              |                |              |          | ۹          | 16 DMMDXX                              |
| K-602 STEEL        | KENNUME TAL              |                 | 71-2266-R    | LOX          | 14.7            |        | 0     | 00/04              |                |              |          | ۹          | 15 DMMDXX                              |
| K-602 STEEL        |                          |                 | 71-2266-9    | õ            | ۰               |        | 50    | 10/10              |                |              |          | •          | II DHMDXX                              |
| KAPTON H-FILM      | E.I. DUDONT CO. INC.     |                 |              |              | •               | •      |       |                    |                |              |          |            |                                        |

-

.

.

· · · ·

. ,

. · -

1 · \*\*

うしてラ

ģ

\* • • 1

-----

\*\*\*\*\*\*

,

۴ • •

.....

÷

- -

د مہر د

, <del>.</del>.: Ś

| MFGR 5 DESIGNATION  | MANUFACTURER               | SPEC.<br>THICK. | TÊT RPT NO. | TEST<br>ENVR | TEST<br>PRESS | TEST<br>TEMP | 1 MP T<br>ENER | ND DF | FLAS"<br>POINT | FIRE PROP<br>PT DIST L                  | нт<br>055 | а н<br>г н | MATL<br>CDDE   |
|---------------------|----------------------------|-----------------|-------------|--------------|---------------|--------------|----------------|-------|----------------|-----------------------------------------|-----------|------------|----------------|
| KAPTCN H-FILM       | E-I+ DUPONT CO++INC+       |                 | 70-1752-1   | XQS          | 25.0          | 1000         |                |       | ROOR           | 066N                                    |           |            | EJCOXX         |
| KAPTON N-FILM       | - DUPONT                   |                 |             | COX          |               |              |                |       | 710            | •                                       |           |            | FUCUXX         |
| 1                   | DUPONT                     |                 | 70-1752-3   | CCX<br>CCX   | 50-0          |              |                |       | 578            | 85.8                                    |           |            | FILDER         |
| Ξ                   | . DUPONT                   |                 | 70-1752-4   | COX          | 100.0         |              |                |       | 644            | 644                                     |           | 12         | JCDXX          |
| KAPTON H-FILM       | E-I- DUPONT CG- INC-       |                 | 70-1752-5   | ŝ            | 500.0         |              |                |       | 579            | 579                                     |           | 1          | XXU21          |
| _                   | . DUPONT CO                |                 | 70-1752-6   | 60X          | 1000.0        |              |                |       | 492            | 492                                     |           | 10         | EJCDXX         |
| _                   | . DUPONT CO                |                 | 70-1752-7   | 3            | 1500.0        |              |                |       | 535            | 535                                     |           | 12         | EJCDXX         |
| _                   | . DUPONT                   |                 | 70-1752-8   | COX          | 2000-0        |              |                |       | 541            | 541                                     |           |            | E-JORXY        |
|                     | · DUPONT                   |                 | 70-1752-9   | ŝ            | 16;5          | 1000         |                |       | 066N           | 000N                                    |           | 2          | JCDXX          |
| _                   | <ul> <li>DUPONT</li> </ul> |                 | 1001-01     | COX<br>COX   | 1000.0        |              | 50             | 00/04 |                |                                         |           | 1          | CKODXX         |
|                     | . DUPONT                   |                 | 1661-02     | Š            | 1500.0        |              |                | 01/01 |                |                                         |           |            | CKCDXX         |
| KAPTON H-FELM       |                            |                 | 70-1991-1   | 60 X         | 500.0         |              | 50             | 00/04 |                |                                         |           | 11         | CKCDXX         |
|                     | . DUPONT                   | •0750           | 70-1991-2   | Š            | 500.0         |              |                | 00/04 |                |                                         |           | 10         | CKCDXX         |
|                     |                            |                 | 70-1991-3   | COX          | 100.0         |              |                |       | 466            | 466                                     |           | 13         | CKCDXX         |
|                     | . DUPONT                   |                 | 70-1991-4   | × S          | 1500.0        |              |                |       | 374            | r.                                      |           | 5          | CKCDXX         |
|                     |                            |                 | 70-1991-5   | X 05         | 1500.0        |              | 50             | 00/04 |                |                                         |           | 1          | KCOXX          |
| _                   | INOANO .                   |                 | 71-2431     | A50          | 723-0         |              |                |       |                |                                         |           | 5          |                |
| KAPTON H-FILM       |                            |                 | 71-2431-1   | A-50         | 831.0         |              |                |       |                |                                         |           | 5          | LCDXX          |
| KAPTON H-FILM       | NDADO                      |                 | 71-2431-2   | A-50         | 751.0         | 516          |                |       |                |                                         |           | 15         | FJCDXX         |
| KEL-F-81            | CO• ST•                    |                 | M9-0296     | COX<br>COX   | 5.0           | -            |                |       | 870            | 666N                                    |           | 13         | DKBDXX         |
|                     | 5 <b>T</b> •               |                 | M9-0296     | Ň            | 4500.0        |              | 50             | 00/04 |                |                                         |           |            | DK BDXX_       |
|                     | CO. ST.                    |                 | H9-0296     | 60X          | 4000.0        |              |                | 02/02 |                |                                         |           | 2          | DK BDXX        |
| REL-F-51            | CO• 51•                    |                 | 9-0296-1    | ŝ            | 10.0          | 1000         |                |       | 068            | 606N                                    |           | <b>6</b>   | DK.BDXX        |
|                     | :::                        |                 | 01-9620-6W  | 20X          | 1110.0        |              |                |       | 655            | 655                                     |           | -          | XX08XX         |
|                     |                            |                 | 11-9620-64  | Š            | 1500.0        |              |                |       | 698            | 604                                     |           |            | OK BD X X      |
| KEL-F-BI<br>Verues  | <b>.</b> !?                |                 | M9-0296-12  | 20X          | 2000.0        |              |                |       | 705            | 706                                     |           |            | DKBDXX         |
|                     | 36                         | 0420            | M9-0296-15  |              |               |              | <b>9</b> ,     | 20/20 |                |                                         |           | 2:         | ULBUXX         |
|                     |                            |                 | M0-020-15   |              |               |              |                | +0.00 |                |                                         |           |            | *****          |
|                     |                            |                 | H9-0296-15  |              |               | 0001         |                |       | 000            |                                         |           | 2 2        |                |
| KEL-F-81            |                            |                 | M9-0296-17  |              | 3000.0        | >            |                | -     | 6669<br>629    | 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |           | 12         | DKROXX         |
| XEL-F-BI            | CO• ST•                    |                 | M9-0296-13  | XOS          | 5000-0        |              |                | ~     |                | 1                                       |           | 22         | DKBDXX         |
| XEL-F-B1            |                            |                 | 9-0296-1    | X OS         | 4500 °C       |              |                | 01/01 |                |                                         |           |            | DKEDXX         |
| XEL-F-81            | 3                          |                 | M9-0296-2   | COX          | 20.0          | 1000         |                |       | 850            | 666N                                    |           | 13         | DKBOXX         |
| KEL-F-81            | co. st.                    |                 | M9-0296-20  | <b>X</b> 09  | 4000.0        |              |                | 10/10 |                |                                         |           | 2          | OKBDXX         |
| KEL-F-81            | CO. ST.                    |                 | M9-0296-21  | COX<br>COX   | 3000.0        |              |                | 10/10 |                |                                         |           | 10         | XXDEXC         |
| XEL-F-81            | CD• ST•                    |                 | M9-0296-22  | Š            | 2500.0        |              |                | 10/10 |                |                                         |           | ្ព         | 0×80XX         |
| KEL-F-51<br>VII - C | s.t.                       |                 | M9-0296-23  | X09          | 2000.0        |              |                | 01/03 |                |                                         |           | T 10       | 0.<br><br>b0xx |
|                     |                            |                 | 2-9620-     | ŝ            | 0.00.01       |              |                | 10/10 |                |                                         |           | 2          | DKBDXX         |
|                     | 69• SI•                    |                 | M9-0296-25  | 20X          | 1000.0        |              |                | 00/04 |                |                                         |           | 10         | DXBDXX         |
|                     |                            |                 | 9-029-0-0   | × GB         | 25.0          |              |                |       | 161            | 666N                                    |           | 5          | DKBDXX         |
|                     | 24 CU - 21 - 7AUL          |                 | H9-020-04   |              | 0.00          | 1000         |                |       | 160            | 666N                                    |           |            | DKBOXX         |
|                     |                            |                 |             | Ś            |               | •            |                |       | 20             | ファンス                                    |           |            | JKBUAN         |
|                     |                            |                 |             |              |               |              |                |       |                |                                         |           |            |                |

f

\*

55

14444 Sec. 24

1

٠.

۰. .

ş

DTMDXX DTMDXX DTMDXX CTMDXX 088PXX FKXXXX FKXXXX XXXXX DKBDXX CXONTO DKBOXX 0X80XX 0K80X3 **DKBOXX** OKBO X) OK8DXX FKXXXX UKBDXX DKBDX) MATL 25 8 5 5 PAGE 0 O, 0 00 1222 000 13 00000000 --œ FIRE PROP WT PT DIST LOSS 768 N999 666N 065N 681 676 702 497 FLASH POINT 768 570 590 002 700 581 676 702 475 72 JAN JAN 00/04 01/03 ND OF REACT 00/04 01/04 00/04 00/04 00/04 01/03 01/03 01/03 01/03 01/03 00/04 00/04 01/01 00/04 00/04 00/04 01/02 01/01 01/01 01/01 01/01 00/04 00/04 02/04 I MP T E NER MATERIAL TEST DATA BY MANUFACTURER S DESIGNATION AS DF 20 S 50 50 20 3 20 1000 000 502 495 523 509 0001 TEST TEMP +000.0 +500.0 1000.0 +500.0 +500.0 +1000.0 100.0 100.0 100.0 100.0 100.0 100.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000.0 1000 TEST PRESS TES T ENVR ş 

 M9-0296-8

 71-2700-2

 71-2700-2

 71-2700-5

 71-2700-5

 71-2700-5

 71-2700-6

 71-2700-6

 71-2700-6

 71-2700-6

 71-2700-6

 71-2292-1

 71-2292-1

 71-2292-2

 71-2292-1

 71-2292-1

 71-2292-1

 71-2292-1

 71-2292-1

 71-2292-1

 71-2292-1

 70-1957-4

 70-1957-4

 70-1952-1

 70-1952-1

 70-1982-1

 70-1882-1

 70-1882-1

 70-1882-1

 70-1883-1

 70-1885-1

 70-1885-1

 70-1885-1

 70-1885-2

 70-1885-2

 69-1346

 69-1346-1

 TEST RPT • 0050 • 0050 • 0050 • 0050 •0050 •0050 •0050 •0050 •0050 0750 SFEC. MESTINGHOUSE ELECTRIC MESTINGHOUSE ELECTRIC MESTINGHOUSE ELECTRIC MESTINGHOUSE ELECTRIC MESTINGHOUSE ELECTRIC EC TR I EC TRI ÿ <u>v</u>vvv INC. ELECTR1 <u>v</u> v v v CO. . INC. 99999 99999 00 C0..1 C0--1 0...1 C0++1 00 5 100 ...... CC: ST. PAUL CO: ST. PAUL <u>.</u> MANUFAC TURER L HOHI **SUOM** BORCEN IND. E+1+ LXPONT ST INGHOUS NOADO 8 **WILTON** õ : ŝ ġ 571 2 2 8 81370-31H 61370-3 CLEAR CLEAR CLEAR CLEAR CLEAR CLEAR MFGN S DESIGNA ( ION SVSK SVSK 55 KE-F-01 KE-F-0 61-13 XVEVI 143AX 240AB 24048 24048 24048 24048 24048 24048 24048 24048 24048 24048 24048 24048 **RO** 43A KAYTOX KRYTOX KRYTOX KRYTOX KRYTOR KRYYBK KRY'9K KRV70.X **KRYTOX KRYTOX** KAVIBK KAYIGI

.

÷,

| KAYTOX 240AC     | s designation manu         | MANUFACTURER   | ~          | SPEC.<br>THICK. | TEST RPT NO. | TEST     | TEST<br>PRESS | TEST<br>TEMP | I MP T<br>ENER | NO OF<br>REACT | FLASH<br>POINT | FJRE<br>PT | FROP<br>Dist L | мТ<br>05S | н<br>Т<br>Т<br>Т | MATL<br>CODE |
|------------------|----------------------------|----------------|------------|-----------------|--------------|----------|---------------|--------------|----------------|----------------|----------------|------------|----------------|-----------|------------------|--------------|
|                  | Fala                       | THIRD          | CO 18G.    |                 | 01-4451-64   | X        | 0,000         |              |                |                | 203            | 603        |                |           | -                |              |
| TARK YOU'S       |                            |                |            |                 |              |          |               |              |                |                |                |            |                |           |                  |              |
| ÷.,              |                            |                |            |                 | 11-0+01-60   | 209      | 0*000T        |              |                |                |                |            |                |           |                  |              |
|                  |                            | -              | -3M1+-03   |                 |              | KO3      | 1000.0        |              |                |                | 784            | 784        |                |           |                  |              |
|                  | E•1.                       | -              | CD++1%C+   |                 | 69-1346-13   | X09      | 1087.0        |              |                |                | 813            | 813        |                |           |                  |              |
|                  | E.1.                       | DUPONT         | COINC-     |                 | 69-1346-14   | Š        | 1110.0        |              |                |                | 202            | 795        |                |           |                  |              |
| KRYTOX <+OAC     | E.I.                       | DUPONT         | CO 1 NC.   |                 | 69-1346-15   | 60X      | 1500.0        |              |                |                | 808            | 808        |                |           |                  |              |
|                  |                            | DUFONT         | CDINC.     |                 | 69-1346-16   | ž        | 1565.0        |              |                |                | 830            | 0.5 4      |                |           |                  | DARPYX       |
|                  |                            | DIMONT         |            |                 | 246-1        |          |               |              |                |                |                |            |                |           |                  |              |
|                  |                            |                |            | <b>O</b>        | 11-0+01-60   |          |               |              |                |                |                |            |                |           |                  |              |
|                  |                            |                |            |                 | 01-0+0T-10   | 3        | 0.0000        |              | Ì              | *0/00          |                |            |                |           |                  | UBBYXX       |
|                  | E•1•                       | _              | CO++1NC+   | • 0050          | 69-1346-19   | X09      | 5000°0        |              | 20             | 40/00          |                |            |                |           |                  |              |
|                  | E.1.                       |                | CD++INC+   |                 | 69-1346-2    | ×09      | 20.0          | 1000         |                |                | 546            | 666N       |                |           |                  |              |
| KAVTDX 240AC     | E.1.                       | DUPONT         | C0+1NC.    |                 | 69-1346-20   | 60X      | 16.5          | 1000         |                |                | 666N           | 666N       |                |           |                  |              |
| KRYTOX 240AC     | E • 1 •                    | DUPONT         | COINC.     |                 | 69-1346-21   | ×09      | 200.0         | I            |                |                | 849            | 849        |                |           |                  |              |
| KRYTDY 2404C     | F.1.                       |                | COTMC.     |                 | 60-1366-32   | 202      | 0000          |              |                |                | 70.0           | 700        |                |           |                  |              |
|                  |                            |                |            |                 | 40-1346-22   |          |               |              |                |                |                |            |                |           |                  | X X 1000     |
|                  |                            |                |            |                 |              | Ş        | -             |              |                |                | \$01           | 10.        |                |           |                  |              |
|                  | E.I.                       | -              | C01NC.     |                 | 69-1346-3    | COX      | 25.0          | 1000         |                |                | 290            | 656N       |                |           |                  |              |
|                  | E+I.                       |                | CO+1NC+    |                 | 69-1346-4    | ž        | 30.0          | 1000         |                |                | 666N           | 665N       |                |           |                  |              |
|                  | E•1•                       |                | C0++INC+   |                 | 69-1346-5    | GOX      | 0.04          |              |                |                | 5 74           | 974        |                |           |                  |              |
| KRYTOX 240AC     | E . ] .                    | DUPONT         | COENC.     |                 | 64-1346-6    | ŝ        | 50.0          | 1000         |                |                | 566N           | 000N       |                |           |                  |              |
| KRYTOX 240AC     | E•1•                       | DUPONT         | CDINC.     |                 | 69-1346-7    | 60X      | 50.0          |              |                |                | 864            | 864        |                |           |                  |              |
| KAVTDX 240AC     | E•1.                       | <b>TNO4UO</b>  | CO++INC+   |                 | 69-1346-8    | ž        | 100.0         |              |                |                | 854            | 854        |                |           |                  |              |
| KRVTUX 240AC     | E.I.                       | DUPONT         | CO+1NC+    |                 | 69-1346-9    | GOX      | 500-0         |              |                |                | 831            | 831        |                |           |                  |              |
| KRYTOX 240AC     | E.1.                       |                | CO++*NC+   |                 | 71-2274      |          | 779.0         | 496          |                |                | <b>)</b><br>   |            |                |           | 1 15             | DBEPXX       |
| KRYTDX 240AC     | E•1•                       | DUPONT         | CO++1NC+   |                 | 71-2274-1    | A-50     | 744.0         | 197          |                |                |                |            |                |           |                  |              |
| KRYTOX 240AC/TFE |                            | DUPON // DIXON | C          |                 | 69-1346/1041 | ŝ        | 1000.0        | 703          |                |                |                |            |                |           |                  |              |
|                  | GLASS) E-1-                | DEPEND         | 0          | 0000            | X-07/2461-64 |          |               | ,            | c              |                |                |            | 00             | 00        |                  |              |
| 240AC/TFE        | IGLASSIE-I - DUPIDNT/DIXON | THCHING        | DIXON CORF |                 | 69-1346/70-X | SOX<br>S | 1000.0        | 620          | >              |                |                |            | •              | •         |                  | RAFFUE       |
| 762MC            | E.l.                       | DUPCHT         | Y          |                 | 10-65        | 20X      | 20.05         | l            |                |                | 930            | 04         |                |           |                  |              |
|                  | 19434                      | PENNISALT CORP | 0          |                 | 70-1956      | A-50     | 407-0         | 944          |                |                |                | )<br>1     |                |           |                  |              |
|                  | 05.00                      | DEWISALT CORP. |            |                 | 20-1054-1    | A-60     | 471 0         | 415          |                |                |                |            |                |           |                  |              |
|                  |                            |                |            |                 | 70-1954-2    |          |               |              |                |                |                |            |                |           |                  |              |
|                  |                            |                |            |                 | 20-1025      |          |               |              | 0              | 101.00         |                |            |                |           |                  |              |
|                  |                            |                |            |                 |              | < no     | 0.0001        |              |                | 10,00          |                |            |                |           |                  |              |
|                  |                            |                |            |                 | 10114204     |          | 0.0001        |              | 202            | * 0 / 0 h      |                |            |                |           |                  | XX - XHI     |
|                  |                            |                |            |                 | 2-9261-02    | LUX      | / · + ]       |              | ŝ              | 00/00          |                |            |                |           |                  |              |
|                  |                            |                |            |                 | 10-1956-6    | FOX      | 14.7          |              | 200            | 00/04          |                |            |                |           |                  |              |
| K YWAR           |                            |                | 4          |                 | 70-1956-7    | A-50     | 502.0         | 423          |                |                |                |            |                |           |                  |              |
| KYHAR            | W3d                        |                | 9 A D      |                 | 70-1973      | A-50     | 479.0         | 419          |                |                |                |            |                |           |                  |              |
| K AND X          | FERM                       |                | 6          |                 | 10-1973-1    | IXX      | 370.0         | 420          |                |                |                |            |                |           | 1 15             | EHCTXX       |
| k via.           | PEN                        |                | đ          |                 | 70-1973-2    | III      | 481.0         | 437          |                |                |                |            |                |           |                  |              |
| x yrar           | PENCI                      |                | ÷          |                 | 1            | A-50     | 515.0         | 437          |                |                |                |            |                |           |                  |              |
| K 7MAR-400       | PEN                        |                | ŝ          |                 | 71-2259      | á-50     | 484.0         | 417          |                |                |                |            |                |           |                  |              |
| ktraa-400        | PENN                       | PENNSALT CORP  | ٩          |                 | 1-6522-12    | A-50     | 494.0         | 419          |                |                |                |            |                |           |                  |              |
| IL ICONE         | RUBBER                     |                |            |                 | -2413        | ХOS      | 250.0         |              |                | 00/04          |                |            |                |           |                  | OVCPXX       |
| -13098 SILICTHE  | RUBBER                     |                |            |                 | 71-2413-1    | 60X      | 75.0          |              |                |                | 634            | 634        |                |           |                  |              |

. .

-----

...

.

.

PAGE 26

•

7

• \*

日本を行う

ξ.

.

(m 11 m)

御事みらなをからいまん、うちまったが、ふかって、どう

÷

\*

۰. ۱

|                          | MANUFACTURER      |         | SPEC.<br>THICK. | TEST RPT ND. | TEST<br>ENVR | TEST<br>PRESS | TEAP | I MP T<br>ENER | ND DF | FLASH<br>POINT | F1RE P<br>P* | PROP<br>DIST LI | MT 055      | ~~<br>62 ~~1 | יא.⊾[ .<br>ניי    |
|--------------------------|-------------------|---------|-----------------|--------------|--------------|---------------|------|----------------|-------|----------------|--------------|-----------------|-------------|--------------|-------------------|
|                          | PARKER SEAL/LOS   | ANGL    | •0750           | 10-40        | XOS          | 3000.0        |      |                | 00/04 |                |              |                 | •           | 5.<br>T      | CHD               |
| L-449-6 FLUORDSILICONE   | PARKER SEAL/LOS   | ANGL    | -0750           | 10-40-1      | <b>COX</b>   | 3500.0        |      | -              | 01/02 |                |              |                 |             | 01           | Y                 |
|                          |                   | ANGL    |                 | 10-40-10     | Š            | 3000-0        |      | -              | 10/10 |                |              |                 | ,.          | -            | CHDGXX            |
|                          | PARKER EAL/LOS    | ANGL    |                 | 10-40-01     | 60X          | 2500.0        |      | -              | 01/02 |                |              |                 | <b></b>     | 10           | CHDGXX            |
| L-449-6 FLUORDS 11 ICONE | PARKER SEAL/LDS   | ANGL    |                 | 10-40-12     | SOX<br>SOX   | 2000-0        |      |                | 00/04 |                |              |                 |             |              |                   |
| -449-6 FLUGROS IL ICONE  | PARKER SEAL/LOS   | AMGL    |                 | [0+0-1]      | COX.         | 500.0         |      | 05             | 02702 |                |              |                 | • -         |              |                   |
| L-M9-6 FLUORDS IL ICONE  |                   | ANGL    | -0750           | 10-40-2      | ŝ            |               |      |                | 20170 |                |              |                 |             |              |                   |
| -445-5 FLUDERSTLTCINE    |                   | AMCI    | 0.750           |              | ŝ            |               | ,    | 200            |       |                |              |                 |             |              |                   |
|                          |                   | ANG     | -0750           |              |              |               |      |                |       |                |              |                 |             |              | *****             |
| -                        |                   | ANG     | 0750            |              | ŝ            |               |      |                | 10.00 |                |              |                 |             |              | 7790LJ            |
|                          |                   |         | 0750            | 2-4-07       |              |               |      |                | 70/10 |                |              |                 |             | :<br>:<br>:  | ××90000           |
| -449-6 FLUGENS II IC THE |                   | ANCI    |                 |              |              |               |      | 2              |       | 0.00           |              |                 | - (         | • •          | XX900-0           |
|                          |                   | ANG     |                 |              |              |               |      |                |       | 575            |              |                 |             | -            |                   |
|                          |                   |         |                 |              |              |               |      |                |       |                |              |                 | - 1         | -            | CHUGAK            |
|                          |                   | A RUL   | 0760            |              | xn3          | 10.5          |      |                |       | 748            | 441          |                 |             |              | CHOCXX            |
|                          |                   |         |                 |              | 3            | 0.0002        |      |                | 00/04 |                |              |                 |             |              | DINOXX            |
|                          |                   |         | 06/0.           |              | GOX          | 45G0.0        | 1    | -              | 00/04 |                |              |                 |             | 2            | DTMOXX            |
|                          |                   |         |                 | 11-2533      | A-50         | 801.0         | 512  |                |       |                |              |                 | -           |              | DACKGO            |
|                          | SYNTHANE CORP     | •       |                 | 71-2533-1    | A-50         | 762.0         | 512  |                |       |                |              |                 |             |              | 040×040           |
| AND                      | REEVES BROS+ INC. | INC.    |                 | 70-2090      | ŝ            | 300.0         |      |                |       |                | `<br>• -     |                 | 0           |              | <b>3BDFCC</b>     |
| LARIANTE 7564 AND 7581   | REEVES BROS.      |         |                 | 70-2090-1    | X O S        | 450.0         |      |                |       | ž              | . 0ç         |                 | 6           | ~            | BBDFCC            |
|                          |                   | BRASS   |                 | 71-2744      | A-50         | 746.0         | 506  |                |       |                |              |                 | -           | L 15         | EL MCM2           |
| P BRAS                   | <<br><            | BRASS C | • 0000          | 71-2744-1    |              | •             |      |                |       |                |              | . 1/            | 00.         | 51           | EL NCHZ           |
| アンコドー                    | •                 | GAMBLE  |                 | 71-2889-1    | Š            | 6000.0        |      | 200            | 01/04 |                |              |                 | -           | 11           | ANXXXX            |
|                          | +                 | GAMBLE  |                 | 71-2389-2    | C0X          | 3000.0        |      | -              | 10/10 |                |              |                 |             | 0            | AXXXHA            |
| FRESH                    | <b>+</b>          | GAMBLE  |                 | 71-2689-3    | žõ           | 2000.0        |      | -              | 10/10 |                |              |                 |             | 2            | <b>44X : X</b> 44 |
| FRESH                    | •                 | GAMBLE  |                 | 71-2589-4    | COX<br>COX   | 1000.0        |      | -              | 00/04 |                |              |                 |             | -,           | V N N N N N N     |
| LEMON FRESH JOY          |                   | GAMBLE  |                 | 71-2889-5    | Š            | 1500.0        |      | -              | 10/10 |                |              |                 | • •         | •            | **                |
| LINEAR POLYETHYLENE      | 3                 |         | .0000           | 71-2437      |              | °             |      | 5              |       |                |              | 00.             | •00         | ، ،<br>و     | ,<br>,            |
| LINEAR POLYETHYLENE      | 3                 | J       | 0000            | 71-2437-1    |              | ç             |      | c              |       |                |              | 00.             | 00.         | 15           | UT2               |
|                          | R                 | HARMON  |                 | 71-2560      | IVI          | 807.0         | 530  |                |       |                |              |                 | <b>-</b> -  | 15           | FLMRMC            |
|                          | Ĩ                 | HARMON  |                 | 71-2560-1    | Ĩ            | 779.0         | 514  |                |       |                |              |                 | -           | 51           | FL MRMC           |
| LITHUBRAZE BT-720        | 2                 | HARMON  |                 | 71-2560-2    | 60X          | 1500.0        |      |                | 00/04 |                |              |                 | <           | -            | FL MRMC           |
| LITOPLEX K20             |                   | RKE     |                 | 71-2432      | ð            | 5000.0        |      | 50             | 00/00 |                |              |                 | -           | 11           | CCP, XX           |
| LETOPEEX X20             |                   | RKE     |                 | 71-2432-1    | XC9          | 5000.0        |      | ~              | 01/02 |                |              |                 | -           | 9            | CCFLXX            |
| ITOFLEX K20              |                   | RKE     |                 | 71-2432-2    | Š            | 2500.0        |      | -              | 01/01 |                |              |                 | -           | 10           | CCPL XX           |
| LITUFLEX K20             |                   | RKE     |                 | 71-2432-3    | 60X          | 2000.0        |      | -              | 01/02 |                |              |                 | <b>P</b> =- |              | CCFLXX            |
| ITUHLEX K20              |                   | RK F    |                 | 71-2432-4    | žõ           | 1500.0        |      | -              | 10/10 |                |              |                 |             |              | CCFL XX           |
| LITORLEX K20             |                   | R K E   |                 | 71-2432-5    | 60X          | 1000.0        |      | ~              | 10/10 |                |              |                 | н           | 2            | CCFL XX           |
| LITUTLEX K20             | ÷.                | RKE     |                 | 71-2432-6    | ž            | 500.0         |      | -              | 40/00 |                |              |                 | -           | -            | CCR_XX            |
|                          |                   |         |                 | 69-1516      | 20X          | 1565.0        |      |                |       | 295            | 295          |                 | <u>م</u>    |              | D SBAFN           |
|                          |                   |         | • 0050          | 70-2063      | õ            | 1500.0        |      | 50             | 00/04 |                |              |                 | -           | -            | BUREN             |
|                          | -                 |         | • 0050          | 70-2063-1    | GOX          | 1500.0        |      | 5              | 00/04 |                |              |                 | ~           | ~            | BSBMFW            |
| LUCTITE - GRADE A        |                   |         |                 | 70-2063-10   | ž            | 1000.0        |      |                |       | 259            | 259          |                 | <b>(</b>    | -            | E SBMFN           |
|                          | 0001 1116 1000    |         |                 |              |              |               |      |                |       |                |              |                 |             |              |                   |

PAGE 21

\_\_\_\_\_

\_\_\_\_

• :

**K**'

54

. .

:

π,

•

:

. . . . . .

;;

, ' ,

ł

.

.

. . .

٠.

| ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~  | <b>モモモ</b>                        |        |            |      |        |       |    |       |      |       |              |           |
|------------------------------------------|-----------------------------------|--------|------------|------|--------|-------|----|-------|------|-------|--------------|-----------|
| < 4 < < < < < < < < < < < < <            | - · ·                             |        | 20-2003-12 | Š    | 50.0   |       |    |       | 218  | 398   | ۵            | 13 BSBMFW |
| ~~~~~~~~                                 |                                   |        | 70-2063-13 | 60X  |        |       |    |       | 2 69 | 269   | 0            |           |
|                                          | ł                                 |        | 70-2063-14 | ž    | 1000.0 |       |    |       | 282  | 282   | 0            |           |
| ******                                   | 2                                 |        | 70-2063-15 | GOX  | 2500.0 |       | 50 | 10/00 |      |       | 4            | 40        |
|                                          |                                   |        | 70-2063-16 | Š    | 3000.0 |       |    | 10/00 |      |       | •            | 40        |
|                                          | Ë.                                |        | 70-2063-17 | 60 X | 5000.0 |       |    | 00/04 |      |       | •            | _         |
|                                          | LOCTITE COR?                      |        | 70-2063-18 | ×09  | 500.0  |       |    | 01/01 |      |       | 60           | - 644     |
| ~ ~ ~ ~ ~                                | LECTITE CORF                      |        | 70-2063-19 | 60X  | 1000-0 |       | -  | 10/10 |      |       | α.           |           |
| ~ ~ ~ ~                                  | H                                 |        | 70-2063-2  | XOS  | 0-0001 |       |    |       | 282  | 282   | <i>م</i> د   |           |
|                                          | H                                 |        | 70-2063-20 | X05  | 1500-0 |       | -  | 10/10 | :    | >     | ) c          | שי<br>שי  |
|                                          | 1                                 |        | 70-2063-21 | χ.   | 2000-0 |       | -  |       |      |       | 5 6          | 5 0       |
| 4                                        | : <u>H</u>                        |        | 70-2063-3  | , No | 50.0   |       |    |       | 240  | 240   | 2 0          |           |
|                                          | <b>F</b>                          |        | 70-2063-4  | ŝ    | 100.0  |       |    |       | 241  | 241   | <b>، د</b>   | 3 0       |
| OCTIF-GRADE A 10                         | : #                               |        | 70-2062-5  | 203  |        |       |    |       | 151  |       | 2 0          |           |
|                                          | : #                               |        | 70-2053-6  | ŝ    | 1500.0 |       |    |       | 700  | 204   | 20           | 0 a       |
|                                          | ÷۳                                |        | 70-2063-7  | X US | 2000-0 |       |    |       | 208  | 20.8  |              | מנ        |
| -                                        | Ħ                                 |        | 70-2063-8  | IWN  | 776-0  | 520   |    |       | :    |       | -            |           |
| <                                        | E H                               |        | 70-2063-9  | MRH  | 815.0  | 5 1 C |    |       |      |       | • -          |           |
| , uu                                     | H                                 |        | 71-2558    | A-50 | 158.0  | 512   |    |       |      |       | - 1-         |           |
|                                          | LOCTITE CORP                      |        | 71-2558-1  | A-50 | 772.0  | 514   |    |       |      |       | -            |           |
| _                                        | LOCTITE CORP                      |        | 70-2122    | ×09  | 1500.0 |       |    | 02/02 |      |       | <b>—</b>     |           |
| -                                        | Ē                                 | + 0050 | 70-2122-1  | GOX  | 1500.0 |       | 50 | 00/04 |      |       | ◄            | 11 DSC9XX |
|                                          | 2                                 |        | 70-2122-10 | Š    | 50.0   |       |    |       | 210  | 210   | ٥            |           |
|                                          | ۳                                 |        | 70-2122-11 | 80X  | 100.0  |       |    |       | 274  | 27+   | ۵            |           |
|                                          | Ĕ                                 |        | 70-2122-12 | ŝ    | 500.0  |       |    |       | 217  | 217   | C            |           |
|                                          | -<br>۳                            |        | 70-2122-13 | 60X  | 1000-0 | 168   |    |       |      |       | 0            |           |
|                                          | <u>ب</u>                          |        | 70-2122-13 | Š    | 1000.0 |       |    |       | 168  | 168   | 0            |           |
| LT IIIC+6KAUC+C LU<br>BALTTTC COANC-C SA | LUCIIOC CURP                      |        | +1-2712-0, | x ng | 0-00-1 |       |    |       | 182  | 192   | ؛ <b>م</b>   | μ<br>μ    |
|                                          | ₩                                 |        |            | 33   | 00002  |       |    |       | すかず  | 471   | ، د          | -         |
|                                          | Ľ۳                                |        | 70-2122-17 | ŝ    | 3000°0 | 977   |    |       | 452  | 4.5.2 | <u>م</u> د   | XX8350 CT |
|                                          | Ħ                                 |        | 81-2212-02 | 20X  | 50-0   |       |    |       | 474  | 424   | ے د          |           |
|                                          | LOCTITE CORP                      |        | 70-2122-2  | ž    | 4500.0 |       | 50 | 00/04 | 2    | J I   | •            | ں (       |
|                                          | Ĕ                                 |        | 122-       | X09  | 1000.9 |       |    |       | 300  | 300   | ٥            | 4         |
|                                          | ۳                                 |        | 70-2122-4  | Š    | 3000.J |       |    |       | 241  | 241   | ٥            |           |
| -                                        | ۳                                 |        | 70-2122-5  | GOX  | 5000.0 |       | 50 | 00/04 |      |       | 4            |           |
|                                          | H                                 |        | 70-2122-6  | š    | 2500.0 |       | _  | 10/10 |      |       |              |           |
|                                          | 21                                |        | 70-2122-7  | XOU  | 1500.0 |       | -  | 10/19 |      |       | -            |           |
|                                          |                                   |        | 70-2122-8  | ŝ    | 1000.0 |       | -  | 01/01 |      |       | -            |           |
| LUCTITE • GRADE-E LO                     | LOCITIE CORP                      |        | 70-2122-9  | 60X  | 500.0  | •     | -  | 1/02  |      |       | <b>⊢</b> I   |           |
|                                          |                                   |        |            | 00-4 | 0.211  | 300   |    |       |      |       | - 1          |           |
| LULITE*6RANT~L LU<br>S_E3                | LUCITE LURP<br>Nitunis Encineenne |        | 1-142-11   | A-50 | 801.0  | -     | 0  |       |      |       | <b>⊢</b> . • | 15 0SC8XX |
|                                          |                                   |        | 70-1778    | 5 G  |        |       |    | +0/00 |      |       | 4 1          |           |

4

· . . .

·

j**\*\*** \*

ALL STATES

THE A LOW

ī

ì

「「日本」の「日本になるないないない」というできたが、「「「「」」」というできたいとなるという

No. of the Address of the Address of the

•

÷

۰ · •

P.AGE 28

í

.

-

• •• (

.

and filming a second second film

Manager C

. тен **с** 

MATERIAL TEST DATA BI HAMIN ACTURER S DESIGNATION AS DF 31 JAN 72

|                        |           |                 | THICK. |            | ENVR   | PRESS       | TEMP ENER | ENER | REACT P | POINT | PT UI | IST LOS | - s        | ,<br>*     | <b>30</b> 6 |
|------------------------|-----------|-----------------|--------|------------|--------|-------------|-----------|------|---------|-------|-------|---------|------------|------------|-------------|
|                        | NICHOLS E | ENGINEERING     |        | 70-1778-1  | ž      | 3000.0      |           |      |         | 4 2 K | 42A   |         | 0          | 13 0       | DODGCP      |
|                        | NICHOLS E | ENGINEERING     |        | 70-1778-10 | 20X    | 16.5        |           |      |         | 738   | 768   |         | 0          | 13 0       | 00060P      |
|                        | MICHOLS E | ENGINEER ING    |        | 70-1778-11 | Š      | 25.0        |           |      |         | 912   | 716   |         | c          | -          | 00060       |
|                        | NICHOLS E | ENGINEERING     |        | 70-1778-12 | ×09    | 50.0        |           |      |         | 483   | 4.63  |         | 0          | _          | 000602      |
|                        | -         | ENGINEERING     |        |            | Š      | 50.0        |           |      |         | 674   | 674   |         | c          | _          | 00000       |
|                        |           | ENGINEERING     |        |            | X05    | 100.0       |           |      |         | 122   | 100   |         | c          |            | Done co     |
|                        |           | ENGINEERING     |        | 1770-1     | ŝ      | 500.0       |           |      |         | 421   | 101   |         | 5          |            | DUDGCP      |
|                        | _         | ENGINEERING     |        | 70-1778-16 | 60X    | 1000-0      |           |      |         | 701   | 304   |         |            |            | 0.000       |
|                        |           | ENGINEERING     |        | 778-1      | Š      | 1500-0      |           |      |         | 377   | 1.1.6 |         | s C        |            |             |
|                        |           | FMGIMEERING     |        | 70-1778-18 | ŝ      | 0.000       |           |      |         | . 00  |       |         | 2          |            |             |
|                        |           | FMC INFFR ING   |        | 70-1778-10 | ŝ      |             | 274       |      |         | 227   | 27    |         | <b>.</b> . | 24         |             |
|                        |           |                 |        | 70-1778-2  | 32     |             |           |      | 202.00  |       |       |         | •          |            |             |
|                        |           |                 |        | 70-1778-3  | ŝ      |             |           |      |         |       |       |         | <b>z</b> ⊢ |            |             |
|                        | -         |                 |        |            | 3      |             |           |      |         |       |       |         |            |            |             |
|                        | -         |                 |        |            |        | 10001       |           |      | 00/04   |       |       |         | ∢          | -          | 00000       |
|                        |           |                 |        |            | 33     | 0.0001      |           |      | 40/00   |       |       |         | -          |            | 00000       |
|                        |           | ENGINEER I NO   |        | 10-1178-6  | 60X    | 1000.0      |           |      | 00/04   |       |       |         | -          | -          | 00000       |
|                        |           | ENGINEERING     |        | 70-1778-7  | r<br>C | 14.7        |           |      | 00/04   |       |       |         | 7          | _          | 000000      |
|                        | _         | ENGINEER ING    |        | 70-1778-8  | LOX    | 14.7        |           |      | 00/04   |       |       |         | <          | -          | 000000      |
|                        | AICHOLS E | ENGINEERING     |        | 70-1778-9  | Š      | <b>6.</b> 2 | 1000      |      |         | 808   | 000N  |         | <b>,</b>   |            | 00060.P     |
|                        | NICHOLS E | ENGINEERIMG     | .0756  | 10-34      | 60X    | 1000-0      | I         | Ī    | 00/00   |       |       |         | <          | _          | CHOGXX      |
|                        | NICHOLS E | ENG INEER ING   | .0750  | 10-38-1    | ŝ      | 1500.0      |           |      | 00/07   |       |       |         | 4          | 10         | HOG X X     |
|                        |           | ENGINEER ING    | .0750  | 01-38-10   | X09    | 5000.0      |           |      | 10/10   |       |       |         | 0          |            | CHEGXX      |
|                        | NICHOLS E | ENGINEERING     | •0250  | 10-38-11   | ŝ      | 1000.0      |           |      | 10/10   |       |       |         | 0          |            | C: 106 X X  |
|                        | ICHOLS    | ENGINETRING     | .0750  | 10-36-12   | X09    | 2000-0      |           | 200  | 10/10   |       |       |         | 0          | -          | CHOGXX      |
|                        |           | ENGINEER ING    | .0750  | 10-38-13   | Š      | 30000       |           |      | 10/01   |       |       |         | <          |            | C: IDG XX   |
| ,                      |           | ENGINEERING     | •0750  | 10-38-14   | 60 X   | 4000+0      | ••        |      | 10/00   |       |       |         | 4          | _          | CHOCXX      |
|                        | -         | ENGINEERING     | .0750  | 10-38-15   | ŝ      | 5000.0      |           |      | 40/00   |       |       |         | -          |            | CHOGXY      |
|                        |           | ENGINEERING     |        | 10-30-16   | 60X    | 25.0        | •         |      |         | 725   | 725   |         | Ċ          | -          | CHOGXX      |
|                        | NICHOLS E | ENG INEER ING   |        | 10-38-17   | X09    | 50.0        |           |      |         | 685   | ሪዘን   |         | 2          |            | CHOCXX      |
|                        |           | ENG I NEER I NG |        | 10-38-18   | X OS   | 100.0       |           |      |         | 452   | 452   |         | 2          |            | CHDGXX      |
|                        |           | ENGINEERING     | .0750  | 10-38-2    | ×03    | 2000.0      |           | -    | 04/04   |       |       |         | . C        |            | CHOCXX      |
|                        | _         | ENGINEERING     | .0750  | 10-38-3    | XOU    | 3000.0      |           |      | 10/10   |       |       |         | : c        |            | CHORX       |
|                        |           | ENGINEERING     | .0750  | 10-38-4    | Ň      | 2500.0      |           |      | 90/00   |       |       |         | •          |            | XXOUHU      |
|                        | 5         | ENGINEERING     | 0750   | 10-36-5    | XOS    | 3000-0      |           |      | 40/10   |       |       |         | : C        |            | CHDRXX      |
|                        | NICHOLS & | ENGINEERING     | .0750  | 10-38-6    | 60X    | 3500.0      |           |      | 20/10   |       |       |         |            |            |             |
|                        |           | ENGINEER INC    | .0750  | 10-30-7    | CON    | 4000.0      |           |      | 20/10   |       |       |         | -          |            |             |
|                        | _         | ENGINEERING     | •0750  | 10-30-8    | Š      | 4500.0      |           | -    | 04/04   |       |       |         |            |            | CHOCKY      |
|                        |           | ENGINEERING     | .0750  | 0-36-0     | 20X    | 200.0       | •••       |      | 04/04   |       |       |         | ) c        |            |             |
| LUBECO N350 A/ALUMINUM |           | INC.            | .0050  | 70-1765    | Ň      | 500.0       |           |      | 10/00   |       |       |         | •          |            |             |
| UBECO N35C A/ALUMINUN  |           | INC.            |        | 70-1765-3  | COX OS | 500-0       | -         | 32   | 00/06   |       |       |         | [ 4        |            |             |
| N35C                   | S LURFCO  |                 | 0000   |            | 202    |             |           |      |         |       |       |         | • •        | -          |             |
| 155                    |           |                 |        | 70-1746-2  |        |             | -         |      |         |       |       |         | ۹.         | 2 :<br>2 : |             |
| A 350A                 | I LIBECO  |                 |        | 71-2373    |        |             |           |      |         |       |       |         | •          |            |             |
|                        |           |                 |        |            |        |             |           |      |         |       |       |         | •          |            |             |

-

PAGE 29

•

÷

4

з.

Ļ

Ŋį,

•

「「「「「「「「」」」」

· - · -

È.

2

;

1 .

;

: . .

1 · · · · ·

:

-----

| MFGR S DESIGNATION | HANUFAC TURER           | SPEC.<br>THICK. | TEST RPT ND. | TEST<br>Envr | TEST<br>PRESS | TEAP | 1 MP T<br>ENER | NO OF<br>React | FL A SH<br>PO INT | FIRE F<br>PT C | PROP W | T R<br>SS I | ⊢⊢      | MATL<br>CCCE                            |      |
|--------------------|-------------------------|-----------------|--------------|--------------|---------------|------|----------------|----------------|-------------------|----------------|--------|-------------|---------|-----------------------------------------|------|
| - 0                | LUBECO INC.             |                 | 71-2272-2    | KO3          | 1000.0        | 1000 |                |                | 66M               | , 666N         |        | ~           | 51      | DAEJE                                   | I    |
| _                  | -                       | • • • •         |              | COX          |               | 1000 |                |                | 704               | 666N           |        | <b>&gt;</b> |         | DEXXXX                                  | ×    |
| -                  | INDS T                  | · ^!            |              | Š            | 25.0          |      |                |                | 738               | 738            |        | G           | 2       | XXX00                                   | X    |
|                    | T SIGH I                | • •             |              | C0X          | 2000.0        |      |                |                | 466               | 466            |        | 6           | 5       | DRXXXX                                  | ×    |
|                    | INDST                   | ۰.<br>۱۷        |              | š            | 3000.0        |      |                | 10/00          |                   |                |        | •           | 2       | DBXXX                                   | Š    |
| L9/3T GREASE       |                         | • >!            |              | XOS          | 4000.0        |      |                | 10/00          |                   |                |        | 4           | 10      | DBXXXX                                  | ×    |
| L9/3T GREASE       | AIRESEARCH INDST D      | -               |              | Š            | 5000.0        |      |                | 00/04          |                   |                |        | -           | 2       | DBXXXX                                  | ×    |
| -                  |                         | • • • •         |              | X09          | 3500.0        |      | 200            | 10/00          |                   |                |        | •           |         | DIJXXXX                                 | ×    |
| L9/3T GREASE       | INDST                   | •               |              | ŝ            | 4000.0        |      | 200            | 10/00          |                   |                |        |             | 1       | DIBXXX                                  | č    |
|                    |                         | • • • •         |              | <b>X0</b> 9  | 5000.0        |      | 200            | 40/00          |                   |                |        | <           | 77      | XXXXHO                                  | ×    |
|                    | I NDS T                 | 17              | SP-6928-17   | š            | 500.0         |      | 50             | 40/00          |                   |                |        | -           | 7       | DBXXX                                   | Š    |
| L9/3T GREASE       |                         | -               | SP-6928-18   | 60X          | 500.0         |      |                | 40/00          |                   |                |        | •           | 9       | DBXXX                                   | ×    |
|                    | INDST                   | 1<              | SP-6928-19   | š            | 1500.0        |      | 50             | 00/04          |                   |                |        | 4           | 1       | DBXXXX                                  | ×    |
|                    | I NDST                  | -               | SP-6928-2    | 60X          | 50.0          |      |                |                | 760               | 760            |        | 5           | 13      | DBXXX                                   | ×    |
|                    | _                       | 1               | SP-6928-20   | Š            | 1500.0        |      |                | 01/01          |                   |                |        | -           | 2       | OBXXXX                                  | S    |
| L9/3T GREASE       |                         | • •             |              | 50X          | 50.0          |      |                |                | 600               | 600            |        | 0           | 3       | DEXXX                                   | ×    |
|                    | T SCN1                  | ,<br>V          |              | 60X          | 100-0         |      |                |                | 530               | 5 30           |        |             | 1       | DAXX                                    | ×    |
| -                  | I NDS T                 | • •             |              | COX          | 500.0         |      |                |                | 467               | 467            |        |             | 12      | DAXXX                                   | ( )× |
|                    | T SONE                  | 1               |              | C.X          | 1000-0        |      |                |                | 460               | 440            |        | , <b>-</b>  |         |                                         | 2    |
|                    | TSONT                   |                 |              | SOX<br>SOX   | 1.747.0       |      |                |                | 444               | 444            |        |             | 1       | ~~~~                                    | \$   |
|                    | TADAT                   |                 |              |              |               |      |                |                | 101               | 101            |        | 5           | 15      | < > > < > < > < > < > < > < > < > < > < | </th |
|                    | TSOM                    |                 |              |              | 1545          |      |                |                |                   |                |        |             | 2:      | ~~~                                     | < >  |
| - 64               |                         | •               |              |              | 1202.0        |      |                |                | - + 0             |                |        | 2.          | 1       |                                         |      |
|                    |                         |                 | 242270       | ŝ            | 12000         |      |                |                |                   |                |        |             | 29      |                                         | 59   |
| MACNET LIGE TYOR N |                         |                 |              |              |               |      | \$             |                |                   |                |        | a ·         | 2       | E PCOH                                  | 2    |
|                    |                         |                 |              | ŝ            | 0.0062        |      | 0              | 10/04          |                   |                |        | •           |         | E-PCDHS                                 | ş    |
|                    |                         |                 | 2-8612-01    | KOS          | 1400.0        |      |                |                | 518               | 518            |        |             | EI<br>1 | E PCOHS                                 | Š    |
| MELANINE           | RUTARY PLASTICS         |                 | 71-2486      | A-50         | 763.0         | 667  |                |                |                   |                |        | -           | 5       | CLASX                                   | ×    |
| MELAMINE           | Y PLASTICS              |                 | 71-2468-1    | A-50         | 727.0         | 486  |                |                |                   |                |        |             | 15      | CIL A SXX                               | ×    |
| MICANATTE          |                         |                 | 71-2597      | A-50         | 784.0         | 501  |                |                |                   |                |        | ٣           | 15      | FUHFXX                                  | ×    |
|                    | INSULATING              | Ľ               | 71-2597-1    | A-50         | 616.0         | 524  |                |                |                   |                |        | -           | 5       | X HEN J                                 | ×    |
|                    | MICA CORP               |                 | 71-2630      | A-50         | 774.0         | 515  |                |                |                   |                |        |             | 57      | CR863                                   | 3    |
| MICAPLY TYPE GF    |                         |                 | 71-2680-1    | A-50         | 746.0         | 513  |                |                |                   |                |        | -           | 51      | CRBGXX                                  | ×    |
| GLASS              | AJICA                   |                 | 70-2236      | š            | 1000.0        |      |                |                | 493               | 693            |        | -           | ET      | CRBGXX                                  | ×    |
| <b>GLASS</b>       | MICA                    |                 | 10-2236-1    | COX          | 1500.0        |      | 50             | 40/00          |                   |                |        | •           | 11      | CRBGXX                                  | ×    |
| 0                  | MICA CORP               |                 | 70-2236-2    | Š            | 1500.0        |      |                | 60/10          |                   |                |        | -           | 2       | CRBGXX                                  | ž    |
| QUARTZ THERM       | ENG.                    |                 | 20-1990      | ×09          | 1500.0        |      | 50             | 00/04          |                   |                |        | •           | Ξ       | CKHKXX                                  | ×    |
|                    | ENG.                    |                 | 70-1990      | Š            | 1500.0        |      |                |                |                   |                |        | •           | 2       | CKHKXX                                  | ×    |
| CRO CUARTZ THERM   | INSULROS-MONT ENG. CORP | •               | 1-0661-02    | 60X          | 1500.0        | 1000 |                |                | 666N              | 666N           |        | •           | 13      | C KHKX                                  | ×    |
| CLD TEFLON         |                         |                 | 70-1751      | Š            | 5.0           | 1000 |                |                | 938               | 666N           |        | ſ           | ET      | EPCNO                                   |      |
| POLY CLD TEFLON    |                         |                 | 751          | XOS          | 25.0          | 1000 |                |                | 516               | 666N           |        | 7           | 12      | EPCNGI                                  |      |
| CLD TE-LON         |                         |                 | 751          | COX          | 50.0          |      |                |                | 835               | 835            |        |             | 1       | E PCNCT                                 | -    |
| POLY CLD TEFLON    |                         |                 | 751          | COX          | 50.0          |      |                |                | 79.8              | 010            |        |             |         | 5 DCNC                                  |      |
| POLY CLD           |                         |                 | 70-1751-4    | ŝ            | 100.0         |      |                |                | 619               | 619            |        | 20          | 12      |                                         |      |
| PREV CID TEELON    |                         |                 |              | 103          | 0.003         |      |                |                | - 10              |                |        |             | 1 1     |                                         |      |
|                    |                         |                 |              | <            |               |      |                |                |                   | . 10           |        | 2           |         | ۲<br>۲                                  | -    |
|                    |                         |                 |              |              |               |      |                |                |                   |                |        |             |         |                                         |      |

PAGE 30

· · ·

11

i

\*\*\*\* \*

i

÷ · · ·

;

;

. .

1

•

; <sup>38</sup>

A 2005 BEACHING

1.2.4.4.1

A

• - •

÷---

| RFGR S DESIGNATION | MANUF AC TURER       | SPEC.<br>THICK. | TEST RPT NO. | TEST<br>ENVR | TEST<br>PRESS | TEMP  | I WP I | NO OF<br>REACT | FLASH<br>POINT | FIRE P<br>PT 0 | PR0P<br>D1ST נ | DSS          | ~ <b>-</b> | MATL<br>CODE   |          |
|--------------------|----------------------|-----------------|--------------|--------------|---------------|-------|--------|----------------|----------------|----------------|----------------|--------------|------------|----------------|----------|
| CLD TEFLON         |                      |                 | 70-1751-6    |              | 1000.0        |       |        |                | 789            | 789            |                | -            | 0 13       | SPCNG          | -        |
| Par CLO            |                      |                 | 70-1751-7    |              | 1500.0        |       |        |                | 714            | 714            |                | -            |            | E PCNG         |          |
| CLD TEFLON         |                      |                 | 70-1751-8    |              | 2000.0        |       |        |                | 720            | 720            |                | Ŭ            |            | EPCNG          | _        |
| PRN RETAL          | ALLEGHENY LUDLUM     | •               | 71-2483      | A-50         | 746.0         | 511   |        |                |                |                |                | -            |            | DMMGXX         | ×        |
|                    |                      |                 | 71-2483-1    | A-50         | 732.0         | 510   |        |                |                |                |                | •            |            | XXOLLO         | ×        |
|                    | MDLYCOTE             |                 | 70-1877      | GOX          | 1500.0        |       |        | 00/04          |                |                |                | -            |            | UAEJGP         | ۵.       |
|                    |                      |                 | 70-1677      | ×8           | 16.5          | 1000  |        |                | 666N           | 666N           |                |              | 1 13       | UAEJGP         | ٩        |
|                    | MOLYCOTE             |                 | 70-1877-1    | 60 X         | 25.0          | 10003 |        | -              | 666N           | 0690           |                | •            |            | UAE JGP        | ۵.       |
| MOLYKOTE X-15      |                      |                 | 70-1877-10   | ×09          | 1500.0        | 1000  |        |                |                | 666N           |                |              |            | SAEJGP         | <u> </u> |
| MOLYKOTE X-15      | MOLYCOTE             |                 | 70-1877-11   | COX          | 2000.0        | 1000  |        |                |                | 066N           |                |              |            | DEJGP          |          |
|                    | MOLYCOTE             |                 | 70-1677-12   | X09          | 950-0         | 1000  |        |                |                | 666N           |                |              |            | DAFJCP         | 4        |
| NGLIKOTE X-15      | MOLYCOTE             |                 | 70-1077-2    | XOS          | 50.0          | 0000  |        |                |                | 666N           |                |              |            | DAE JGP        |          |
|                    | NOL YCOTE            |                 | 70-1877-3    | XUS          | 62.0          | 1000  |        |                |                | 066N           |                |              |            | UAEJGP         | 4        |
|                    | MOLYCOTE             |                 | 70-1877-4    | 60 X         | 0.006         | 1000  |        |                |                | 666N           |                | -            |            | DAEJGP         | ۵.       |
| XIX                | MULYCOTE COR         |                 | 70-1877-6    | Š            | 50.0          | 1000  |        |                | 666N           | 666N           |                |              |            | DAEJGP         | م        |
|                    | MULYCOTE COR         |                 | 70-1877-7    | ×00          | 100.0         | 1000  |        |                | - 666N         | 666N           |                | ,            |            | DAEJGP         | ۵.       |
| Ĭ                  | MOLYCOTE COV         |                 | 70-10/7-8    | Š            | 500.0         | 1000  |        |                | 666N           | 666N           |                |              |            | <b>IJAEJGP</b> | ۵.       |
| I                  | MOLYCOTE COR         |                 | 70-1877-9    | ×09          | 1000.0        | 1000  |        | -              | - 666N         | 6667           |                | ,            |            | DAE JGP        | ٩        |
| X-15               | HA MOLYKOTE          | •0020           | 70-1877-5    | Š            | 1500.0        |       | 50     | <b>70/00</b>   |                |                |                |              |            | DAEJGP         | ۵.       |
| X-15               | GAC                  |                 | 70-2147      | X 09         | 2000.0        |       |        | 00/04          |                |                |                | •            |            | DTHON SHOW     | s        |
| 01E X-1            |                      |                 | 70-2147-1    | ŝ            | 2000.0        |       | 50     | <b>*0/00</b>   |                |                |                | -            |            | <b>CHOMIC</b>  | s        |
| Provide L          | TOWNSEND CO.         |                 | 1-+602-01    | X09          | 1500.0        | •     |        | 00/04          |                |                |                |              | -          | LL NNINC       | LU<br>LU |
|                    | TOWNSEND CO.         |                 | 2-+602-02    | Š            | 1000.0        |       |        | 40/00          |                |                |                | -            | 2          | B, MNMC        | ں        |
|                    |                      |                 | 10-201-01    | 60 X         | 1500.0        |       |        | 40/00          |                |                |                | -            | 01         |                | د        |
| 2                  | NLA O                |                 | 71-2712      | Ř            | 250.0         |       |        | 00/04          |                |                |                | -            | 2          | XOHUL          | ×        |
|                    |                      |                 | 70-2028      | SOX          | 50.0          |       |        |                | 695            | 695            |                | -            | 61         | OUCBXX         | ×        |
|                    | · DUPONT             |                 | 70-2028-1    | žõ           | 1500.0        |       |        | 40/00          |                |                |                |              | 10         | DUCCX          | ×        |
|                    | INCODO               |                 | 70-2028-2    | 60X          | 100.0         |       |        |                | 649            | 649            |                | U            | 5          | oucex          | ×        |
|                    | DUPONT               |                 | 70-2028-3    | ğ            | 1000.0        |       |        |                | 440            | 440            |                |              | 13         | DUCBX          | ×        |
|                    | C.I. DUPONT CO. INC. |                 | 70-2028-4    | 20X          | 1500.0        |       | 50     | 00/04          |                |                |                | •            | 11         | DUCBX          | ×        |
|                    |                      |                 | 70-2028-5    | Š            | 500.0         |       |        |                | 466            | 466            |                | -            | Ē          | DUCBX          | ×        |
|                    | LNOING               |                 | 70-2028-6    | XOS          | 1500.0        |       |        |                | 386            | 386            |                | 0            | 61         | DUCBX          | ×        |
|                    | IND AND              |                 | -9202        | ŝ            | 25.0          |       |        |                | 733            | 750            |                | -            | 5          | DUCBX          | ×        |
|                    | THOMUS - [*          |                 | 70-2028-8    | X 200        | 1000.0        | 419   |        |                |                |                |                | 0            | 2          | DUCBX          | ×        |
| HTLAR SPEET        |                      |                 | 202-02-02    | ŝ            | 20.0          |       |        |                | 743            | 743            |                | -            | 61         | oucex          | ×        |
|                    | E.I. DUVONT CO. THC. | • 0750          | 70-2120      | X 200        | 1500.0        |       |        | 01/02          |                |                |                | <b>۱</b> ـــ | 2          | DUCBXX         | ×        |
|                    |                      | 06/04           | 1-5713       | ŝ            | 0.00          |       |        | 01/08          |                |                |                |              | 10         | DUCBX          | ×        |
|                    | TNOLOO               |                 |              | X OS         | 1500.0        |       |        |                | 419            | 6 <b>I</b> 4   |                | Ļ            |            | DUCBXX         | ×        |
| TYLAR-A            |                      |                 | 2120-1       | 8            | 2000.0        |       |        |                | *<br>2         | 294            |                |              |            | DUCBXX         | ×        |
| AVLAR-A            | INDADO               |                 | 2120-1       | COX          | 25.0          |       |        |                | 763            | 763            |                |              |            | OUCBXX         | ×        |
| MYLAR-A            | - DUPONT             |                 | ະ            | Š            | 50.0          |       |        |                | 732            | 732            |                | -            |            | NUCBXX         | ×        |
| HVLAR-A            | NUGDO .I.            |                 | 2120-        | COX<br>COX   | 1000.0        |       |        |                | 450            | 450            |                | <u> </u>     |            | DUCBXX         | ×        |
| AVLAR-A            | - OUPCHT             |                 | 2            | Š            | 3000.0        |       |        |                | 335            | 335            |                | -            |            | DUCBXX         | ×        |
| AT AR-A            | E.I. DUPCHT COINC.   |                 | 70-2120-4    | A-50         | 779.0         | 505   |        |                | -              |                |                | -            |            | pucaxx         | ×        |
|                    |                      |                 |              |              |               |       |        |                |                |                |                |              |            |                |          |

, :

**:** .

-

. . . . . .

۹. ۲

----, ,

PAGE 31

. •

李

+ =

DUCBXX DUCBXX CHDJXX CHDJXX CHDJXX CHDJXX CHDJXX α ... FIRE PROP WT PT DIST LOSS 6 4 5 6 5 4 4 8 4 4 8 4 FLASH 6 75 6 5 4 4 4 5 4 4 5 72 MATERIAL TEST DATA BY MAMUFACTURER S DESIGNATION AS DF 31 JAN TEST INPT NO OF Temp Ener React 00/04 00/04 00/04 00/04 00/04 01/01 01/01 3 ŝ 445 125 88 TEST TEST ENVR PRESS No. TEST RPT .0750 .0750 .0750 .0750 .0750 .0750 .0750 SPEC. THICK. E-I DUPDMT CO. INC. EAL/LOS EAL/LOS AL/LOS AL/LOS EAL/LOS SEAL/LOS SEAL/LOS EAL/LOS MANUFACTURER ARKEI ARKE ARKE MFGA S DESIGNATION

50 50 50 5 2 2 423 497 504 498 600 513 1000-0 2000-0 2000-0 32500-0 45500-0 45500-0 15500-0 15500-0 1753-0 1753-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 2500-0 25000-0 25000-0 20 550.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 50 5000.0 71-2775-1 71-2775-2 71-2775-3 1-2774-10-52-9 1--2693 0750 0750 0750 0750 SEAL/LOS ANGLS R SEAL/LOS ANGLS NGL <u>33</u>3 . . . VICTOR EQUIPMENT VICTOR EQUIPMENT Rubbercraft Corp EQUIPMENT EQUI PMENT CORP AL/LOS 1/105 L/LOS RUBBERCRAFT AVCHEN ARKER ARKEN AXKER ARKER ARKER ARKEP AR KER **TUB ING** RANS RANS RANS COC-1 BUNA-N BUNA-N BUNA-N BUNA-N BUNA-N BUNA-N 2-5 BUNA-N BUNA-N BUNA-N BUNA-N BUNA-N としていい N-WNN NYLAR-A NYLAR-A HYLAR-A

XXFGAD XX

XXTOF EGFGR +08V×

331 N600

331 N600

02/02 01/01 00/04

02/02

00/04 00/03 01/03 01/02 04/04 01/01 01/01

HDBXX

XXFOH

485 496

495

XXTOT

XXTOH

32 PAGE MATL CODE

Ę

£

|                                            | MANUFACTURER                                   | SPEC.<br>THICK. | TEST RPT NO. | . TEST<br>ENVR | TEST<br>PRESS | TEMP       | . MP T<br>ENER | NC DF<br>REACT | FLASH FI  | FIRE PROP<br>PT DIST | HT LOSS | а<br>    | MATL<br>CODE |
|--------------------------------------------|------------------------------------------------|-----------------|--------------|----------------|---------------|------------|----------------|----------------|-----------|----------------------|---------|----------|--------------|
|                                            | VICTOR EQUIPMENT CO.                           |                 | 71-2774-3    | Š              | 1500.0        |            |                | 10/10          |           |                      |         | 010      | CHDAXX       |
|                                            | VICTOR EQUIPMENT CO.                           |                 | 71-2774-4    | COX<br>COX     | 1000-0        |            |                | 01/03          |           |                      |         |          |              |
| NEOPRENE SEATS                             | EQUIPMENT C                                    |                 | 71-2774-5    | Š              | 500-0         |            |                | 70/00          |           |                      |         |          | -            |
|                                            |                                                |                 | 71-2783-1    | COX            | 2500.0        |            |                | 02/02          |           |                      |         |          | _            |
|                                            | VICTOR EQUIPMENT CO.                           |                 | 71-2783-2    | ğ              | 1500.0        |            |                | 10/10          |           |                      |         |          |              |
|                                            | CIOR EQUIPMENT C                               |                 | 71-2783-3    | COX<br>COX     | 1000.0        |            |                | 00/04          |           |                      |         |          | _            |
|                                            | R.R.                                           |                 | 70-1966      | A-50           |               | 667        |                |                |           |                      |         |          |              |
|                                            | L.                                             |                 | 70-1966-1    | A-50           |               |            |                |                |           |                      |         |          | _            |
|                                            | × Z                                            |                 | 70-1966-2    | A-50           |               | 491        |                |                |           |                      |         |          |              |
|                                            | ¥.                                             |                 | 70-1466-3    | A-50           |               |            |                |                |           |                      |         |          | _            |
| SPAN                                       |                                                |                 | 701966-4     | INI            | 812.0         |            |                |                |           |                      |         |          |              |
| ני<br>ני<br>ני                             |                                                |                 | 70-1966-5    | T.WW.          | 765.0         |            |                |                |           |                      |         |          | _            |
| SPAN C ALLOY                               | EAC                                            | •0750           | 70-2145      | Š              | 2000-0        |            |                | 00/07          |           |                      |         |          |              |
| SPAN C ALLOY                               |                                                | •0750           | 70-2145-1    | X09            | 2000.0        |            | 50             | 00/04          |           |                      |         |          |              |
| MI SPAN C ALLUY 902<br>Mi soah c allov 903 |                                                |                 | 71-2336      | A-50           | 781.0         |            |                |                |           |                      |         |          |              |
| STAR C ALLUT                               |                                                |                 | 71-2338-1    | A-50           | 746.0         |            |                |                |           |                      |         |          | _            |
|                                            |                                                |                 | 71-2706      | A-50           | <b>813.0</b>  |            |                |                |           |                      |         |          |              |
|                                            |                                                |                 | 71-2706-1    | A-50           |               | 615        |                |                |           |                      |         |          |              |
| MITT NU 32                                 | CARPENIER SIEEL CURP                           |                 | 71-2650      | A-50           |               |            |                |                |           |                      |         |          |              |
|                                            | b)                                             |                 | 71-2650-1    | A-50           | 746.0         | 514        |                |                |           |                      |         |          | _            |
| METLER SETER-LOUGH                         | THICHT WINSS INC                               |                 | 71-2656      | A-50           | 784.0         |            |                |                |           |                      |         |          |              |
|                                            | MARIE IUN STANDARU                             |                 | 70-2195      | X DS           | 2000.0        |            | -              | 00/04          |           |                      |         |          | _            |
| MICHEL ALLUT 200                           |                                                | 0610*           | 1212-01      |                | 2000.0        |            |                | 00/04          |           |                      |         |          |              |
|                                            |                                                |                 | 71-2395      |                | 0.997         | 064        |                |                |           |                      |         |          | -            |
| AUTO                                       |                                                |                 | 1-63-31      |                | 0.10/         | 4          |                |                |           |                      |         |          |              |
| ALLOY                                      | 640                                            | -0750           | 70-2123      |                | 0°162         | 0          | -              |                |           |                      |         |          | XXNULO       |
| ALLOY                                      | GAC                                            |                 | 70-2123-1    | A-50           | 578.0         | 455        |                | 10,000         |           |                      |         |          |              |
| ALLCY                                      | GAC                                            |                 | 70-2123-2    | A-50           | 451.0         | 431        |                |                |           |                      |         |          | -            |
|                                            | CAC                                            |                 | 70-2123-3    | A-50           | 841.0         | 541        |                |                |           |                      |         |          | -            |
| ALLOY                                      |                                                |                 | 70-2123-4    | N204           | 252.1         | 72         |                |                |           |                      |         |          | -            |
|                                            |                                                |                 | 71-2674-2    | THE            | 768.0         | 540        |                |                |           |                      |         |          | _            |
|                                            |                                                |                 | 71-2674-3    | I              | 811.0         | 515        |                |                |           |                      |         |          |              |
| ALLONG BO                                  |                                                |                 | 71-2674      | A-50           | 773.0         | 518        |                |                |           |                      |         |          | -            |
|                                            | MANDY AND HARMON                               |                 | 71-2674-1    | A-50           | 772.0         | 516        |                |                |           |                      |         |          |              |
| NFCORD BO WIRE                             | MESTERN GULU T ALLUIS<br>MESTERN GOLD + ALLUYS |                 | 71-2522-1    |                | 10.015        | 914<br>613 |                |                |           |                      |         | ۲<br>:15 | AHMUMC       |
| NICEDBRAT FLUX-REATING                     |                                                |                 | 70-1043      |                |               | -          |                | .0.00          |           |                      |         |          |              |
| WICROBRAZ FLUX-BRAZING                     | MALL CULTONOT                                  |                 | 70-1043      |                |               |            |                | 40/00          |           |                      |         |          | _            |
| KICKOBRAZ FLUX-BRAZING                     |                                                |                 | 70-1042-1    |                |               | 0001       |                |                |           | 4                    |         |          |              |
| MICROBRAZ-50 PELLETS                       |                                                |                 | 70-2104      |                |               | 0001       |                |                | 5552 555E | *                    |         | 61 ×     | _            |
| Macharaka                                  |                                                |                 | 70-2104-1    |                | 0.00c1        |            |                | 40/04          |           |                      |         |          |              |
| MICENSEATE IN 221 SC                       |                                                |                 | 71-2430      |                | 0.0001        |            | 2              | 40/00          |           |                      |         | -        | FL XXXX      |
| MICENERATE DM 231 CC                       |                                                |                 |              | Y OS           | 0.0002        |            |                | 40/00          |           |                      |         |          |              |
|                                            |                                                |                 |              |                |               |            |                |                |           |                      |         |          |              |

PAGE 33

-

1

٩j

THE REAL PROPERTY IN

THE PARTY

Ś

;

Ĩ

, : ÷

, : :

į ł i

i

ļ

ł

و معرود ورد

3 1 1

1

| NECR S DESIGNATION    | MANUFACTURER       | SPEC.<br>Thick. | TEST RPT NO.           | TES T<br>ENVR | TEST<br>PRESS | TEST<br>TEMP                    | I MP T<br>ENER | ND DF<br>REACT | FLASH | FIRE<br>PT | PR0P<br>0157 1 | HT<br>LOSS | я I<br>Т Т  | MATL<br>CODE |            |
|-----------------------|--------------------|-----------------|------------------------|---------------|---------------|---------------------------------|----------------|----------------|-------|------------|----------------|------------|-------------|--------------|------------|
|                       | WALL COLMONOY CORP |                 | 71-2430-2              | A-50          | 791.0         | 487                             |                |                |       |            |                |            | 7 15        | FLXXXX       | XX         |
| HICROBRAZE P. 321 SS  |                    |                 | 71-2430-3              | A-50          | 795.0         | 495                             |                |                |       |            |                |            | -           |              | XX         |
|                       | 5                  |                 |                        | 3             | 0-0001        | 0001                            |                |                | 566N  | 666N       |                |            |             |              | X          |
|                       |                    |                 | 71-2743-1              | A-50          | 0.475         | 220                             |                |                |       |            |                |            |             | -            |            |
|                       | COLD & PL          |                 | 71-2749-2              |               |               |                                 |                |                |       |            |                |            |             |              | Ļ          |
|                       | 14 3 0109          |                 | 71-2743-3              | I             | 0.958         | 547                             |                |                |       |            |                |            |             |              |            |
| F.                    |                    |                 | 71-2575                | 60 X          | 6.2           | 600                             |                |                | 499   | N60C       |                |            | . A<br>51 A | _            | 3          |
|                       | EQUIPMENT C        | •               | 71-2778-1              | Š             | 2500.0        |                                 |                | 02/02          |       |            |                |            |             | CHBSXX       | XXS        |
| Ē                     | EQUIPMENT          |                 | 71-2778-2              | X 00          | 1000.7        |                                 |                | 10/10          |       |            |                |            |             | -            | XXS        |
| K I                   | COULPMENT          | •               | 71-2778-3              | Š             | 500.0         |                                 |                | 00/04          |       |            |                |            |             |              | XXS        |
|                       | VICTOR EQUIPRENT C |                 | 71-2780-1<br>71-2780-2 | ×09           | 2500.0        |                                 |                | 02/02          |       |            |                |            | 010         |              | X          |
|                       | FOUTPMENT          |                 | 71-278A-3              |               |               |                                 |                |                |       |            |                |            |             |              | < ><br>< > |
| 8                     | EQUIPMENT          |                 | 71-2780-4              | ŝ             | 500.0         |                                 |                | 10/10          |       |            |                |            |             | XX2010 1     | ~ ~        |
| _                     | EQUIPMENT          | •••             | 71-2781-1              | XDS           | 2500.0        |                                 |                | 02/02          |       |            |                |            |             |              |            |
| INLON GASKET-NOZZLE   | EQUIPMENT          | •               | 71-2761-2              | Š             | 1000.0        |                                 |                | 10/10          |       |            |                |            |             |              | XX         |
|                       | VICTOR EQUIPRENT C | •               | 71-2781-3              | XOS           | 500.0         |                                 |                | 04/05          |       |            |                |            |             | -            | XX         |
|                       |                    |                 | 71-2685                | A-50          | 773.0         | 501                             |                |                |       |            |                |            |             |              | XX         |
| E i                   |                    |                 | 71-2685-1              | A-50          | 748.0         | ŝ                               | 1              | :              |       |            |                |            |             | _            | XX         |
| _                     |                    |                 | 10-4                   | ž če          | 200.0         |                                 | 20             | 40/00          |       |            |                |            |             |              | XXS        |
|                       |                    |                 | [-++-0]                | 20%           | 500.0         |                                 |                | 00/04          |       |            |                |            |             | _            | XXX        |
|                       |                    |                 | 2-4-01                 | ž             | 4500.0        |                                 | 50             | 40/00          |       |            |                |            |             |              | XX         |
|                       | ·                  |                 | 10-44-3                | XDS           | 4000.0        |                                 |                | [0/I]          |       |            |                |            |             | -            | XX         |
|                       |                    |                 | 10-44-01               | Š             | 1500.0        |                                 |                | C1/01          |       |            |                |            |             |              | XX         |
|                       |                    |                 | 10-44-5                | × 20          | 1 100°O       |                                 |                |                | 376   | 376        |                |            |             | _            | XX         |
|                       | LOUIPRENI          |                 | 1-278:-1               | Š             | 2,00.0        |                                 |                | 02/02          |       |            |                |            |             |              | ××         |
|                       | E-OULPRENT         |                 | 71-2782-2              | X QQ          | 2000-0        |                                 |                | 10/10          |       |            |                |            |             |              | XX         |
|                       | VILLANG CONTRACT O |                 | 11-2/82-3              | 33            | 0.0041        |                                 |                | 20/10          |       |            |                |            | 010         |              | ×××        |
|                       | LUSUS MENT         | ••••            | 71-2782-4              |               |               |                                 |                | 10/10          |       |            |                |            |             | -            | X          |
|                       |                    |                 | 71-2438                |               |               |                                 |                |                |       |            |                |            |             |              | K )<br>K ) |
| 1.16 CO               |                    |                 | 71-2438-1              | ŝ             | 1000.0        |                                 |                | 10/10          | 231   | 231        |                |            | - C         | FUBSER       | < >        |
| WIN .                 |                    | CO              | 71-2678                | A-50          | 777.0         | 511                             |                |                |       |            |                |            |             | _            | X          |
| -                     | NN FILAMENT        |                 | 71-2678-1              | A50           | 760.0         | 517                             |                |                |       |            |                |            |             |              | XX         |
| WALON TYING STRING    | C0- 1              | SC.             | 71-2436                | X<br>C<br>C   | 500.0         |                                 | 50             | 00/04          |       |            |                |            |             | -            | XX         |
| WALDER TY ING STRING  | DUPONT CO1         |                 | 71-2436-1              | Š             | 50.0          |                                 |                | 10/10          |       |            |                |            |             |              | XX         |
| - KTLUM/STAINLESS     |                    |                 | 71-2595                | A-50          | 90 <b>9</b> 0 | 5<br>2<br>2<br>2<br>2<br>2<br>2 |                |                |       |            |                |            |             |              | BS         |
| . ns-124/4L202        | MONSANTO CORP      |                 | 71-2505                |               | 777.0         | 515                             |                |                |       |            |                |            |             | BUMDBS       | 282        |
| DS-124/AL202          |                    |                 | /1-2604-1              | A-50          | 723.0         | 504                             |                |                |       |            |                |            |             | -            | ŝ          |
|                       | SEAL/LOS           |                 | 10-84                  |               | 2000.0        |                                 |                | 00/04          |       |            |                |            | A 10        |              | XX         |
|                       | SEAL/LUS           | ANGLS •0750     | 10-84-1                |               | 2500.0        |                                 |                | 01/02          |       |            |                |            |             |              | XX         |
| P-003-1 FUL TURE HANE | PARKER SEAL/LUS AN |                 | 10-84-2                | COX<br>COX    | 3000.0        |                                 |                | 01/03          |       |            |                |            |             | CHCOXX       | XX         |

PAGE 34

Ч

ĥ

....

Allow States Allow States

--- -

مد معمد مراقعه فحروم مده

いいたい

ş

¢.

• :•

|                              |                |              | L K        |        | SPEC.<br>THICK. | TEST RPT NO.             | ENVR        | PRESS . | TEMP EN | IMPT NO OF<br>Ener React | 50   | F181<br>P1 |   | α | CUDE      |
|------------------------------|----------------|--------------|------------|--------|-----------------|--------------------------|-------------|---------|---------|--------------------------|------|------------|---|---|-----------|
|                              | POL YURETHANE  | PARKER SEA   | SEAL/LOS A | ANGLS  | •0750           | 10-34-3                  | X OS        | 3500.0  |         | 01/0                     | 53   |            |   |   | O CHICOXX |
| P-565-7 PGL NU               | POL VURETHANE  | PARKER SEA   | SEAL/LOS A | ANGI S | • 0750          | 10-84-4                  | COX         | 4000-0  |         | 210                      | 2    |            |   |   | _         |
|                              | THANE          |              |            | ANGLS  | •0750           | 10-34-5                  | XQS         | 4500-0  |         | 04/04                    | 14   |            |   |   |           |
|                              | POL TURETHANE  | PARKER SEA   | SEAL/LOS A | ANGLS  | • 0750          | 10-84-6                  | 60%         | 5000-0  | 20      | 40/00 00                 | 4    |            |   |   |           |
| PALINEY NO 7                 |                | THE J.N. NEY | IEY CO     |        |                 | 71-2742                  | ž           | 250.0   | 1       |                          | 1    |            |   |   |           |
| PALENEY NO 7                 |                |              | NEV CO     |        |                 | 71 742                   | XU2         | 250.0   | Ľ       | EO 00/00                 | 2    |            |   |   |           |
|                              |                |              |            |        | •               |                          |             | 271.0   | 404     |                          | ţ    |            |   |   |           |
|                              |                | CAL          |            |        |                 |                          |             |         |         |                          |      |            |   |   |           |
|                              | -              |              |            |        |                 |                          |             | η.      | 3       |                          | č    |            |   |   | _         |
|                              |                |              |            |        |                 |                          | ŝ           |         |         |                          | 684  | 9 503      |   |   | IS ANGNGI |
|                              |                |              |            |        |                 | 1-5036-1                 | Y D9        | 10.7    |         |                          | 49   |            |   |   | -         |
| PHILAFFIN-SIL SCONE          |                | CARBIONSFC   |            |        |                 | 702039                   | õ           | 6.2     |         |                          | 48   |            | ~ |   | 3 ANGNFW  |
| MARTETH-SILICONE             | ONE CARBIONSFC | CMSFC        |            |        |                 | 70-2039-1                | ×09         | 16.5    |         |                          | 54   |            |   |   |           |
| PARAFFIN-SODIUM              |                | NSFC         |            |        |                 | 70-2055                  | ŝ           | 6.2     |         |                          | 50.  |            | ~ |   |           |
| PARAFF IN-SODICE             | IN ACETATE     | MSFC         |            |        |                 | 70-2055-1                | COX         | 16.5    |         |                          | 20.  |            |   |   |           |
| PARAFFIN-TUNGSTEX CARBIDHSFC | TES CARBI      | DMSFC        | •          |        |                 | 70-2038                  | Š           | 6.2     |         |                          | 9    |            |   |   |           |
| PARAFFIN-TUNGSTEN CARBIDHSFC | TEN CARBI      | DASFC        |            |        |                 | 70-2038-1                | SOX         | 16.5    |         |                          | 4    | 7 487      |   |   |           |
| PARCE CAMPORED               | 1060-70        | DI LETTE     | DIDDED     | 0000   |                 | 20-1547                  |             |         |         |                          |      |            |   |   |           |
|                              |                |              |            |        |                 | 1001-60                  |             | 0.0     |         |                          | t    |            | • |   |           |
|                              | -              |              |            |        |                 | 1-1001-60                | 202         | 0.62    |         |                          | 11   |            |   |   | _         |
|                              |                |              | KUBBEK     |        |                 | <b>69-1567-2</b>         | Š           | 50.0    |         |                          | 65   |            |   |   | -         |
|                              |                | PLASTICS +   | RUBBER     | PROU   |                 | 69-1567-2                | 80X         | 50.0    |         |                          | 424  |            | _ |   | -         |
|                              |                | PLASTICS +   | - RUBBER   | 200%   |                 | 69-1567-4                | Š           | 100.0   |         |                          | 44   |            | _ |   | -         |
| PINCO CONFOURD               |                | PLASTICS +   | RUBBER     |        |                 | 69-1567-5                | COX<br>COX  | 500.0   |         |                          | 398  | 388        |   |   | _         |
|                              |                | PLASTICS +   | - RUUBER   | P#00   |                 | 69-1567-6                |             | 1000.0  |         |                          | 56   |            |   |   |           |
|                              |                | PLASTICS &   | RUBBER     | PROD   |                 | 69-1567-7                |             | 1500-0  |         |                          | 3.86 |            |   |   | _         |
|                              | 1050470        | PLASTICS +   | RUBBER     |        |                 | 69-1567-8                |             | 2000-0  |         |                          | ŝ    |            |   |   |           |
| PARCE CONFOUND               | 1237-70        | PLASTICS +   | A UBBER    | PRODS  |                 | 69-1568                  |             | 25.0    |         |                          | 1.5  |            |   |   |           |
| PARCE COMPOUND               | 1237-70        | PLASTICS +   | RUBBER     | PROU   |                 | 69-1568-1                | Ş           | 50.05   |         |                          |      |            |   |   |           |
|                              |                | PLASTICS +   | RUBBER     | PROD   | -0750           | 69-1-68-10               |             | 200.002 | 00      |                          |      |            |   |   |           |
|                              |                | PLACTICS +   | DIARED.    | 0000   |                 | E 4 0 - 1                |             |         |         |                          |      |            |   |   |           |
|                              |                | + VULLY Id   | PLAREP     |        | 0120            | 00-1200-11<br>40-1640-12 | 52          |         |         |                          |      |            |   |   |           |
|                              | •••            |              |            |        |                 |                          |             |         |         |                          |      |            |   |   |           |
|                              |                |              | AUBBEK     |        |                 | 1-890                    | Kng         | 1200.0  | 20      |                          | 1    |            |   |   |           |
|                              |                | PLASTICS +   | RUBBER     | PROU   | • C150          | 568-1                    | ×09         | 2000.0  | 20      | 0/10 0                   |      |            |   |   |           |
|                              | _              | PLASTICS +   | · RUBBER   | 00%    |                 | 69-1568-15               | ŝ           | 50.0    |         |                          | 565  | ŝ          |   |   |           |
|                              | ÷.             | PLASTICS +   | RUBBER     | PROD   |                 | 69-1568-16               | <b>X0</b> 2 | 100.0   |         |                          | 551  | 551        |   |   | A DVDPXX  |
| PARCO CONFOUND               | 1237-70        | PLASTICS +   | - RUBBER   | PROD   |                 | 568-1                    | XQS         | 1000-0  |         |                          | 44   |            |   |   |           |
| PARCO COMPOUND               |                | PLASTICS +   | RUBRER     | PROD   |                 | 568-1                    | U.Y         | 1500.0  |         |                          | 0    |            |   |   |           |
| PARCO COMPOUND               |                | PLASTICS +   | RUBBER     | PROD   |                 | 568-2                    | ž           | 62.0    |         |                          | 1.0  |            |   |   | -         |
|                              |                | + STITS      | DIDRED     |        |                 |                          |             | 148.0   |         |                          |      |            | _ |   |           |
|                              |                |              |            |        | 0360            |                          |             |         |         |                          |      |            | _ |   | -         |
|                              |                |              |            |        |                 |                          |             | 2000-0  |         |                          | 1    |            |   |   | 13V0° X   |
|                              |                |              | KUBBEK     |        |                 | -800                     |             | 3000.0  |         | 10/00                    |      |            |   |   | D DVDPXX  |
|                              |                | PLASTICS +   | . RUBBER   | PROD   | •0750           | 9-8951-39                | š           | 3500.0  |         | 10/00                    | 1    |            |   |   | CVDP X    |
|                              |                | FLASTICS +   | RUBAER     | PR CO  |                 | 69~1568-7                | ×09         | 4000.0  |         | 00/04                    | 74   |            |   |   | _         |
| PARCO COMPOUND               | 1237-70        | PLASTI +     | RUBBFR     | PROD   | •0750           |                          | NU2         | 4500-0  |         | 0110                     | , c  |            |   |   | -         |
|                              |                |              |            |        |                 |                          |             |         |         | 1 1 1 1                  |      |            |   |   |           |

•

, . . .

-----

122,222

1

PAGE 35

· -- -

¥:

X

The subscription of the second second second

ļ

....

:

? •

「「「「「」」」

1

· F,

|                                   |               | lER            | SPEC.<br>THICK. | TEST RPT NO.       | TEST<br>ENVR | TEST<br>PRESS      | TEST<br>TEMP | 1 MP T<br>E NER | NO OF<br>REACT | FLASH        | F18F<br>P1 | PP()P | LDSS | н<br>Т<br>Т                             | MATL<br>CODE   |
|-----------------------------------|---------------|----------------|-----------------|--------------------|--------------|--------------------|--------------|-----------------|----------------|--------------|------------|-------|------|-----------------------------------------|----------------|
| PARCO COMPOUND 920-70             | PLASTICS -    | + RUBBER PRODS |                 | 70-1710            | ×09          | 5.0                | 1000         |                 |                | 744          | 666N       |       |      | 51 L                                    | DVDFX          |
| PARCO COMPOUND 920-70             | PLASTIC       | RUBBER PRODS   |                 | 76-1710-1          | 60 X         | 25.0               |              |                 |                | 7 89         | <b>R13</b> |       |      | 0                                       | DVDFXX         |
|                                   | PLASTIC       | PRUBBER PRODS  |                 | 70-1710-11         | ž            | 2000.0             |              |                 | 10/00          |              |            |       |      | A 10                                    | OVDF XX        |
| PARCO COMPOUND 920-70             | PLASTIC       | ā              |                 | 70-1719-12         |              | 2500.0             |              |                 | 00/04          |              |            |       |      | A 10                                    | DVDFXX         |
|                                   | 10 PLASTICS 4 | PRUBBER PRODS  |                 | 70-1710-13         |              | 3000.0             |              |                 | 01/02          |              |            |       |      | 1 10                                    | C-VDF X X      |
| PARCO COMPUUND 920-70             | PLASTIC       | - RUBBFR PRODS |                 | 70-1710-14         |              | 3500.0             |              |                 | 01/02          |              |            |       |      | 101                                     | O VDF XX       |
|                                   |               | FRUBBER PRODS  |                 | 1710-1             | Š            | 4000.0             |              |                 | 00/01          |              |            |       |      |                                         | UVDF XX        |
|                                   |               | RUBBER PRODS   |                 | 70-1710-16         | XOS          | 4500-0             |              |                 | 04/04          |              |            |       |      | 1 10                                    | <b>EVDEXX</b>  |
| CONFOUND                          | PLASTIC       | ď.             |                 | 70-1710-17         | COX<br>COX   | 2000.0             |              | 200             | 90/00          |              |            |       |      |                                         | DVDFXX         |
|                                   | TO PLASTICS + | - RUBBER PRODS |                 | 70-1710-19         | GOX          | 2500.0             |              |                 | 10/00          |              |            |       |      |                                         | <b>UDFXX</b>   |
| COMPOUND                          | PLASTIC       | •              |                 | 70-1710-19         | ŝ            | 3000.0             |              |                 | 00/01          |              |            |       |      | A 10                                    | DVDFXX         |
| COMPOUND                          |               | ٩              |                 | 70-1710-2          | COX<br>COX   | 50.0               |              |                 |                | 718          | 587.       |       |      |                                         | DVDF XX        |
|                                   | PLASTICS      | RUBBER PRODS   |                 | 70-1710-20         | ŝ            | 3500.0             |              |                 | 00/00          |              |            |       |      | A 10                                    | I)VDF XX       |
| PARCO COMPOUND 920-70             |               | RUBBER PRODS   |                 | 70-1710-21         | 60 X         | 4000.0             |              |                 | 00/00          |              |            |       |      |                                         | DVDFXX         |
|                                   | PLASTICS      | + RUBBER PRODS |                 | 70-1710-22         | Š            | 4500.0             |              |                 | 00/04          |              |            |       |      |                                         | DVDFXX         |
| PARCO COMPOUND 920-70             |               | ٩              |                 | 70-1710-23         | х G Э        | 5000.0             |              |                 | 10/10          |              |            |       |      | T 10                                    | OVDFXX         |
| PANCO COMPOUND 920-70             | TO PLASTICS 4 | PRUBBER PRIDS  | •               | 70-1710-24         | SOX<br>SOX   | 5000.0             |              | 200             | 00/04          |              |            |       |      |                                         | OVDFXX         |
| COMPOUND                          | PLASTIC       | ٩              |                 | 70-1710-3          | GOX          | 50.0               |              |                 |                | 574          | 574        |       |      |                                         | <b>VDFXX</b>   |
| COMPOUND                          | PLASTICS      | 2              |                 | 70-1710-4          | ŝ            | 100.0              |              |                 |                | 562          | 562        |       |      |                                         | DVDFXX         |
| COMPOUND                          | PLASTIC       |                |                 | 70-1710-5          | 20X          | 500.0              |              |                 |                | 480          | 480        |       |      | D 13                                    | <b>XX JUVC</b> |
| COMPOUND                          | PLASTIC       | ā.             |                 | 70-1710-6          | õ.           | 1000.0             |              |                 |                | 445          | 445        |       |      |                                         | DVDFXX         |
| COMPORING                         | PLASTIC       | ā              |                 | 70-1710-7          | ×09          | 1500.0             |              |                 |                | 414          | 4]4        |       |      |                                         | DVDFXX         |
|                                   | PLASTIC       | X (            |                 | 20-1110-8          | X CO         | 2000.0             |              |                 |                | 419          | 419        |       |      |                                         | DVDFXX         |
|                                   |               | 2              |                 | 10-111-0-8         | 20X          | 2000.0             |              |                 |                | 419          | 614        |       |      |                                         | DVDFXX         |
|                                   |               | 5 8            |                 | 10-1/1-0/          | N N          | 6, 91<br>2 2 2 2 2 |              |                 |                | 5 T T        | 861        |       |      |                                         | DVDFXX         |
|                                   |               | PRUBBEN PRUDS  | 0510.           | 1661-02            | 60X          | 5000.0             |              | 20              | 40/00          |              |            |       |      |                                         | CHOFXX         |
|                                   |               | RUBBEK PH      | 0610.           | 10-1951-1          | ž če         | 0.0004             |              |                 | 00/07          |              |            |       |      | A 10                                    | CHDFXX         |
|                                   |               |                |                 | 1841-01            | × 19         | 0-0041             |              | ŝ               | 00/00          |              |            |       |      | A 1.                                    | ABXXXX         |
| DUPUTNC                           | - 1           | BEAR           |                 | 70-1987            | Š            | 1500-0             |              |                 | 00/00          |              |            |       |      | A 10                                    | ABXXX          |
| PBX BURUING CENEWI                |               |                |                 | 1-1461-01          |              | 1500.0             | 000          | •               |                | 66 <b>6N</b> | 606N       |       |      |                                         | ABXXXX         |
| LEANIC CHAT                       |               |                |                 | 10-1966<br>70-1966 | ŝ            | 1-00-1             |              | 00              | 40/00          |              |            |       |      | 1 I I I I I I I I I I I I I I I I I I I | ABHUXX         |
|                                   |               |                |                 |                    |              | 0.0001             |              |                 | +>>>>>         | 0001         |            |       |      |                                         | ABHHAA         |
| CERANIC CARS                      |               |                |                 | 10-1988-1          | 33           | 1000-0             | 1000         |                 |                |              | 666N       |       |      |                                         | ABHOXX         |
|                                   |               |                |                 | 10-1965            | 100          | 0.0001             |              | ,<br>,          | 10/10          |              |            |       |      | -                                       | ALBJXX         |
|                                   |               |                |                 | 1-1963-1           | 3            | 1500.0             |              | 20              | 00/04          |              |            |       |      | 4 11                                    | AL BJXX        |
|                                   |               |                |                 | 10-1463-2          | A-50         | 413.0              | 515          |                 |                |              |            |       |      | -1                                      | AL B.IXX       |
| 200-21-001                        |               |                |                 | 70-1963-3          | -20<br>-2    | 818.0              | 522          |                 |                |              |            |       |      | -                                       | ALBJXX         |
|                                   | HYSOL CORP    |                |                 | 70-1963-4          | A-50         | 161                | 164          |                 |                |              |            |       |      | -                                       | ALBJXX         |
|                                   |               |                |                 |                    | A-50         | 0.128              | 004          |                 |                |              |            |       |      | ~                                       | AL BJ          |
| PC-1/-UU/<br>BC-100 ARMECTVE TARE |               | TADE COD       |                 | 70-3067            |              | 1000.0             | 007          |                 |                | 005          | 300        |       |      | <b>6</b><br>0                           | AL JJXX        |
|                                   | •             |                |                 |                    |              | 1 0 0 V            | 200          | 0               | 10100          | 000N         | NOON       |       |      |                                         | 026015         |
| y n                               | SMCINECTON    |                |                 | 1-0007-1/          |              |                    |              | 06              | 40/00          |              |            |       |      | -                                       | E POE X        |
| 4                                 |               |                |                 |                    |              |                    |              |                 |                |              |            |       |      | -                                       |                |

PAGE 36

1

Ļ

**1**, **1**,

+ +

きちい いちきん いちょう

:

and the second of the second se

- 12

. · •

、 しょうち しきょうてん しきない 御書 ひとた ないない なないない あいずたいない こうなぜんどうせん たまなな 御書

-----

10 · · · · · · · · · · · · · · ·

÷

i

11

| PENTON                  |                      | THICK.  |            | ENVR       | PRESS 1 | TENP E | ENER R | REACT  | POINT  | PT DIST  |      | MA TL<br>COJE |
|-------------------------|----------------------|---------|------------|------------|---------|--------|--------|--------|--------|----------|------|---------------|
|                         | HERCULES INC         |         | 71-2922    | X OS       | 1000.0  |        |        |        | 270    | 270      | 0 13 |               |
|                         | MERCULES INC         |         | 71-2922-1  | 60 X       | 150.000 |        | 50 0   | 00/00  |        |          |      | Z             |
| PENTON                  | HERCULES INC         |         | 71-2922-2  | C0 X       | 1501.0  |        |        | 01/01  |        |          |      | 2             |
| <b>FK</b> 15-7          | GAC                  |         | 71-2315    | Å50        | 623.0   | 473    |        |        |        |          | 1 15 | -             |
| PH 15-7                 | GAC                  |         | 71-2315-1  | A-50       | 770.0   | 504    |        |        |        |          |      |               |
| E 17-7                  | GAC                  |         | 71-2316    | A-50       | 0.677   | 664    |        |        |        |          |      | _             |
| - #N 17-7               | GAC                  |         | 71-2316-1  | A-50       | 826.0   | 514    |        |        |        |          |      | -             |
|                         | ALLIED CHEM CORP     |         | 71-2675    | A-50       | 782.0   | 479    |        |        |        |          |      | _             |
| PLASKEN ALKYD 422       | ALLIED CHEN CORP     |         | 71-2675-1  | A-50       | 762.0   | 495    |        |        |        |          |      |               |
| COBALT                  | HANILTON F           | s       | 71-2369    | COX<br>COX | 1500.0  |        | 50 0   | 00/04  |        |          | V II | -             |
| PLATTHUM COBALT MAGNETS | HANILTON PRECIOUS    | v       | 71-2369-1  | ŝ          | 1500.0  |        | 0      | 40/00  |        |          |      |               |
|                         | 3                    |         | 70-1814-16 | ×09        | 950.0   |        |        |        | 529    | <b>A</b> |      | _             |
|                         |                      |         | 70-1814    | ŝ          | 50.0    |        |        |        | 652    | 652      |      |               |
|                         |                      |         | 70-1314    | XOS        | 1500.0  |        | 50     | 00/04  |        |          |      |               |
|                         |                      | •       | 70-1814    | Š          | 1500.0  |        | ¢      | 20/1   |        |          |      |               |
|                         |                      |         | 70-1814-1. | GOX        | 50.0    |        |        |        | 797    | 797      |      | ABDFXX        |
|                         |                      |         | 70-1814-10 | Š<br>Š     |         | 1000   |        |        | 304 1  | 666N     |      | ABDFXX        |
|                         |                      | • 0050  | 70-18111   | 60 X       | 3000.0  |        | 0      | 00/00  |        |          |      | ACDFXX        |
|                         |                      | • 00 50 | 70-1814-12 | ŝ          | 3500.0  |        | 0      | 01/02  |        |          |      | -             |
|                         |                      | • 0050  | 70-1814-13 | XOS        | 4000-0  |        | -      | 04/04  |        |          |      | _             |
|                         |                      | • 0050  | 70-1814-14 | <u>ද</u>   | 3000.0  | ~      | 200 C  | Cn /04 |        |          |      | -             |
|                         |                      | • 0050  | 70-1814 IS | XOS        | 4000.0  | Ň      | 0<br>8 | - /04  |        |          |      | _             |
| -                       |                      |         | 10-1414-2  | Š.         | 100.0   |        |        |        | 669    | 669      |      | -             |
|                         |                      |         | 70-1814-3  | XOS        | 165.0   |        |        |        | 197    | 812      |      | _             |
|                         |                      |         | 70-1814-4  | ŝ          | 500.0   |        |        |        | 570    | 570      |      | ANDFXX        |
|                         |                      |         | 70-1814-5  | 60 X       | 0006    |        |        |        | 517    | 517      |      | _             |
|                         |                      |         | 70-1814-6  | ê.         | 1000.0  |        |        |        | 536    | 536      |      | -             |
|                         |                      |         | 70-1814-7  | XOS        | 1500.0  |        |        |        | ~      | 40R      |      |               |
|                         | PERAURE LABS         |         | 70-1814-8  | Š          |         | 1      |        |        |        | 426      |      |               |
|                         |                      |         | 10-101-01  |            |         | 1000   |        |        | 4 666N | 666      |      |               |
|                         |                      | 0010.   |            | ŝ          | 10000   |        | 20     | 42700  |        |          |      |               |
|                         | REFEX STAR FORD      | Card    |            |            | 0.0001  |        | ć      | 2.00   | 4 666M | 666N     |      | EXXXX         |
| PULYET NOL ENE          | I MOST DI            | 00104   | A0-1266    | ŝ          | 25.0    |        | ,      |        | 643    | 643      | 2 :  |               |
| BOR VETHER FAR          | INDET OF             |         | 40-1244-1  |            |         |        |        |        | 200    |          |      | -             |
| POR VETHELENE           | INDST OF             |         | 60-1206-2  |            |         | 0001   |        |        |        |          |      |               |
| POLYETHELENE            | 50                   |         | 69-1296-3  | ŝ          | 165.0   |        |        |        |        | 581      |      | -             |
| POLYETHELENE            | INCST DI             |         | 63-, 296-4 | GOX        | 20-05   |        |        |        | 406    | 374      |      |               |
| POLYETHELENE            | INDST DI             |         | 69-1296-5  | 60X        | 100-0   |        |        |        | 575    | 273      |      | -             |
| POL VETHELENE           | 10                   |         | 69-1296-6  | 60X        | 500.0   |        |        |        | 251    | 251      |      |               |
| POL YETHELENE           | AIRESEARCH INDST DIV |         | 69-1296-7  | X09        | 1000.0  |        |        |        | 286    | 286      |      |               |
| POLYETHELENE            | AIRESEARCH INDST DIV |         | 69-1296-8  | GOX        | 1500.0  |        |        |        | 261    | 261      |      |               |
| POLYETHELENE            | AIRESEARCH INDST DIV |         | 69-1296-9  | GUX        | 2000.0  |        |        |        | 307    | 307      |      |               |
| POLYISOPRENE            | NR DOWNEY            |         | SP-6926    | COX        | 1000.0  |        | 50,05  | 00/07  |        |          |      | DODIXX        |

PAGE 37

. .

1

۰.

. بوري ب 19 A

2

, e

A DATA A LOTA A

and a second

1 . . . . . . . . . . . . . . . .

-1

| POLYISOPRENE<br>POLYISOPRENE<br>PR-11200-72-4-765                        |                       | SPEC.  | TEST ROT NO. |            |             | TEST INDT | DT NO DE |              | 1 0100 | 0000 UT | T MAT     |               |
|--------------------------------------------------------------------------|-----------------------|--------|--------------|------------|-------------|-----------|----------|--------------|--------|---------|-----------|---------------|
| POL VISOPREME<br>POL VISOPREME<br>PR-11209-12-M-765<br>#B-12008-12-M-765 |                       | THICK. |              | ENVR       | PRESS .     | TEMP ENER | R B A    | NIOd         | L d    | ڌ ۲     |           | CODE          |
| POL Y ISOPREME<br>PR-11208.22-R-765<br>PR-13208.22-R-765                 | NR DOWNEY             |        | SP-6926-1    | ð          | 1000.0      | 200       | 00/00 0  | •            |        |         |           | XX 1 000      |
| PR-11208.22-R-765<br>20-12208.22-8-745                                   |                       |        | SF-6926-2    | LOX        | 14.7        | 50        | 40/00 C  | •            |        |         | 16        | DIXX          |
| 98-11206.77-9-745                                                        | RUBBER P              |        | 70-1776      | Š          | 25.0        |           |          | 735          | 735    |         | 1         | XX4000        |
|                                                                          | RUBBER P              |        | 70-1776-1    |            | 50.0        |           |          | 724          | 724    |         | 13        | XX4000        |
| PR-11208=27-4-765                                                        | RUBBER P              |        | 70-1776-10   |            | 1500.0      |           |          | 471          | 471    |         | 13        | XX4000        |
| PR-11208+22-R-745                                                        | SION RUBBER P         | •      | 70-1776-11   |            | 2000.0      |           |          | 767          | 494    |         | 13        | DODPXX        |
| PR-11208.22-R-765                                                        | SION RUBBER P         |        | 70-1776-12   | Š          | 950.0       |           |          | 41?          | 412    |         | 13        | XX4000        |
| PR-11208 • 22-R-765                                                      | SION RUBBER P         |        | 70-1776-2    | 50 X       |             | 1000      |          | 751          | 006.4  |         | <b>61</b> | XX 4 0 0 0    |
| PR-11208+22-R-765                                                        | SION RUBBER P         | I      | 70-1776-3    | ×09        | 165.0       |           |          |              | Я17    |         | Ē         | <b>000PXX</b> |
| PR-11208 • 22-R-765                                                      | SION RUBBER P         | • 4750 |              |            | 1500.0      |           |          | _            |        |         | 10        | XX4000        |
| PR-11206.22-R-765                                                        | SION RUBBER P         | •0750  | 70-1776-5    | ×03        | 1500.0      | Š         | 40/00 U  | ۰.<br>ح      |        |         | 11        | XX4000        |
| PR-11206.22-4-765                                                        | STON RUBBER F         |        |              | GOX        | 50.0        |           |          | 66           | 668    |         | 13        | XX4000        |
| PR-11208.22-R-765                                                        | RUBBER P              |        | 70-1776-7    | Š          | 100.0       |           |          | 582          | 582    |         | 13        | XX d000       |
| PR-11206+22-2-765                                                        | RUBBER P              |        |              | 60X        | 500.0       |           |          | 504          | 506    |         | 13        | DOGPXX        |
| PR-11208-22-R-765                                                        | RUBBER P              |        | 70-1776-9    |            | 1000.0      |           |          | -            | 498    |         | 13        | DOC P X X     |
| PR-11206.22-R-775                                                        | P.UBBER PR            |        | 71-2303      |            | 2000-0      |           | 01/0     | · - ~        |        |         | 01        | DVUPXX        |
| PR-11208+22-R-775                                                        | PRECISION RUBBER PROD |        | 71-2303-1    |            | 1500.0      |           |          | 505          | 505    |         | 13        | DVCPXX        |
| · · · · · · · · · · · · · · · · · · ·                                    | PRODUCI. RESEARCH     |        | 71-5002      | č0X        | 5000.0      | 50        | -        | 4            |        |         | 11        | BACOXX        |
| PR-1538                                                                  |                       |        | 71-5002-1    |            | 1000.0      |           | 01/01    | -            |        | •       | 10        | BACDAA        |
|                                                                          |                       |        | 71-5002-2    | COX        | 500.0       |           | 01/02    | ~            |        |         | 2         | BACOXX        |
| 3E2-1238                                                                 |                       |        | 71-5002-3    | Š          | 500.0       |           | 01/01    | -            |        |         | 10        | BACQXX        |
|                                                                          |                       |        | 71-5002-4    | Š          | 1500.0      |           | 01/01    | _            |        |         | 10        | BACOXX        |
|                                                                          |                       |        | 71-5002-5    | COX<br>COX | 500.0       |           | 40/00    | *            |        |         | 10        | BACQXX        |
| PR-1536                                                                  | PRODUCTS RESEARCH     | •      | 71-5002-6    | GOX        | 500.0       |           | 01/03    | •            |        |         | 2         | BACQXX        |
| BES1-1238                                                                | æ                     |        | 71-5002-7    | Š          | 500.0       |           | 01/0     | t            |        |         | 10        | BAC.QXX       |
| PRO-SEAL 333C                                                            | CDAST PRO SEAL        |        | 71-2591      | A-50       | 769.0       | 519       |          |              |        |         | 15        | AKGUXX        |
| PR0-SEAL 333C                                                            |                       |        | 71-2591-1    | A-50       | .165 .0     | 511       |          |              |        |         | T 15 AK   | AKGUXX        |
| PWC 3025-140                                                             | 51.                   |        | 71-2554      | A-50       | 439.0       | 425       |          |              |        |         | 15        | E ZCUXX       |
| 1025-140                                                                 | PAUL                  |        | 71-2554-1    | A-50       | 574.0       | 465       |          |              |        |         | 5         | EZCUXX        |
|                                                                          | 6                     |        | 71-2521      | HWH        | 767.0       | 502       |          |              |        |         | 15        | EPCONA        |
|                                                                          | EARCH INUST UI        |        | 71-2521-1    | I          | 779.0       |           |          |              |        |         | 15        | EPCOMA        |
|                                                                          | 1991                  |        | 11-2/10      |            | 250.0       | 50        | 00/04    | . <b>t</b> . |        |         | -         |               |
|                                                                          | CURNING TIDUL         |        | 1-01/2-11    | ŝ          |             | 0         | 0/00     |              |        |         | 2         | FUHDXX        |
|                                                                          | CURPTING FIDGE        |        | 19-1-01      | N N N      |             | 1000      |          | 666N         | 666N   |         | 13        | DOHKXX        |
|                                                                          | CORMING FIBGL         | 0.000  | 70-1767-1    | ž č        |             | 1000      |          | 666N         | 666N   |         | - 61      | DOHKXX        |
| 044/ 71M400                                                              | CORMING FIBGL         | 05/0*  | 70-1767-10   | -          | 5000.0      |           |          | 4            |        |         | 2         | DDHKXX        |
|                                                                          | CURNING FIBGL         | 0620.  | 11-1911-01   |            | 4 9 0 0 . 0 | 2002      |          | -            |        |         | 11        | DOHKXX        |
|                                                                          | CODUCIO CODUCIO       | 0620.  | 1-1 10-1 101 |            |             |           | 00/00    | .t.          |        |         |           | DOHKXX        |
|                                                                          | CORNING FIBGL         |        | 70-1767-2    | Š          |             | 1000      |          | 666N         | 366X   |         | - 6 -     | DDHKXX        |
|                                                                          | COMNING FIBGL         |        | 70-1767-3    | 20X        | 100.0       | 1000      |          | 666N         | 650N   |         | 13        | DDIHKXX       |
|                                                                          | CORNING               |        | <b>_</b> .   | ğ          | 165.0       | 1000      |          | 666N         | 666N   |         | <b>m</b>  | DDHKXX        |
|                                                                          | COXMING FISC          |        | 70-1767-5    | 20X        | 200.0       | 1000      |          | 666N         | 666N   |         | <b>61</b> | DDHKXX        |
|                                                                          | COMMING FIRGL         |        | 1 /67        | ŝ          |             | 1000      |          | 666N         | 666N   |         | 2         | VXXHQQ        |
| 04417 1440                                                               | UNENS CORNING FIBGLS  |        | 10-1167-7    | X DS       | 1500.0      | 1000      |          | 066N         | 666N   |         |           | XXX           |

´---

į

• • • • •

;

and the second second

-----

. ا

•

• :

{

\*

**.** .

<u>.</u> .

1.1.1

ì

J Reference

Ä,

÷,

71.1

•

| RFGR S        | MFGR S DESIGNATION     | MANUFACTURER              | SPEC.<br>THICK. | TEST RPT NO.                             | TEST<br>ENVR | PRESS  | TEMP | ENER F | NO DF<br>REACT | FL ASH<br>POINT | F18E | PROP | HT<br>LOSS | ¥    | MATL<br>CUDE |
|---------------|------------------------|---------------------------|-----------------|------------------------------------------|--------------|--------|------|--------|----------------|-----------------|------|------|------------|------|--------------|
| OUARTZ        | 1.940                  | OMENS CORNING FIBGLS      |                 | 10-1767-8                                | X OS         | 2000.0 | 1000 |        |                | 666N            | 666N |      |            | A 13 | ррнкхх       |
| OUAR72        | 7940                   |                           | .0750           | 70-1767-9                                | COX<br>COX   | 4000.0 |      | 2      | 00/01          |                 |      |      |            |      | DOHKXX       |
| QUARTZ        | U76L                   | OMENS CORMING FIBGLS      |                 | 0251-02                                  | ŝ            | 1500.0 |      | -      | 00/04          |                 |      |      |            |      | DOHKXX       |
| - GUARTZ      | 1940                   | DMENS CORNING FIDGLS      |                 | 70-1920-1                                | 80X          | 1500.0 |      | 50     | 00/07          |                 |      |      |            |      | DDHKXX       |
| <b>DUARTZ</b> | 044                    | DWENS CORNING FIBGLS      |                 | 70-1920-2                                | ŝ            | 1500.0 | 1000 |        |                | 666N            | 666N |      |            |      | DDHKXX       |
| REDAR         | 51-500-03              | DARLING.R.E. CO. INC      |                 | 70-1648                                  | COX<br>COX   |        | 0001 |        |                | 737             | 666N |      |            |      | DVDPXX       |
|               | SI-500-03              | DARLING R.E. CO. INC      |                 | 70-1648-1                                | ×09          | 25.0   |      |        |                | 72.9            | 728  |      |            |      | DVDPXX       |
|               | S1-500-03              |                           |                 | 70-1648-10                               | X09          | 3000-0 |      |        | 20/10          |                 |      |      |            |      | XXdUVG       |
|               | 51-50-03               |                           |                 | 70-1648-11                               | ž            | 3500.0 |      |        | 0/00           |                 |      |      |            |      | DVDPXX       |
|               | S1-500-03              |                           | •               | 70-1648-12                               | 60 X         | 4000-0 |      |        | 10/00          |                 |      |      |            |      | DVDPXX       |
|               | S1-500-03              |                           |                 | 70-1648-13                               | Ň            | 4500.0 |      |        | 02/03:         |                 |      |      |            |      | DVDPXX       |
|               | 51-500-03              |                           |                 | 70-1648-14                               | XOS          | 5000.0 |      | -      | 73/04          |                 |      |      |            |      | X 402.0      |
| * FBAA        | SI-500-03              | •                         |                 | 70-1648-15                               | Š            | 5000.0 |      | 200    | 40/00          |                 |      |      |            |      | DVDPXX<br>0  |
|               | SI-500-03              | DARLING.R.E. COINC        |                 | 70-1648-16                               | COX<br>COX   | 2000.0 |      | J      | 20/04          |                 |      |      |            |      | DVDPXX       |
|               | S1-500-03              | ٠                         |                 | 70-1648-17                               | ŝ            | 2500.0 |      | -      | 10/10          |                 |      |      |            |      | 2VDPX        |
| REDAR         | SI-500-03              | DARLING .R.E. CO. INC     |                 | 70-1648-18                               | 60X          | 3500.0 |      | J      | 10/10          |                 |      |      |            |      | DYDPXX       |
|               | S1-500-03              | DARLING .K.E. CO. INC     |                 | 70-1648-19                               | Š            | 4000.0 |      | 5      | 01/03          |                 |      |      |            |      | DVDPXX       |
|               | SI-50/-03              |                           |                 | 70-1648-2                                | C0X          | 50.0   |      |        |                | 720             | 720  |      |            |      | DVDPXX       |
| REDAR         | 51-5(-0-03             | 4                         |                 | 70-1648-20                               | ŝ            | 4500.0 |      | ~      | 01/02          |                 |      |      |            |      | DV:DPXX      |
|               | SI-5(0-03              |                           |                 | 70-16 .8-21                              | COX          | 5000.0 |      | J      | 94/04          |                 |      |      |            |      | DVDPX        |
|               | 50-0i) <u>5-15</u>     |                           |                 |                                          | ŝ            | 200.0  |      |        | 10/10          |                 |      |      |            |      | DVDPX        |
|               | S1-540-03              |                           |                 | 70-1648-23                               | GOX          | 500.0  |      | 200 C  | 10/10          |                 |      |      |            |      | DVDPXX       |
| REDAR         | SI-500-03              | DARLING R.E. CO. INC      |                 | 70-1648-24                               | š            | 1000.0 |      |        | 10/10          |                 |      |      |            |      | XdQVO        |
|               | 51-560-03              |                           |                 | 70-1648-25                               | COX<br>COX   | 1500.0 |      |        | 10/10          |                 |      |      |            |      | XXdQAQ       |
|               | 51-540-03              |                           |                 | 70-158-3                                 | ŝ            | 50.0   |      |        |                | 474             | 474  |      |            |      | DVDPXX       |
|               | 51-500-03              | DARLING -R - E - CO - INC |                 | 70-1648-4                                | 20%          | 100.0  |      |        |                | 472             | 472  |      |            |      | DVDPXX       |
|               | SI-500-03              |                           |                 | 70-1648-5                                | ŝ            | 500.0  |      |        |                | 44]             | 441  |      |            |      | DVDPXX       |
|               | S I - 500-03           |                           |                 | 70-1648-6                                | X09          | 1000.0 |      |        |                | 391             | 391  |      |            |      | XX40V0       |
|               | SI-50-03               |                           |                 | 70-1648-7                                | š            | 1500.0 |      |        |                | 359             | 359  |      |            |      | XX 40/0      |
|               | S 1-500-03             |                           |                 | 70-1648-8                                | ×09          | 2000.0 |      |        |                | 417             | 417  |      |            |      | DVDPXX       |
|               | 51 <b>-50</b> 0-03     |                           |                 | 70-1648-9                                | Š            | 2500.0 |      | ~      | 40/00          |                 |      |      |            |      | DVDPXX       |
| HEDAR         | SI-503-00              |                           |                 | 70-1647                                  | <b>X</b> 09  | 5.0    |      |        |                | 711             | 277  |      |            |      | DVDPXX       |
|               | S1-503-00              | ÷                         |                 | 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1- | ŝ            | 25.0   |      |        |                | 749             | 749  |      |            |      | 040PXX       |
| REDAR         | S1-503-00              |                           | .0750           | 70-1647-10                               | 80X          | 3500.0 |      | 2      | 10/10          |                 |      |      |            |      | XXODAO       |
|               | 51-503-00              |                           | .0750           | 70-1647-11                               | ŝ            | 4000°C |      |        | 40/40          |                 |      |      |            |      | DVDPXX       |
| COAR .        | SI-503-00              |                           | •0750           | 70-1647-12                               | X09          | 2000.0 | •••  | 200 (  | 90/00          |                 |      |      |            |      | DVDPXX       |
| REDAR         | S1-503-00              |                           |                 | 70-1647-2                                | ×05          | 50.0   |      |        |                | 657             | 657  |      |            | D 13 | DVDPXX       |
| LEDAR         | 00-605-15              | DARLING.R.E. CO. INC      |                 | 70-1647-26                               | ×09          | 6.2    |      |        |                | 721             | 759  |      |            |      | UVDPXX       |
|               | SI-503-00              |                           |                 | 70-1647-27                               | Š            | 16.5   |      |        |                | 735             | 744  |      |            |      | DVDFXX       |
|               | 00-E05-IS              |                           |                 | 70-1647-3                                | COX<br>COX   | 50.0   |      |        |                | 481             | 481  |      |            |      | DVDPXX       |
|               | 00-E0 <del>5</del> -15 | DARLING .R.E. CO. INC     |                 | 70-1647-4                                | Š            | 100.0  |      |        |                | 441             | 447  |      |            |      | DVDPXX       |
| REPAR         | S1-503-00              |                           |                 | 70-1647-5                                | COX          | 500.0  |      |        |                | 393             | 393  |      |            |      | DVOPXX       |
| REDAR         | S1-503-00              |                           |                 | 70-1647-6                                | 50X          | 1000-0 |      |        |                | 201             | 107  |      |            |      | 2 Y O V O    |
|               |                        |                           |                 |                                          |              |        |      |        |                | 100             |      |      |            |      |              |

-

ł

. ...

P.AGE 39

....

10.049.5 .

. .

ŧ

. ::: - **q** 

| REDAR S1-503-00<br>REDAR S1-503-00<br>REDAR S1-528-00<br>RIDAR S1-528-00<br>RIDAR S1-528-00 |                  | - NUTHI       |              | ENVR        | PRESS  | TEST<br>TEMP | I MP T<br>ENER | NO OF<br>REACT | FL ASH<br>POINT | F166<br>P1 | PROP<br>DIST L | WT<br>OSS | 2 I<br>F F | KATL<br>CODE |
|---------------------------------------------------------------------------------------------|------------------|---------------|--------------|-------------|--------|--------------|----------------|----------------|-----------------|------------|----------------|-----------|------------|--------------|
|                                                                                             | DARLING-R-E- CD  | CDINC         | 70-1647-8    | COX         | 2000.0 |              |                |                | 353             | 353        |                |           | 0 13       | DVDPX        |
|                                                                                             |                  | CO++INC +0750 | 70-1647-9    | COX         | 3000.0 |              |                | 00/04          |                 |            |                |           |            |              |
|                                                                                             | DARLING-R+E+ CO  | ••1 NC        | 70-1438      | Š           | 1500.0 |              |                | 10/10          |                 |            |                |           |            | EKDPXX       |
|                                                                                             | DARLING-R.E. CO. | COINC         | 70-1938      | COX<br>SOX  | 1500.0 |              | 50             | 00/00          |                 |            |                |           |            |              |
| <b>REDAR SI-528-00</b>                                                                      | DARLING R.E. CD. | ••1 NC        | 70-1938-1    | Š           | 100.0  |              |                |                | 555             | 555        |                |           | 0 13       |              |
|                                                                                             |                  | 180           | 70-1938-10   | 60X         | 1000.0 | 284          |                |                |                 |            |                |           |            |              |
| REDAR 51-528-00                                                                             | DARLING R.E. CO  |               | 70-1938-11   | XQS         | 1500.0 | 232          |                |                |                 |            |                |           |            | EKDPXX       |
| REDAR SI-528-00                                                                             | DARLING R.E. CO. | • INC         | 70-1938-12   | GOX         | 1500.0 |              |                |                | 787             | 787        |                | -         |            |              |
| REDAR SI-528-00                                                                             |                  |               | 70-1938-2    | XUS         | 500.0  |              |                |                | 202             | 202        |                |           |            |              |
|                                                                                             |                  | 60. 1MC       | 70-1938-3    | En X        | 10001  |              |                |                | 250             | 250        |                |           |            |              |
|                                                                                             |                  | C D = 1 MC    | 7-1010-V     | Å,          |        |              |                |                | , r<br>, r      |            |                |           |            |              |
|                                                                                             |                  |               | 70.1038-5    | 33          |        |              |                |                |                 |            |                |           |            |              |
|                                                                                             |                  |               |              |             |        | 0000         |                |                | c (<br>0 - 1    |            |                |           |            | F KUY XX     |
|                                                                                             |                  |               | 0-8541-02    | KN9         | 2.0    | 1000         |                |                | 169             | 666N       |                |           |            |              |
| REDAK 51-528-00                                                                             |                  | CO INC        | 70-1938-7    | 20X         | 16.5   |              |                |                | 787             | 787        |                | -         |            |              |
| REDAR S1-528-00                                                                             | DARLING -R .L CO | CO I NC       | 70-1938-8    | Š           | 1500.0 |              |                |                | 232             | 232        |                |           |            | EKDPXX       |
| #2-025 SHIN                                                                                 |                  |               | SP-6919      | GOX         | 5.0    | 1000         |                |                | 666N            | 000N       |                | _         |            |              |
| #2-025 SHI#                                                                                 |                  |               | SP-6919-1    | XQS         | 25.0   | 1000         |                |                | 000N            | 000N       |                |           |            |              |
| #5-025 SHIM                                                                                 |                  |               | CP-6919-10   | 202         | 500-02 |              | 0er            | 10/00          |                 |            |                |           |            |              |
|                                                                                             |                  |               | 11-0109-05   |             |        |              | 200            | 10/00          |                 |            |                |           |            |              |
|                                                                                             |                  |               |              |             |        |              |                |                |                 |            |                |           |            |              |
|                                                                                             |                  |               |              |             | 0.0001 |              |                | 10/00          |                 |            |                |           |            | -            |
|                                                                                             |                  |               | 5P6919-13    | Ň           | 2000.0 |              |                | 00/04          |                 |            |                |           |            |              |
|                                                                                             |                  | •             | 5P-6919-14   | 20X         | 20.0   | 0001         |                |                | 666N            | C06N       |                | -         |            | _            |
|                                                                                             |                  |               | SP-6919-15   | Š           | 100.0  | 1000         |                |                | 666N            | 606N       |                |           |            |              |
| 12-025 SHIN                                                                                 |                  |               | SP-6919-2    | 60X         | 50.0   | 1000         |                |                | 868             | 666N       |                | -         |            | CHMAXX       |
|                                                                                             | •                |               | SP-6919-3    | Š           | 62.0   | 1000         |                |                | 666N            | 666N       |                |           |            | CHMAX        |
|                                                                                             |                  |               | SP-6919-4    | х<br>С<br>С | 165.0  | 1000         |                |                | 666N            | 066N       |                | -         |            | CHMAX        |
| RS-025 SHIM                                                                                 |                  |               | SP-6919-5    | Š           | 0.006  | 1000         |                |                | 666N            | 666N       |                |           |            | CHNAX        |
| RS-025 SHIM                                                                                 |                  |               | SP-6919-6    | GOX         | 2500.0 |              |                | 00/00          |                 |            |                |           |            | CHMAXX       |
| R122 521R                                                                                   |                  |               | · SP-6919-7  | X CS        | 3000-0 |              |                | 10/00          |                 |            |                |           |            | Y Y MH J     |
|                                                                                             |                  |               | SP-6919-8    | SOX.        | 3500-0 |              |                | 10/00          |                 |            |                |           |            |              |
|                                                                                             |                  |               | SP-6919-9    | SOX S       | 4000-0 |              |                | 10/00          |                 |            |                | •         |            |              |
| ŘTV-106 RED                                                                                 | G.E. SILICONE PI | PRODUCTS      | 71-2368      | 60 X        | 500-0  |              | ۶0<br>۲        | 90/00          |                 |            |                |           |            |              |
| <b>RTV-1</b> 06 RED                                                                         |                  | PRODUCTS      | 71-2368-1    | ž           | 500-0  |              |                | 40700          |                 |            |                | •         |            |              |
|                                                                                             | SILICONE         |               | 71-2368-2    |             |        |              |                |                | 5 60            | 5 60       |                |           |            | <<<>>><>><>  |
|                                                                                             | STITEONE         |               | 71-2446      | A-FO        |        | 5 2.4        |                |                | 20              | 2          |                | -         |            |              |
|                                                                                             | CT I LOWE        |               | 21-2446-12   |             |        |              |                |                |                 |            |                |           |            |              |
|                                                                                             |                  |               | L            |             |        | 100          |                |                |                 |            |                |           |            | 000065       |
|                                                                                             |                  |               | 2 ++ 2 - 1 / |             | 0.624  | 414          |                |                |                 |            |                |           |            |              |
| <b>FTV-30</b>                                                                               | SILICONE         |               | 71-2442-1    | A-50        | 457.0  | 431          |                |                |                 |            |                |           |            |              |
| ATV-60                                                                                      | SILICONE         |               | 71-2443      | A-50        | 397.0  | 415          |                |                |                 |            |                |           |            |              |
| ATV-50                                                                                      | SILICONE         | PRODUCTS      | 71-2443-1    | A-53        | 417.0  | 418          |                |                |                 |            |                |           |            |              |
| #14-00                                                                                      | G.E. SILICONE PI | PRODUCTS      | 71-5000      | ×09         | 5000-0 |              | 50             | 00/04          |                 |            |                |           |            | NOOP XX      |
| R TV-90                                                                                     | STLTCONE         |               | 71-5000-1    | GOX         | 500.0  |              |                | 70700          |                 |            |                |           |            |              |
| 00-A18                                                                                      | STI LCONE        | PRODUCTS      | 71-5000-10   | COX         | 1500.0 |              |                | 20/00          |                 |            |                |           |            |              |
|                                                                                             |                  |               |              |             |        |              |                |                |                 |            |                |           |            |              |

Ę

35

うちろう しいか おやい

ころとうないとうで、それになっていたのであるのであったが、ころのというできます。

Contraction of the second second

:

:

÷

ţ

ł

: (\*\*) :4

• :

ł

PAGE 40

.

٢.

Ē

Į

ŀ

XX 9000 000PXX 000PXX 000PXX 000PXX DODPXX MATL CODE 4 PAGE 0 <u>د</u> --L USS PR()P FIRF 5 989 965 669N 179 179 802 788 761 N999 666N 686 FLASH POINT 802 788 761 N999 N999 752 650 N999 739 989 72 NAU NO DF REACT 00/01 01/02 00/01 02/04 01/01 00/01 00/01 00/01 00/01 00/01 10/00 00/01 00/04 00/04 00/04 01/02 01/01 01/02 01/01 01/01 01/01 01/03 01/03 01/04 01/04 01/04 01/03 I MP T ENER 2000 200 2002200 1000 TEST TEMP 1000 1000 50.0 62.0 165.0 3000.0 2500.0 2500.0 2500.0 2500.0 3000.0 3500.0 3500.0 1500.0 1500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500.0 500 TE ST PRE SS TEST ENVR . 00 71-5000-15 71-5000-15 71-5000-15 71-5000-15 71-5000-5 71-5000-5 71-5000-5 71-5000-5 71-5000-5 71-5000-5 71-5000-5 71-5000-5 71-5000-5 71-5000-5 71-5000-5 71-5000-5 71-5000-5 71-5000-5 70-1716-12 70-1716-12 70-1716-12 70-1716-12 70-1716-12 70-1716-5 70-1716-6 70-1716-6 70-1716-6 70-1716-12 70-1716-12 70-1716-12 70-1716-12 70-1716-12 70-1716-12 70-1716-12 70-1716-12 70-1716-7 70-1716-8 70-1716-9 76-1717-1 770-1717-10 70-1717-10 70-1717-12 70-1717-15 70-1717-15 70-1717-15 70-1717-15 70-1717-3 70-1717-4 TEST RPT •0300 •0750 •0750 •0750 •0750 •0750 •0750 •0750 •0750 •0750 •0750 •0750 •0750 •0750 •0750 •0750 •0750 •0750 0300 0350 0750 0750 SPEC. THICK. PRODUCTS Gef Silicone Gef Cone Dixone Cone SILICONE SILICONE SILICONE MANUFAC TURER COR<sup>®</sup> 5089 8 ğ ŝ ă NOX10 DIXON DIXON NOX10 NDX EQ DIXON DIXON NOXIO **NOX10** NOX 10 NOX IO MOX10 NOX10 NOX I G Ş õ E X NOX 1 O NOXI NOX10 HOX10 **UXIO** DX10 MFER S DESIGNATION 81V-90 81V-90 81V-90 £ K74-90 RTV-90 174-90 REACH STREET 888888888

31 MATERIAL TEST DATA BY MANUFACTURER S DESIGNATION AS DF

| A ULU DY A        |                       | 1 H I CK . |            |                     | FRESS   | TEMP | ENER | REACT  | PUINT | La   | DIST LOSS | 1 | CUDE      |
|-------------------|-----------------------|------------|------------|---------------------|---------|------|------|--------|-------|------|-----------|---|-----------|
| AUL 07 A          | DIXIN CORP            | .6750      | 10-111-6   | X03                 | 3500.0  |      |      | 10/00  |       |      |           | 4 | O DKCNAD  |
|                   | DIYAN CORP            | 0750       | 70-1717-7  |                     | 0000    |      |      |        |       |      |           |   |           |
|                   |                       |            |            |                     |         |      |      |        |       |      |           |   | -         |
|                   |                       |            |            |                     |         |      |      | 10.00  |       |      |           |   |           |
|                   |                       | 04204      | 6-1111-01  | X D S               | 0.0004  |      |      | 00/07  |       |      |           |   | O DKCNAD  |
| × 20,54           | DIXON COAP            |            | 70-1975    | A-50                | 750.0   | 164  |      |        |       |      |           |   | 5 DKCNAD  |
| FULCH A           | DIXON CORP            |            | /0-1975-1  | A-50                | 686.0   | 478  |      |        |       |      |           |   |           |
| PLN CM A          | -                     |            | 70-1076-2  |                     | 760.0   | 107  |      |        |       |      |           |   |           |
|                   |                       |            |            |                     |         | -    | ,    |        |       |      |           |   |           |
|                   | -                     |            | 2422-11    | 20X                 | 1500.0  |      | 50   | 00/04  |       |      |           |   | -         |
| RULUM A .         |                       |            | 71-2242-1  | Š                   | 1500.0  |      |      | 01/02  |       |      |           |   | O UKCNIN  |
| REA DW A          | · DIXON CORP          |            | 71-2242-2  | 60 X                | 1000.0  |      |      |        | 738   | 738  |           |   |           |
|                   | DITON CARP            |            | 71-2276    | A-50                | 8 0.7 D | 513  |      |        | I     |      |           |   |           |
|                   |                       |            |            |                     |         |      |      |        |       |      |           |   |           |
|                   |                       |            |            |                     |         | 110  | i    |        | •     |      |           |   |           |
|                   |                       |            | 0767-11    | Š                   | 0.0041  |      | 50   | 00/04  |       |      |           |   |           |
|                   | CIXON CONP            |            | 71-2526-1  | XOS                 | 1500.0  |      |      | 01/02  |       |      |           |   | O DKCNAD  |
|                   | CIXON CARP            |            | 71-2526.2  | SOX<br>SOX          | 1000.0  |      |      |        | 635   | 625  |           |   |           |
| ETGI-IR FUIRED AS |                       |            | 71-2383    | 20X                 | 500.0   |      | 5.0  | 20100  | ,     |      |           |   |           |
|                   |                       |            |            |                     |         |      | R    |        |       |      |           |   | -         |
|                   |                       |            | 11-2383-1  | CUX                 | 0.00.5  |      |      | 00/08  |       |      |           |   |           |
| R751-18 FLUORGLAS | INDUSTRIE:            |            | 71-2383-2  | CCX<br>CCX          | 100.0   | 1000 |      |        | 066N  | 600N |           |   |           |
|                   | PARKER SEAL/LOS ANGLS |            | 10-46      | 6N2                 | 200.0   |      | 20   | 00/00  |       |      |           |   | I CHDPXX  |
| 5-504-7           | PARKER SEAL/LOS ANGLS |            | 10-46-1    | GN2                 | 1000-0  |      | 4    | 00/07  |       |      |           |   |           |
| 5-604-7           |                       |            | 70-1570    | ×09                 | \$000.0 |      |      | 10/10  |       |      |           |   |           |
| 5-604-7           | SEAL/LOS              |            | 70-1570-1  | COX                 | 4000-0  |      | 05   | 70/00  |       |      |           |   | _         |
| S-604-7           | SEAL/LOS              |            | 70-1570-10 | ž                   | 1000-0  |      | )    |        | 454   | 428  |           |   |           |
| 5-404-7           | SFAL /LOS             |            | 11-0-41-02 | KU2                 | 1500.0  |      |      |        | 700   |      |           |   |           |
| (E-101-7          | SEAL / DC             |            | 20-1620-12 |                     |         |      |      |        |       |      |           |   |           |
|                   |                       |            |            | < 12<br>5<br>7<br>5 | 2000-0  |      |      |        | 17 t  | ***  |           |   |           |
|                   | SEAL/LOS              |            | 570-1      | X<br>C<br>C<br>C    | 3000.0  |      |      |        | 419   | 419  |           | ۵ | 13 CHDPXX |
|                   | SEAL/LOS              |            | 20-1       | 60 X                | 1000.0  | 42B  |      |        |       |      |           |   | 5 CHOPXX  |
| 5-604-7           | SEAL/LOS              |            | 70-1570-14 | 60X                 | 3000.0  | 388  |      |        |       |      |           |   | 5 CHDPXX  |
|                   | PARKER SEAL/LOS ANGLS |            | 70-1570-15 | XOS                 | 25.0    |      |      |        | 901   | 827  |           |   | 3 CHOPXX  |
| 5-604-7           | PARKER SEAL/LOS ANGLS |            | 70-1570-16 | 60 X                | 3000.0  |      |      |        | 419   | 419  |           |   |           |
| S-604-7           | SEAL/LOS              |            | 70-1570-2  | X OS                | 0.0006  |      | 50   | 00/04  |       | •    |           |   |           |
| S-404-7           | SFAL /1 DS            |            | 570-       | NO3                 | 1500.0  |      |      | 10/10  |       |      |           |   |           |
| 5-404-7           | SEAL /1 DS            |            | 70-1570-6  |                     |         |      |      |        |       |      |           |   |           |
|                   | CEAL /1 OC            |            |            | 30                  |         |      |      |        | 711   |      |           |   |           |
|                   |                       |            |            | 200                 |         |      |      |        |       |      |           |   | _         |
|                   | SEAL/LDS              |            | 10-1570-0  | X OS                | 20.0    |      |      |        | 642   | 642  |           |   | 3 CHOPXX  |
| S-604-7           | SEAL/LOS              |            | -019       | XON                 | 100.0   |      |      |        | 471   | 471  |           |   | 3 CHDPXX  |
|                   |                       |            | 70-1570-A  | Š                   | 500.0   |      |      |        | 389   | 384  |           |   | 3 CHDPXX  |
| 6-69+7            | PARKFR SEAL/LOS ANGLS |            | 70-1570-9  | ×09                 | 1000.0  |      |      |        | 404   | 404  |           |   | _         |
| 5-613-6           | PARKER SEAL/LOS ANGLS | .0750      | 71-2409    | ŝ                   | 250.0   |      |      | 40/00  |       |      |           |   | 0         |
| 5-613-6           | PARKER SEAL/LOS ANGLS |            | 71-2408-1  | 60 X                | 75.0    |      |      |        | 564   | 564  |           |   | _         |
| 5-614-80          | SEAL/LOS              | •0750      | 10-83      | X (13)              | 2000-0  |      |      | 00/07  |       |      |           |   |           |
| S-61 6-80         | SEAL / I OS           | -0750      | 1-69-01    | XUU                 | 2500 0  |      |      | 207.00 |       |      |           |   |           |
| 5-414-80          | SEAL /I DS            | 0150       | 10-83-2    |                     |         |      |      | 20120  |       |      |           |   |           |
|                   |                       |            | ۰.         |                     |         |      | 000  |        |       |      |           | a |           |

24 ∃74¢

÷

ł

;

Section Sectio

日本なないというであるとなっていたとうないのでののであるというないであるというであるというないであるというない

11

- ----

والمتعادية المعمونات وروالا وروالا والمرام المتعامية المتعادية ومعالية والمعالية

; , ;

ų

42

in the

- Series

• ł

. \$

, .\_\_\_\_\_\_, ..\_\_\_\_,

١.

•

٠

٠

| MFGR 5 DESIGNATION                          | MANUFACTURER                 | SPEC.<br>THICK. | TEST RPT NO. | TEST<br>ENVR             | TE ST<br>PRE SS | TF S T<br>T F M P | 1 MP T<br>ENFR | NO UF<br>REACT | FLASH | 5181:1<br>21 | 1151 רט<br>1151 א |                                         |      | MATL<br>COPE    |          |
|---------------------------------------------|------------------------------|-----------------|--------------|--------------------------|-----------------|-------------------|----------------|----------------|-------|--------------|-------------------|-----------------------------------------|------|-----------------|----------|
| S-614-80                                    | PARKER SEAL/LUS ANGLS        | • (1750         | 10-83-4      | <b>X O</b> 9             | 2000.0          |                   | 200            | 03/04          |       |              |                   | -                                       |      | CHCKKK          | хx       |
|                                             | PARKER SEAL/LOS ANGLS        |                 | 10-83-5      | 60 X                     | <b>6</b> •2     |                   |                |                | 782   | ١сн          |                   | -                                       | 0 13 | CHCKXX          | ××       |
|                                             | PARKER SEAL /LOS ANGLS       |                 | 10-83-6      | õ                        | 16.5            |                   |                |                | R24   | ጸዳሪ          |                   | -                                       |      | CHC K K         | ×        |
| NO. 8                                       | CONTROL PRODUCTS .INC.       |                 | 71-2411      | 20X                      | 250.0           |                   |                | 00/00          |       |              |                   | ~                                       |      | FJCKXX          | ×        |
| NO. 8                                       | CONTROL PRODUCTS+14C.        |                 | 71-2411-1    | Š                        | 75.0            | 1000              |                |                | 666N  | 666N         |                   | ~ `                                     |      | FJCKXX          | ×        |
| SCUICT 373 18PE<br>SENTEME AL 3030          | SH CU SI PAUL                |                 | 8452-11      |                          | 0,0             |                   |                |                | 0090  | 0000 V       |                   | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |      | 102470          | - >      |
|                                             | 2H CO 51 PAUL                |                 |              | ہ ہے<br>ہ ک              |                 | 220               |                |                | アナナビ  |              |                   |                                         |      |                 | <        |
| SCUICTURSE 240                              |                              |                 | 71-2595      | 2 4<br>1 1<br>1 1<br>1 1 | 0.267           | \ -<br>7 -<br>7 - |                |                |       |              |                   |                                         |      | ANDUAN          | ~ >      |
|                                             | SH COL STE FAUL              |                 | 71-2562      |                          | 578.0           | 144               |                |                |       |              |                   | -                                       |      | A A A A A A X X | < >      |
| SCOTCHCAST 282                              | BH CO. ST. PAUL              |                 | 71-2562-1    | Į                        | 783.0           | 503               |                |                |       |              |                   |                                         |      | BABGXX          | 2        |
|                                             | 6-E. SILICONE PRODUCTS       |                 | 67-0243      | 60 X                     | 1555.0          | •                 |                |                | 461   | 461          |                   | 0                                       |      | xx0000          | X        |
| SE-565/VARDY CAT                            | SILICONE                     |                 | 70-1775      | Š                        | 25.0            |                   |                |                | 854   | 854          |                   |                                         |      | DOUP X X        | ×        |
| SE-565/VARDX CAT                            | SILICONE                     |                 | 70-1775      | 60 X                     | 1500.0          |                   | 50             | 00/00          |       |              |                   | •                                       |      | XX4000          | ×        |
|                                             | SILICONE                     |                 | 70-1775      | Š                        | 1500.0          |                   |                | 01/02          |       |              |                   | •                                       |      | DCDPXX          | ××       |
|                                             | . SILICONE                   |                 | 70-1775-1    | GOX                      | 50.0            |                   |                |                | 5 :43 | 533          |                   | 5                                       |      | X X 4 0 0 0     | ××       |
|                                             | <ul> <li>SILICONE</li> </ul> |                 | 70-1775-10   | š                        | 2000.0          |                   |                |                | 410   | 410          |                   |                                         |      | X X 4000        | ××       |
|                                             | SILICONE                     | •0750           | 70-1775-11   | 60 X                     | 1500.0          |                   | 200            | 00/07          |       |              |                   | •                                       |      | 7 X 4 0 0 0     | ~        |
|                                             | SILICONE                     | • \ 750         | 70-1775-12   | š                        | 2000.0          |                   | 200            | 01/03          |       |              |                   |                                         |      | X X 4CIDO       | ××       |
|                                             | SILICONE                     | - 0750          | 70-1775-13   | č0X                      | 2500.0          |                   | 60             | 01/03          |       |              |                   | -                                       |      | X > 4 000       | ×        |
|                                             | SILICONE                     | •0750           | 70-1775-14   | ŝ                        | 3000.0          |                   | 200            | 01/01          |       |              |                   |                                         |      | 000 X X 4 000   | ×        |
|                                             | SILICONE                     | • 0750          | 70-1775-15   | X 09                     | 3500.0          |                   |                | 10/10          |       |              |                   |                                         |      | 000 P X X       | ×        |
|                                             | SILICONE                     | •0750           | 70-1775-16   | Š                        | 4000+0          |                   |                | 04/04          |       |              |                   |                                         |      | 0000 X X 4000   | ×        |
|                                             | SILICONE                     |                 | 70-1775-17   | 60%                      | 1500.0          |                   |                | 00/00          |       |              |                   |                                         |      | 2000 X X 4000   | ×        |
|                                             | SILICONE                     |                 | 81-5-11-02   | ž                        | 2000-0          |                   |                | 01/03          |       |              |                   |                                         |      | XX 4000         | ×        |
|                                             | SILICONE                     |                 | 70-1775-19   | ç0X                      | 2500.0          |                   |                | 03/04          |       |              |                   |                                         |      | XX4000          | ×        |
|                                             | SILICONE                     |                 | 70-1775-2    | Š                        | 50.0            |                   |                |                | 770   | 0110         |                   |                                         |      | 0000 X X        | ×        |
|                                             | · SILICONE                   |                 | 70-1775-20   | XC.9                     | 3000.0          |                   |                | 04/04          |       |              |                   | -                                       |      | 000 P X X       | ×        |
|                                             | SILICONE                     |                 | 70-1775-21   | ŝ                        | 5000.0          |                   | 20             | 00/04          |       |              |                   | ~ .                                     |      | XX4000          | ×        |
| SE-SUSTANUA CAL<br>Se-s-s-sustant rat       | GEE SILICUME PRODUCTS        |                 | 70-1113-22   |                          |                 |                   |                | 10/10          |       |              |                   |                                         |      | ******          | ~ >      |
|                                             | GAL STITCONE PRODUCTS        |                 | 70-1775-24   | ŝ                        | 1000.0          |                   |                | 10/10          |       |              |                   | -                                       |      |                 | <        |
|                                             | · SILICONE                   |                 | 70-1775-25   | ŝ                        | 500.0           |                   |                | 00/04          |       |              |                   |                                         |      | DOOP X X        | ×        |
|                                             | SILICONE                     |                 | 70-1775-26   | COX                      | 0.0005          |                   |                | <br> <br>      | 314   | 314          |                   |                                         |      | DODPXX          | X        |
|                                             | <ul> <li>SILICONE</li> </ul> |                 | 70-1775-3    | ×09                      | 62.0            | 1000              |                |                | 769   | 666N         |                   | 5                                       |      | DODP X X        | ××       |
|                                             | SILICONE                     |                 | 70-1775-4    | 60 X                     | 100.0           |                   |                |                | 549   | 549          |                   | -                                       |      | XX4000          | ×        |
|                                             | - SILICONE                   |                 | 70-1775-5    | Š                        | 165.0           |                   |                |                | A19   | A19          |                   | _                                       |      | DUDPXX          | ××       |
|                                             | · SILICONE                   |                 | 70-1775-6    | X C C                    | 0.003           |                   |                |                | 366   | 386          |                   | -                                       |      | DOD P XX        | ××       |
|                                             | SILICON                      |                 | 70-1775-7    | Š                        | 0.006           |                   |                |                | 428   | 42 R         |                   | -                                       |      | 2006 X X        | ××       |
| SE-S65/VAROX CAT                            | STLICSNE                     |                 | 70-1775-8    | 60X                      | 1000.0          |                   |                |                | 413   | 413          |                   | -                                       |      | DODPXX          | ××       |
| SE-565/VARUX CAT                            | STLICONE                     |                 | -12-         | õ                        | 1500.0          |                   |                |                | 379   | 379          |                   |                                         |      | DODPXX          | ×        |
| SE-303/YERUA LAI<br>Suatuk si esve 331_1/14 | DIE PRUDUCIS                 |                 | 71-2112-21   | 60X                      | 950.0           |                   |                |                | 376   | 316          |                   | ,.                                      |      | a. u            | к,<br>х, |
| CTI FOVETAL STERVE 241-1710                 |                              |                 | 7616-76      |                          |                 |                   |                | 10100          |       |              |                   |                                         |      |                 | <        |
|                                             |                              |                 |              | <b>v</b> n n             | A+0002          |                   |                |                |       |              |                   | •                                       |      |                 | <        |

22

-

8.1 i

:

ころうちゃうちゃう あちまたい うちょうちょう あまたいがくろ

:

• • •

.

a strate

•

•

.

PA(.F 43

i

X

\*

the an and any and and and and

| CRYSTAL STRAIN GACE DYNASCJENCE'<br>CRYSTAL STRAIN GACE DYNASCJENCE'<br>DIOX INSUL SP 9950-46ROSEMONT ENG. CORP<br>DIOX INSUL SP 950-46ROSEMONT ENG. CORP<br>CASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>ELASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>ELASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>LUMPS SX-150 LOT 670MATHESOM COLEMAN + BELL<br>LUMPS SX-150 LOT 670MATHESOM COLEMAN + BELL                                                             |            |           |            | CC 34.4 |      | ENER | PEACT            | POINT   | PT 01 | DIST LOS | nss 1       |    | CODE                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------|------------|---------|------|------|------------------|---------|-------|----------|-------------|----|----------------------------------------|
| CRYSTAL STRAIM GAGE DYNASCIENCE.<br>DIOX INSUL SP 990-46ROSEMONT ENG. CORP<br>DIOX INSUL SP 990-46ROSEMONT ENG. CORP<br>GLASS LAN MIL-P-997 CADILLAC PROCESS CO.<br>ELASS LAN MIL-P-997 CADILLAC PROCESS CO.<br>ELASS LAN MIL-P-997 CADILLAC PROCESS CO.<br>LUMPS SX-150 LOT 670MATHESON COLEMAN + BELL<br>LUMPS SX-150 LOT 670MATHESON COLEMAN + BELL | ~~~~       | 1-4612-0. | Š          | 2500.0  |      | 50   | 00/04            |         |       |          | •           |    | FIGIXX                                 |
| DIGX INSUL SP 950-46RDSEMGMT ENG. CORP<br>DIOX INSUL SP 950-46RDSEMOMT ENG. CORP<br>ELASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>ELASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>ELASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>LUMPS SX-150 LOT 670MATHESOM COLEMAN + BELL<br>LUMPS SX-150 LOT 670MATHESOM COLEMAN + BELL                                                                                                                              |            | 70-2134-2 | 60 X       | 1400-0  | 0001 |      |                  | 000N    | 0000  |          | V           | 5  |                                        |
| DIOX INSUL SP 950-46ROSEMONT ENG. CDRP<br>DIOX INSUL SP 950-46ROSEMONT ENG. CORP<br>DIOX INSUL SP 950-46ROSEMONT ENG. CORP<br>DIOX INSUL SP 950-46ROSEMONT ENG. CORP<br>DIOX INSUL SP 950-46ROSEMONT ENG. CORP<br>GLASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>GLASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>LUMPS SX-150 LOT 670MATHESON COLEMAN + BELL<br>LUMPS SX-150 LOT 670MATHESON COLEMAN + BELL                                                                                                                                                                                                                    | <b>1</b> 1 | 70-1986   | õ          | 1500.0  |      |      | 00/04            |         |       |          |             |    | F. S. K.XX                             |
| DIOX INSUL SP 950-46ROSEMONT ENG. CORP<br>DIOX INSUL SP 950-46ROSEMONT ENG. CORP<br>DIOX INSUL SP 990-46ROSEMONT ENG. CORP<br>DIOX INSUL SP 950-46ROSEMONT ENG. CORP<br>GLASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>GLASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>LUMPS SX-150 LOT 670MATHESON COLEMAN + BELL<br>LUMPS SX-150 LOT 670MATHESON COLEMAN + BELL                                                                                                                                                                                                               | (- I       | 70-1986-1 | 60 X       | 500.0   |      | 50   | 01/01            |         |       |          | -           |    | F JCKXX                                |
| DIOX INSUL SP 950-46ROSEMONT ENG. CORP<br>DIOX INSUL SP 950-46ROSEMONT ENG. CORP<br>DIUX INSUL SP 950-46ROSEMONT ENG. CORP<br>GLASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>GLASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>LUMPS SX-150 LOT 670MATHESON COLEMAN + BELL<br>LUMPS SX-150 LOT 670MATHESON COLEMAN + BELL                                                                                                                                                                                                                                                                                                        |            | 986-      | Š          | 1500.0  | 100  |      |                  | 666N    | 000N  |          | 4           | 13 | F JCKXX                                |
| DJOX INSUL SP 950-46RUSEMONT ENG. CORP<br>DJUX INSUL SP 950-46ROSEMONT ENG. CORP<br>GLASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>GLASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>LUMPS SX-150 LOT 670MATHESON COLEMAN + BELL<br>LUMPS SX-150 LOT 670MATHESON COLEMAN + BELL                                                                                                                                                                                                                                                                                                   |            | 70-1986-3 | X O S      | 1500.0  |      |      | 10/10            |         |       |          |             | := | F JC S X X                             |
| DJUX INSUL SP 950-46ROSEMDNT ENG. CORP<br>GLASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>GLASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>LUMPS SX-150 LOT 670MATHESON COLEMAN + BELL<br>LUMPS SX-150 LOT 670MATHESON COLEMAN + BELL                                                                                                                                                                                                                                                                                                                                             | ~          | -986      | Š          | 5000.0  |      | 20   | 40/05            |         |       |          | • •         | := |                                        |
| GLASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>GLASS LAM MIL-P-997 CADILLAC PROCESS CO.<br>LUMPS 5X-150 LOT 670MATHESON COLEMAN + BELL<br>LUMPS 5X-150 LOT 670MATHESON COLEMAN + BELL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ~          | 70-1986-5 | COX<br>COX | 5000.0  |      |      | 00/00            |         |       |          | 4           |    | F.ICKYY                                |
| GLASS LAM MIL-P-997 CADILLAC PROCESS CO<br>LUMPS SX-150 LOT 670MATHESON COLEMAN +<br>LUMPS SX-150 LOT 670MATHESON COLEMAN +                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | .0750 7    | 210       | ŝ          | 1500.0  |      |      | 01/0             |         |       |          | [           |    | CRCKXX                                 |
| LUMPS SX-150 LOT 670MATHESON COLEMAN +<br>LUMPS SX-150 LOT 670MATHESON COLEMAN +                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ~          | 70-2210-1 | 60 X       | 1000.0  |      |      |                  | 614     | 614   |          | C           | -  | CRCKXX                                 |
| LUNPS SX-150 LOT 670MATHESOM COLEMAN +<br>LUNPS SX-150 LOT 670MATHESOM COLEMAN +                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ~          | 70-2240   | Š          | 1500.0  |      | 50   | 00/04            |         |       |          | •           |    | DUCKXX                                 |
| LUMPS SX-150 LOT 670MATHFSON COLEMAN +<br>LUMPS SX-150 LOT 670MATHFSON COLEMAN +<br>LUMPS SX-150 LOT 670MATHESON COLEMAN +<br>LUMPS SX-150 LOT 670MATHESON COLEMAN +<br>RUB RC/DC 916 RUBBERCRAFT CORP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ~          | 70-2240-1 | GOX        | 1500.0  |      |      | 00/04            |         |       |          | ব           |    | UDCXXX                                 |
| LUMPS SX-150 LOT 670MATHESON COLEMAN +<br>LUMPS SX-150 LOT 670MATHESON COLEMAN +<br>LUMPS SX-150 LOT 670MATHESON COLEMAN +<br>RUB RC/PC 916 RUBBERCRAFT CORP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -          | 70-2240-2 | A-50       | 771.0   | 500  |      |                  |         |       |          | -           |    | NDCKXX                                 |
| LUMPS SX-150 LOT 670MATHESON COLEMAN +<br>LUMPS SX-150 LOT 670MATHESON COLEMAN +<br>RUB RC/DC 916 RUBBERCRAFT CORP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ~          | 70-2240-3 | A-50       | 835.0   | 528  |      |                  |         |       |          | •           |    | DCKXX                                  |
| LUMPS SX-150 LOT 670MATHESON COLEMAN +<br>RUB RC/DC 916 RUBBERCRAFT CORP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ~          | 70-2240-4 | IWN        | 752.0   | 502  |      |                  |         |       |          |             |    | NDCKXX                                 |
| RUB RC/DC 916 RUBBERCRA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -          | 70-2240-5 | IMM        | 756.0   | 503  |      |                  |         |       |          | -           |    | DOCKXX                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            | 1-2563    | A-50       | 286.0   | 370  |      |                  |         |       |          |             | -  | A X a U a C                            |
| SIL RUB RC/DC PIG RUBBERCEAFT CORP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            | 1-2563-1  | A-50       | 203.0   | 370  |      |                  |         |       |          | - }-        | _  |                                        |
| RUE SVSK-B1370-3 HANILTON ST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | . –        | 71-2264   | , ag       | 2000-0  |      |      | 407.00           |         |       |          | . <         | -  | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |
| VSK-51370-3 HAM 1, TON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            | 71-2264-1 | XOS        | 1500.0  |      |      |                  | 564     | 544   |          | • •         |    |                                        |
| S-5370 RTV GAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |            | 1-2512    | A-50       | 783.0   | 509  |      |                  |         |       |          | <b>-+</b> د |    | Hauuu                                  |
| S-5370 RTV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ~          | 71-2512-1 | A-50       | 807.0   | 506  |      |                  |         |       |          |             |    | SHOOD                                  |
| ILASTEC S-5370-RTV DDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ~          | 1-2489    | A-50       | 765.0   | 501  |      |                  |         |       |          |             |    | VOPX                                   |
| S-5370-RTV DON CORNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -          | 1-2489-1  | A-50       | 771.0   | 494  |      |                  |         |       |          | -           |    | DVDPXX                                 |
| I -O-RTV DON CORNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -          | 71-2496   | õ          | 1500.0  |      | 50   | 00/04            |         |       |          | • •         | 1  | AECKGL                                 |
| 140-RTV DOM CORNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            | 71-2496-1 | GOX.       | 1500.0  |      |      | 01/03            |         |       |          | -           | 10 | AECKGL                                 |
| 140-RTV DON CORNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -          | 71-2496-2 | Š          | 1000.0  |      |      |                  | 342     | 342   |          | - C         | 61 | AECKG                                  |
| 3118-RTV DOM CORNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | L.         | 70-2205   | GOX        | 1500.0  |      |      | 00/04            |         |       |          | ٩           | 01 | BAOPXX                                 |
| 3110-RTV DOW CORNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ~          | 70-2205-1 | š          | 1000.0  |      |      |                  | 441     | 441   |          | 0           | 13 | <b>SADPXX</b>                          |
| PILS-RTV DOW CORNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            | 0-2205-2  | 20X        | 50.0    |      |      |                  | 442     | 442   |          | c           | 61 | BADPXY                                 |
| SILE-FLY DUN CURNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ~ (        | 70-2205-3 | Š          | 100.0   |      |      |                  | 450     | 450   |          | c           | 5  | BADPXX                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ~ (        | -2027-A   | YO3        | 0.003   |      |      |                  | 403     | 0     |          | 0           | 64 | BADPXX                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            | 70-2205-5 | š          | 1500.0  |      |      |                  | 353     | 353   |          | 0           | 23 | BADPXX                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            | 9-6022-0  | X DS       | 2000.0  |      |      |                  | 382     | 392   |          | 0           | 61 | <b>SADPX</b>                           |
| SIZU RIV DON CORNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            | 71-2407   | ĝ          | 250.0   |      |      | 00/04            |         |       |          | A           | 10 | BADPXX                                 |
| 3120 RTV DON CORNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            | 71-2407-1 | 60X        | 75.0    |      |      | -<br>-<br>-<br>- | 645     | 645   |          | C           | 53 | BADPXX                                 |
| ILASTIC 601 RTV DOM CORNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |            | 71-2364   | š          | 1500.0  |      | 50   | 00/04            |         |       |          | 4           | 11 | DRDSXX                                 |
| 601 RTV DON CORNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            | 71-2364-1 | SUX        | 1500.0  |      |      | 10/10            |         |       |          | 7           | 10 | XXSQXQ                                 |
| OUT RIV DOW CORNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -          | 71-2364-2 | Š          | 1000.0  |      |      |                  | 420     | 420   |          | 2           | 13 | ORDSX                                  |
| 601 RTV DOW CORNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ~          | <b>N</b>  | LOX        | 14.7    |      | 50   | 00/04            |         |       |          | ۹           | 16 | DRDSXX                                 |
| 601 RTV DOW CORNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -          | 1-2       | LCX.       | 14.7    |      |      | 00/04            |         |       |          | ۹           | 16 | ORDSXX                                 |
| 601 RTV DOW CURNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ~          | -2364-    | 60X        | 1000.0  |      | 50   | 40/00            |         |       |          | 4           | 11 | DRDSXX                                 |
| 601 RIA DOM CORNING CORP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | 23        | ž          |         |      |      |                  |         |       |          | A           | 7  | <b>DRDSX</b>                           |
| SILASTIC 731-RIV DOW CORNING COMP .0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | • 00500 S  | P-6932    | 60X        | 5.0     | 0001 |      | -                | C 6 6 N | 0067  |          | u           | 5  | ABCKX)                                 |

0 AGE 44

۰.

5

i

:

----

•

1

או שעובען אירויניון ונוייבעלאניין יעליייער אירעער איריעער איירון יער יוייע איייר איי יין יי

United Name

THE PARTY AND IN THE PARTY OF T

Contraction of the local distance of the loc

ACT AND A COMPANY

Ĩ

i i i

,

· **P**,

i

..:

| MFGR S DESIGNATION | MANUFAC TUKER    | SPEC.           | TEST RPT NO.           | TEST<br>Enve | TEST   | TEST I<br>Temp F | I MPT N<br>FNrk R | 0 0F<br>FACT | FLASH<br>POINT | FIRF PR<br>P1 D1 | 0151 LUSS | а -<br>Г - | MATL<br>CUDE |                                                   |
|--------------------|------------------|-----------------|------------------------|--------------|--------|------------------|-------------------|--------------|----------------|------------------|-----------|------------|--------------|---------------------------------------------------|
|                    |                  | • • • • • • • • |                        |              | ,      |                  |                   |              |                |                  |           |            |              |                                                   |
| SILASTIC 731-RTV   | DON CORNING CGRP | • 00 5 0        | SP-6932-1              |              | 10.0   |                  |                   |              | 130            | 82U              |           |            | 3 ABCKX      | XXX                                               |
| CILACTIC 731-8TV   | DOM CORNING CORP | . 0050          | SP-6932-10             | 20X          | 1000.0 |                  | 5                 | 10/00        |                |                  |           | 4          |              | X X X                                             |
| -                  | CORNING          | • 0050          | SP-6932-11             | õ            | 1500.0 |                  | -                 | 10/00        |                |                  |           | 4          |              | XXX                                               |
| •                  | CORNING          | • 00 50         | SP-6932-12             |              | 2000.0 |                  | C                 | 10/00        |                |                  |           | ۷ I (      |              | XXX                                               |
|                    | CURNING          | .0050           | SP-6932-13             |              | 2500.0 |                  | -                 | 10/00        |                |                  |           | 4<br>1     |              | ***                                               |
| -                  | CORN ING         | • 0050          | SP-6932-14             |              | 3000.0 |                  | U                 | 0.01         |                |                  |           | A 10       |              | XX                                                |
|                    | CORNING          | .0050           | SP-6932-15             |              | 3500.0 |                  | U                 | 02/01        |                |                  |           | 4 I.       |              | XX                                                |
|                    | CORN I NG        | .0050           | SP-6932-16             | GOX          | 0.0004 |                  | 0                 | 10/00        |                |                  |           | 4<br>7     |              | XXX                                               |
|                    | CORNING          | .0050           | SP-6932-17             | ¥U2          | 4500.0 |                  | Û                 | 00/01        |                |                  |           | A L        | 4            | XXX                                               |
| •                  | CORNING          | .0050           | SP-6932-18             | X09          | 5000.0 |                  | 0                 | 0/04         |                |                  |           | A 1(       | ٠.           | <b>BCKXX</b>                                      |
|                    | CORN ING         | .0050           | SP-6932-19             | Š            | 500.0  | ~                | 200               | 10/00        |                |                  |           | 4          | •            | SCK XX                                            |
|                    | CORNING          | • 0050          | SP-6932-2              | GOX          | 20.0   | 1000             |                   | _            | - 656N         | 000N             |           | 7          | ≪ ∶          | BCKXX                                             |
|                    |                  | .0050           | SP-6932-20             | Š            | 1000.0 | ~                | 200               | 10/00        |                |                  |           | 4          | <            | ×××                                               |
| •                  | CORMING          | .0050           | 5 <b>P-693</b> 2-21    | X09          | 1500.0 | ŝ                | Ť                 | 10/00        |                |                  |           | 4          | ٠            | BCNXX                                             |
| •                  | CORM I NO        | .0050           | SP-6932-22             | 20X          | 2000.0 | ~                | _                 | 00/04        |                |                  |           | A 1        | ≪            | BCKXX                                             |
| •                  | CORMING          |                 | 5P-693-23              | COX          | 500.0  |                  | -                 | 00/04        |                |                  |           | A 1        | ۹            | BCKXX                                             |
|                    |                  |                 | 5P-6932-24             | Š            | 500.0  |                  | -                 | 00/04        |                |                  |           | يت<br>له   | ۹            | BCKXX                                             |
|                    | Del Mano         |                 | SP-6932-25             | X O S        | 1500.0 |                  | 50                | 00/04        |                |                  |           | <b>A</b>   |              | BCKXX                                             |
|                    |                  |                 | 50-4032-24             | 202          | 1500-0 |                  |                   | 40/00        |                |                  |           | 4          | •            | ХXХ                                               |
|                    |                  | 0200            |                        |              | 25.0   |                  |                   |              | 708            | 708              |           | 0          |              | BCKXX                                             |
|                    | CORN ING         |                 | 5-2640-46<br>50-1033-4 |              |        |                  |                   |              | 420            | 620              |           |            | -            | XXX                                               |
|                    | CORMING          | 0000            |                        | ŝ            |        |                  |                   |              | 2 4 4          |                  |           |            |              | BCKXX                                             |
|                    | CORNING          | • 0050          | 5P-6932-5              | 203          | 0.04   |                  |                   |              |                | 000              |           |            | ۲.           | ~~~~                                              |
| STLASTIC TOLARTY   | CORNING          | -0050           | SP-6932-6              | Š            | 0.06   |                  |                   |              |                |                  |           | 2,5        |              |                                                   |
| •                  | DOM CORNING CORP | • 0050          |                        | X<br>09      | 62.0   | 1000             |                   |              | 693            | 666N             |           |            | -            | 222                                               |
|                    | DON CORNING CORP | • 0050          | SP-6932-8              | Š            | 165.0  |                  |                   |              | 668            | 668              |           |            |              | KXX                                               |
| -                  | CORNING          | .0050           | SP-6932-9              | COX          | 1565.0 |                  |                   |              | 8<br>7         | 404              |           |            | -            | XXX                                               |
| KELASTIC BRI-RTV   | CORNING          | .0750           | 70-2193                | ç<br>Ç       | 1500.0 |                  |                   | 01/02        |                |                  |           |            |              | 5 X X                                             |
|                    | CORNING          | • 0750          | 70-2193-1              | COX<br>COX   | 1500.0 |                  | 50                | 20/04        |                |                  |           | < -        | -            | K K S                                             |
|                    | CORNING          |                 | 70-2193-11             | ŝ            | 25.0   |                  |                   |              | 686            | 680              |           |            |              | BADSXX                                            |
|                    | CORNING          |                 | 70-2193-12             | 20X          | 50.0   |                  |                   |              | 663            | 663              |           |            |              | 272                                               |
| STLASTIC BBI-RTV   |                  |                 | 70-2193-2              | ŝ            | 1000.0 |                  |                   |              | 377            | 377              |           |            | _            | HAUSAX                                            |
|                    | DON CORNING CORP |                 | 70-2193-3              | č09          | 1500.0 |                  | -                 | 10/10        |                |                  |           |            | -            | SXX                                               |
| STLASTIC BEL-RTV   | _                |                 | 70-2193-4              | ğ            | 50.0   |                  |                   |              | 4-15           | 475              |           |            |              |                                                   |
|                    | DON CORNING CORP |                 | 70-2193-5              | X O S        | 100.0  |                  |                   |              | 435            | 1 11             |           | 2          | -            |                                                   |
|                    | CORNING          |                 | 70-2193-6              | ŝ            | 500.0  |                  |                   |              | 363            | 363              |           | 0          |              | BADSXX<br>5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 |
|                    |                  |                 | 70-2193-7              | X09          | 1500-0 |                  |                   |              | 326            | 326              |           | 20         | -            | XXSONG                                            |
| STLASTIC BBI-RTV   | CORNING          |                 | 70-2193-A              | Š            | 2000.0 |                  |                   |              | 300            | 300              |           |            |              | RKCURG                                            |
|                    | COPNING          |                 | 70-2193-9              | č0X          | 1000.0 | 432              |                   |              |                |                  |           |            | _            | BADSXX                                            |
|                    |                  |                 | 71-2490                | A-50         | 781.0  | 500              |                   |              |                |                  |           |            |              | DOUPXX                                            |
|                    | CORNING          |                 | 71-2490-1              | A-50         | 764.0  | 505              |                   |              |                |                  |           |            |              | XX4000                                            |
| AL LIN THIM        | TER CORP         |                 | 71-2377                | X09          | 500.0  |                  | 50                | 00/04        |                |                  |           | -<br>-     | -            | ATFKXX                                            |
| AL CONTRACTOR      | DEXTER           |                 | 71-2377-1              | COX          | 500.0  |                  |                   | 00/04        |                |                  |           | V 1 V      | 4            | ****                                              |
|                    | DEXTER           |                 | 71-2377-2              | ŝ            | 100.0  | 1000             |                   |              | 666N           | 606N             |           | 7          | <            | TFXXX                                             |
|                    | ISM.DIFL         |                 | 71-2561                | INN          | 787.0  | 5 O.R            |                   |              |                |                  |           | F          | u.           | JCKGP                                             |
| ILICUME CIN DENGA  |                  |                 | ļ                      |              |        |                  |                   |              |                |                  |           |            |              |                                                   |

የልናኑ ፋና

1

5

;

- A CONTRACT

<u>.</u>}

te , ..**.**.

.

•

**.** .

۰.

s 🔶 en la grant d'anneach

;

:

3

**N**4 131

. ا

- --

••;

Ş

.

BURREY - CARACTER

| HER S DESIGNATION     | MANUFACTURER                       | SPEC.<br>THICK. | TEST RPT NO. | TES T<br>ENVR | TEST   | TEMP | IMPT<br>ENER | ND OF<br>REACT | FLASH  | ғјағр<br>рт ()] | PrGP WY<br>DIST LOSS | α   | ¥Ū<br>FF     | MATL<br>C ODE                           |
|-----------------------|------------------------------------|-----------------|--------------|---------------|--------|------|--------------|----------------|--------|-----------------|----------------------|-----|--------------|-----------------------------------------|
| C T0                  | GLASS CLDTM3M.DIELECTRIC MATLS DIV |                 | 71-2561-1    | H             | 7.87.0 | 510  |              |                |        |                 |                      | •   | u.           | JCKGD                                   |
| STLICONE GLASS CLOTH  | ELECTRO PRODUCTS                   |                 | 70-2096      | 60X           | 1500.0 |      | 50           | 00/04          |        |                 |                      | 4   | 11 8         | BGCKGD                                  |
|                       | ELECTRO PROPUCTS                   |                 | 70-2096-1    | ŝ             | 1500.0 |      |              | 01/03          |        |                 |                      | -   |              | CCK GO                                  |
| -                     | ELECTRO PRODUCTS                   |                 | 70-2096-2    | 60X           | 1000.0 |      |              |                | 23     | 509             |                      | 0   | ۍ.           | BGCKGO                                  |
|                       | PLASTICS +                         |                 | 70-1593-2    | š             |        | 1000 |              |                | 066N   | 665N            |                      | 7   |              | CHOPXX                                  |
| O-AING                | PLASTICS + RUUBER                  |                 | 70-1593-3    | Xos           |        | 1000 |              |                | 755    | 000N            |                      | -   | m            | CHOPXX                                  |
|                       |                                    |                 | 71-2694      | š             | 1500.0 |      |              | 10/10          |        |                 |                      | -   |              | DPDAXX                                  |
| 2                     |                                    |                 | 71-2694-1    | COX           | 1000.0 |      |              |                | 364    | 364             |                      | 2   | _            | DPDAXX                                  |
| 2                     | MICHOLS ENCINEERING                |                 | 71-2386      | Š             | 500-0  |      | 50           | 00/04          |        |                 |                      |     |              | A X A Q M J                             |
| w                     | MICHOLS ENGINEERING                |                 | 71-2386-1    | COX           | 500.0  |      | •            | 40/00          |        |                 |                      |     |              | CHOPXX                                  |
| E RUB 4C70            | MICHOLS ENGINEERING                |                 | 71-2386-2    | ğ             | 100.0  |      |              |                | 535    | 535             |                      |     |              | CHDPXX                                  |
| RUDBER . ANS          | 3357AGC INC.                       |                 | 71-2360      | XOS           | 500.0  |      | 50           | 00/00          |        |                 |                      |     |              | OVERXX                                  |
| E RUBBER.ANS          | TAGC THC.                          |                 | 1-2390-1     | XQ3           | 500.0  |      |              | 40/00          |        |                 |                      | 4   |              | DVCKXX                                  |
| RUBBER . ANS          | •                                  |                 | 71-2380-2    | 60 X          | 100.0  |      |              |                | 550    | 550             |                      |     | -            | DVCKXX                                  |
|                       | SEAL/LOS AN                        |                 | 71-2373      | š             | 500.0  |      | 50           | 00/04          |        | 1<br>L          |                      |     |              | CHDPXX                                  |
|                       | SEAL/LOS                           |                 | 71-2373-1    | GOX           | \$00°0 |      |              | 40/00          |        |                 |                      |     | 01           | CHOPXX                                  |
| \$1L1COME \$-355-7    | PARKER SEAL/LOS ANGLS              |                 | 71-2373-2    | ž             | 1500-0 |      |              | 10/10          |        |                 |                      |     |              | (HOPYY                                  |
| STLICONE S-355-7      |                                    |                 | 71-2373-3    | SDX           | 1500-0 |      | 50           | 90/00          |        |                 |                      |     |              |                                         |
|                       |                                    |                 | 71-2373-4    | 209           | 100.0  |      | R            |                | 57.A   | 578             |                      |     |              | x x agri                                |
| SIL ICONE 5-355-7     | SEAL/LOS                           |                 | 71-2373-5    | TOX           | 14.7   |      | 50           | 90/00          |        |                 |                      |     |              | C HOPYY                                 |
| S111CONE S-355-7      | SEAL/LOS                           |                 | 71-2373-6    | I DX          | 14.7   |      | 200          | 70700          |        |                 |                      | ( • |              |                                         |
|                       | SEAL/LDS                           |                 | 7-678-17     |               | 0.0001 |      | 32           | 10/00          |        |                 |                      |     |              |                                         |
|                       | SEAL /L DS                         |                 | 71-73-8      | ŝ             |        |      |              |                |        |                 |                      |     |              | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |
|                       | SEAL /1 OF AW                      |                 |              |               |        |      |              | 20/10          |        |                 |                      |     |              | K K A G H J                             |
|                       | C.R. CILTONE BRANCO                |                 |              | 30            |        |      |              |                |        | 1.1             |                      |     | _            | XXONU                                   |
|                       |                                    |                 | 1271-44      | ŝ             | 1265.0 |      |              |                | 470    | 470             |                      |     | 13 4         | ANDPXX                                  |
|                       |                                    |                 | 69-1281-1    | XOS           | 1565.0 |      |              |                | 432    | 432             |                      |     |              | ANDPXX                                  |
|                       | Pere SILICONE PRODUCTS             | 0510*           | 2-1821-69    | Š             | 1500.0 |      |              | 10/10          |        |                 |                      |     |              | ANDPXX                                  |
| ME 555U               | GAE SILICONE PRODUCTS              | •0750           | 69-1281-3    | GOX           | 1500.0 |      | 20           | 00/04          |        |                 |                      |     | -            | XXdQHV                                  |
| SQUDER                | ENG.                               |                 | 70-1584      | Š             | 1500.0 |      | 20           | 00/04          |        |                 |                      |     | 11           | FX MR XX                                |
| SCLOER NO.            |                                    |                 |              | × OS          | 1500.0 |      |              | 00/04          |        |                 |                      |     | _            | XXXXXX                                  |
| SULUEX                |                                    |                 | 1-1984-1     | ž             | 1500.0 | 1000 |              |                | - 666N | 605N            |                      |     |              | FXMRXX                                  |
| SULDER                | UNA YOWAH                          |                 | 70-1924      | XOS           | 1500.0 |      | 50           | 00/04          |        |                 |                      |     | _            | FKMAXX                                  |
|                       | HAMDY ANI                          |                 | 79-1924      | Š             | 1500.0 |      |              | 00/04          |        |                 |                      |     |              | FKMAXX                                  |
|                       |                                    |                 | 70-1922      | ž             | 1500.0 |      | Š            | 10/00          |        |                 |                      |     |              | XXXMMC                                  |
| SILVER SOLDER-BRAZING | EUTECTIC CORP                      |                 | 70-1922      | ŝ             | 1500.0 |      |              | 00/04          |        |                 |                      |     |              | OMMRXX                                  |
| STLVER.AA FINE        | GAC                                | •               | 70-2061      | A-50          | 778.0  | 506  |              |                |        |                 |                      |     | -            | OMMRXX                                  |
| R.AA FINE             |                                    |                 | 70-2061 1    | A-50          | A07.0  | 507  |              |                |        |                 |                      |     | 15           | OMMEX.                                  |
| 567 LEAK              |                                    |                 | 70-1827      | XOU<br>COX    | 5000.0 |      | ¢.           | 40/00          |        |                 |                      |     | _            | FYGUX                                   |
| 5                     | SINCO                              |                 | 70-1827-1    | õ             | 5000.0 |      | •            | 00/04          |        |                 |                      | ( < | ين ر<br>10 - | EYGUXX                                  |
| 3                     | SOLDER                             |                 | 71-2657      | A-50          | 772.0  | 517  |              |                |        |                 |                      |     | _            | FAMAND                                  |
|                       | KESTER SOLDER CO.                  |                 | 71-2657-1    | A-50          | 766.0  | 505  |              |                |        |                 |                      |     |              | FKMSMP                                  |
|                       | GAC                                | .0750           | 70-2143      | 60X           | 4500.0 |      |              | 00/00          |        |                 |                      |     | _            | OHMSHR                                  |
| 96 75                 | GAC                                |                 | 21           | A-50          | -      | 500  |              |                |        |                 | •                    | -   | ŝ            | AMSHNO                                  |
| S# 96                 | GAC                                |                 | 70-2143-2    | A-50          | 771.0  | 514  |              |                |        |                 |                      | •   | 5            | AMS MMO                                 |
|                       |                                    |                 |              |               |        |      |              |                |        |                 |                      |     |              |                                         |

• 24

- ---

÷=,==,

. . .

:

:

. .

40

;; .

١

×

PAGE 45

| HER S DESIGNATION        | MANUFACTURER       | SPEC.        | TEST RPT NO. | TEST<br>Envr               | TEST<br>PRESS | TEST .<br>Temp e | MPT  | NO UF F<br>React P | FLASH FIR<br>Point Pt | F PP(1P | WT R<br>USS I |   | MATL        |
|--------------------------|--------------------|--------------|--------------|----------------------------|---------------|------------------|------|--------------------|-----------------------|---------|---------------|---|-------------|
| SN 96.5 SN/AG 3.5        | GAC                |              | 70-2143-3    | N204                       | 361.5         | 195              |      |                    |                       |         | 1             | 4 | AMSMMO      |
| N 96.5 SM/AG 3.5         |                    |              | 70-2143-4    | N204                       | 360.0         | 190              |      |                    |                       |         |               |   | SMN MNO     |
| SN-60                    | SOLDER             | -            | 10-1960      | A-50                       | 763.0         | 507              |      |                    |                       |         | -             | 5 | FKMSMP      |
| SR-60                    |                    | ~            | 70-1960-1    | A-50                       | A14.0         | 518              |      |                    |                       |         | -             |   | FKHSMP      |
| 5N-60                    | SOLDER             | 1-           | 70-1960-2    | INI                        | 750.0         | 509              |      |                    |                       |         | -             |   | FARSME      |
|                          | KESTER SOLDER CO.  | ~            | 10-1960-3    | HMH                        | 756.0         | 507              |      |                    |                       |         | -             |   | FKMSMP      |
| 5M-60 00-5-571           | KESTER SOLDER CO.  | -            | 70-2137      | š                          | 4500.0        | I                | 0    | 20/04              |                       |         | 4             |   | FKMSMF      |
| SEFE0 00-S-571           | KESTER SOLDER CO.  | ~            | 10-2137-1    | 60 X                       | 1000-0        |                  |      | 00/00              |                       |         | Δ             |   | E KMSMD     |
| 58-60 40-S-572           | SOLDER             |              | 70-2137-2    | XOS                        | 1000-0        | Ŷ                | 200  | 10/10              |                       |         |               |   | FKMSMG      |
| SH-#0 00+2-21            | SOLDER             | ~            | 10-2137-3    | XUI                        | 14.7          |                  |      | 90/00              |                       |         | •             |   | L X M X M Z |
| SH-60 00-S-571           | SOLDER             |              | 70-2137-4    | TOX                        | 14.7          | ^                |      | 40/00              |                       |         |               |   | PK M S M S  |
| SW-60 00-5-571           | SDL DER            |              | 10-2137-5    | A-50                       | 781-0         | 503              |      |                    |                       |         |               |   | E K M S M D |
| Ś.,                      | SOLDER             |              | 71-2329      | 2<br>2<br>2<br>2<br>2<br>3 | 1500-0        |                  | 50 0 | 0/04               |                       |         | • •           |   | FKMSMS      |
|                          |                    | , <b>1</b> - | 1-2320-1     | XUU                        | 1500-0        |                  |      | 70700              |                       |         | <             |   | EKMSMD      |
| 1                        |                    |              | 10-2137-6    | N204                       | 289.4         | 130              | 2    |                    |                       |         |               |   | FKMAMP      |
| SW-60-C. S-571.          |                    | ~            | 10-2137-7    | N204                       | 297.7         | 144              |      |                    |                       |         | 4             |   | FXMSMP      |
| 172-2-70. 0769-0784/0ENS | Y                  | ,-           | 71-2653      | A-50                       | 766.0         | 506              |      |                    |                       |         | F             |   | FKMPM       |
|                          |                    | ~            | 1-2653-1     | A-50                       | 765.0         | 520              |      |                    |                       |         | -             |   | FKMPMS      |
|                          | بر<br>هو           | -            | 11-2660      | A-50                       | 743.0         | 502              |      |                    |                       |         | -             |   | FKMSMI      |
| SOLUEN 996M/5 SB         |                    | ~            | ri-2660-1    | A-50                       | 698.0         | 504              |      |                    |                       |         | -             |   | FKMSMP      |
| SOLDER. SILVER           |                    |              | 70-1952      | A-50                       | 821.0         | 494              |      |                    |                       |         | -             |   | FXMRX3      |
| SOLDER SELVER            |                    |              | 70-1952-1    | A-50                       | 760.0         | 505              |      |                    |                       |         | -             |   | FKMRXX      |
| SOLDER'S SILVER.         |                    |              | 70-1952-2    | I                          | 745.0         | 696              |      |                    |                       |         | -             |   | F KMR X)    |
| SELUCIA SULVER           |                    |              | 10-1952-3    | INI                        | 808.0         | 512              |      |                    |                       |         | +             |   | FKMRXX      |
|                          | RUBBER             |              | 10-1968      | A-50                       | 319.0         | 541              |      |                    |                       |         | -             |   | IVC 2 X)    |
| 5K 654-70-               | RUBBER             |              | 0-1968-1     | A-50                       | 521.0         | 478              |      |                    |                       |         | -             |   | CVC Z XX    |
|                          | RUBBER             |              | 70-1968-2    | A-50                       | 767.0         | 504              |      |                    |                       |         | -             |   | CX Z DAU    |
| SH 634-70                | R URBER            | -            | 0-1968-3     | I Z Z                      | 732.0         | 493              |      |                    |                       |         | -             |   | (XZ 2X)     |
| 634-70                   | -RU88ER            |              |              | IWH                        | 769.0         | 502              |      |                    |                       |         | -             |   | UVC Z XI    |
|                          | •                  | <b></b>      |              | 4-50                       | 472.0         | 442              |      |                    |                       |         | -             |   | CHC ZXX     |
| _                        | N RUBBER D         | , <b>-</b>   |              | <u>۸-5</u>                 | 315.0         | 39 J             |      |                    |                       |         | -             |   | () HC Z XI  |
|                          |                    |              |              | çõ                         | 100.0         |                  |      |                    | 622 62                | ~       | C             |   | I)PDGXX     |
| •                        |                    |              |              | Š                          | 500.0         |                  | 50   | 40/06              |                       |         | 4             |   | CX 90dC     |
| n                        | I NDUSTR I         |              |              | XOS.                       | 500.0         |                  |      |                    | 435 435               | 5       | 0             |   | CX DOd C    |
| 0                        | ••                 |              |              | Ř                          | 59.0          |                  |      |                    |                       | t       | 0             |   | OPDG X)     |
|                          | •                  | ~            |              | COX                        | 1500.0        |                  |      |                    | 396 396               | ę       | 0             |   | NPDGXX      |
| ŝ                        | INDUSTRIE          | -            |              | ŝ                          | 2000-0        |                  |      |                    |                       | ø       | ٥             |   | OPDG X)     |
| -                        | I NDUS TR I        | L            |              | 60 X                       | 1000.0        |                  |      |                    |                       | I       | ٥             |   | OPDGXY      |
|                          |                    | :            |              | ະ<br>ອິ                    | 1000.0        |                  | ·    |                    |                       |         | 0             |   | 0PDG X X    |
| -                        | INDUSTRI           | ŗ.           |              | 60 X                       | 500.0         |                  | o    | 00/04              |                       |         | <             |   | OPDGXX      |
| <b>1</b> 7.              |                    | -            |              | ŝ                          | 1500.0        |                  | 50 0 | 00/00              |                       |         | -             |   | OPOGX       |
|                          | • •                |              | 1-2253-4     | CCX<br>CCX                 | 1500.0        |                  |      | 01/01              |                       |         | 7             |   | XXUOdO      |
|                          |                    |              | 71-2253-5    | š                          | 1000,0        |                  | C    | 1/02               |                       |         | ۲             |   | OPDGX       |
|                          | CERCENT SUMMETRICE | F            | •            |                            |               |                  |      |                    |                       |         |               |   |             |

.....

\_ .

-- -

1 . . . . .

:

.

.

•

• - <sup>•</sup>•

PAGE 47

•••

•

\*

١.

1

ì

1

and the second sec

an han the same with a second of the

ł

. . . .

-- -

.

いいろうちょうちょうからとうできまするいろうちのないのでのない

Į-

4

| MFCR S DESIGNATION             | MANUFACTURER                           | SPEC.<br>THICK. | TEST RPT NO. | TES T<br>ENVR | TEST<br>PRESS | TEST<br>TEMP | I MP T<br>ENER | NU OF<br>REACT | FL ASH<br>PUINT | F T R E      | Pol : | L USS |        | £ັບັ   | MATL<br>CODE    |
|--------------------------------|----------------------------------------|-----------------|--------------|---------------|---------------|--------------|----------------|----------------|-----------------|--------------|-------|-------|--------|--------|-----------------|
| SE-2702-75 FLUDROC ALBOM       | ON CARGENT THOUGTOILS                  |                 | 71-2253-8    | <b>4</b> 03   | 26 . O        |              |                |                | 000             | 011          |       |       |        |        |                 |
|                                |                                        |                 |              |               | •             |              |                |                | 5 2 L           |              |       |       |        |        | 10688           |
|                                |                                        |                 | 10-62        |               |               |              | 0              | 10100          | 500             | 505          |       |       |        | -      | 220222          |
| 58-69-70                       |                                        |                 | 10-62-1      | şõ            | 1500-0        |              | 2              | 20/10          |                 |              |       |       |        | 52     |                 |
| SR6-0410CT0 F/G-5404-1023H     | 1023H CO. ST. PAUL                     |                 | 71-2364      | Ň             | 500.0         |              | 50             | 00/04          |                 |              |       |       |        |        | Secking Section |
| SR6-0410CTD F/6-5404-1023H     | CO. ST.                                |                 | 71-2364-1    | COX           | 500.0         |              | •              | 40/00          |                 |              |       |       |        |        | CKGD            |
| SRE-0310CT0 F/6-5406-1023M     | CO. ST.                                |                 | 71-2384-2    | XOS           | 100.0         |              |                |                | 484             | 484          |       |       |        |        | BFCKGD          |
| SRG-2119CTD F/G-5469-1023N     | 3                                      |                 | 71-2385      | X09           | 500.0         |              | 50             | 00/04          |                 |              |       |       |        |        | BECKGO          |
| SR0-2115CT0 F/6-5469-1023M     | CD+ 51+                                |                 | 71-2385-1    | ŝ             | 500.0         |              |                | 40/00          |                 |              |       |       |        |        | BFCKGD          |
|                                | 1023M CO. ST. PAUL                     |                 | 71-2385-2    | XOS           | 100.0         |              |                |                | 474             | 474          |       |       |        |        | FCKGD           |
|                                | C.K.                                   |                 | 70-2105      | XOS           | 5000.0        |              | 50             | 40/00          |                 |              |       |       |        | II DI  | HWI WHO         |
|                                | Ę                                      |                 | 70-2105-1    | Š             | 5000.0        |              |                | 00/00          |                 |              |       |       |        |        | HWIWHO          |
| 2<br>2                         |                                        |                 | 70-2105-2    | š             | 6800.0        |              |                | <b>4</b> 0/ JO |                 |              |       |       |        |        | OMALK:          |
|                                |                                        |                 | 71-2268      | 60x           |               | 1000         |                |                | 666N            | 00 <b>6N</b> |       |       |        | •      | AUDPXX          |
|                                | LATEX                                  |                 | 71-2569      | Š             | 1500.0        |              | 50             | 03/03          |                 |              |       |       |        | -      | <b>88YXX</b>    |
|                                | LATEX                                  |                 | 71-2569-1    | Š             | 250.0         |              |                | 00/03          |                 |              |       |       |        | •      | ABBYXX          |
|                                | LATEX                                  |                 | 71-2569-2    | ŝ.            | 1000.0        |              | 50             | 05/10          |                 |              |       |       |        | •      | 88YXX           |
|                                | LATEX                                  |                 | 71-2569-3    | × Og          | 1250.0        |              | 20             | 10/10          |                 |              |       |       |        | -      | 88YXX           |
|                                | LATEX                                  |                 | 71-2569-4    | Š             | 9 00.0        |              | 20             | 00/07          |                 |              |       |       |        |        | ABBYXX          |
|                                |                                        |                 | 71-2569-5    | Ň             | 1000.0        |              | 25             | õ              |                 |              |       |       |        |        | ABBYXX          |
| D 136 ADMESIVE                 | LATEX                                  |                 | 71-2569-6    | ŝ             | 9000          |              | 25             | 00/02          |                 |              |       |       |        |        | <b>3BYXX</b>    |
| POLYESTR+105A                  | RESULTIONIX INC                        |                 | 71-2677      | A-50          | 755.0         | 500          |                |                |                 |              |       |       |        |        | PACCXX          |
| D POLYESTA+105A                | RESULTROWIN INC                        |                 | 71-2677-1    | A-50          | 767.0         | 517          |                |                |                 |              |       |       |        |        | BACCXX          |
| STEEL CO PLATED                |                                        |                 | 71-2715      | A-50          | 759.0         | 23           |                |                |                 |              |       |       |        | _      | BINMOHS         |
|                                |                                        |                 | 71-2715-1    | A-50          | 763.0         | 521          |                |                |                 |              |       |       |        |        | SHOWNO          |
|                                | ARMCD                                  |                 | 71-2564      | XOS           | 1500.0        |              | 3<br>S         | 00/04          |                 |              |       |       |        | _      | BDH IMN         |
|                                |                                        |                 | 71-2564-1    | ŝ             | 1500.0        |              |                | 00/04          |                 |              |       |       |        |        | BOMIMN          |
|                                |                                        |                 | 70-2033      | A-50          | 777.0         | 501          |                |                |                 |              |       |       |        |        | DHONHO          |
|                                | ALLOY                                  |                 | 70-2033-1    | Ī             | 832.0         | 529          |                |                |                 |              |       |       |        |        | DMOMMO          |
| STRUETE VER-2<br>STRUETE ORD-2 | HATHES ALLUT CURP<br>HAVNES ALLUT CORP |                 | 70-2033-2    |               | 783.0         | 510          |                |                |                 |              |       |       | - F    | 53     | OMOMNO          |
| STELL ITE-25                   | ALLOY                                  |                 | 71-2241      |               | 1500.0        |              | 50             | 90/00          |                 |              |       |       |        |        |                 |
| STELL 17E25                    | ALLOY                                  |                 | 71-2241-1    | SOX SO        | 1500-0        |              | 2              | 00/00          |                 |              |       |       |        |        | CHUMAN          |
| STELL ITE-60                   | ALLOY                                  |                 | 71-2243      | ŝ             | 1500.0        |              | 50             | 00/00          |                 |              |       |       |        |        | DMOMONO         |
| - STBLL ITE-48                 | HAVNES ALLDY CORP                      |                 | 71-2249-1    | Š             | 1500.0        |              |                | 00/04          |                 |              |       |       |        |        | DMMMMMM         |
| STYCAST 1090                   | ENERSON CUMING INC                     |                 | 71-2482      | A-50          | R16.0         | 528          |                |                |                 |              |       |       |        |        | BABHXX          |
|                                | CUNING                                 | •               | 71-2482-1    | A-50          | 769.0         | 49 A         |                |                |                 |              |       |       | -      | 5      | BABHXX          |
|                                | CUNING                                 |                 | 71-5001      | GOX           | 5000.0        |              | 50             | 40/00          |                 |              |       |       |        |        | ABHXX           |
|                                | CUMING                                 |                 | 71-5001      | š             | 5000.0        |              | 50             | 00/07          |                 |              |       |       |        | 11 8/  | BABHXX          |
|                                | CURING                                 |                 | 71-5001-1    | 60.0          | 500.0         |              |                | 00/04          |                 |              |       |       |        |        | ABHXX           |
|                                | CUMING                                 |                 | 71-5001-1    | Š             | 500.0         |              |                | 00/04          |                 |              |       |       |        | 10 8/  | BAGHXX          |
|                                | CUMING                                 |                 | 71-5001-10   | X OS          | 1000.0        |              |                | 01/04          |                 |              |       |       | -      | 0      | <b>BABHXX</b>   |
| - 1                            | COMING                                 |                 | 71-5001-10   | ŝ             | 1000.0        |              |                | 01/04          |                 |              |       |       | -      | 8<br>0 | BABHXX          |
| -THLAST 1090                   | ENERSING COMING INC                    |                 | 71-5001-11   | XOS           | 50.0          |              |                |                | 670             | 670          |       |       | -<br>- | 3 8/   | ABHXX           |

4

-

£

:

1 1

- ちっていたいないのであるのであるとないとうとう

1.10

ためとうちょう

100

Statistic transmission of the states

ž

ĺ

PAGE 48

MATERIAL TEST DATA B' MANUFACTURFR S RESIGNATION AS OF 31 JAN 72

\* ~~ \*

Ş

.

| TTTCS:         1000         FFR550         01/01         1100         01/01           STTCS:         1000         FFR550         01/01         01/01         1100           STTCS:         1000         FFR550         01/01         01/01         1100           STTCS:         FFR550         01/01         01/01         01/01         1100           STTCS:         FFR550         01/01         01/01         01/01         1100           STTCS:         FFR550         01/01         01/01         01/01         1100         01/01           STTCS:         FFR550         01/01         01/01         01/01         01/01         1100         01/01           STTCS:         FFR550         01/01         01/01         01/01         01/01         1100         01/01         1100           STTCS:         FFR550         01/01         01/01         01/01         01/01         1100         01/01         1100         1100           STTCS:         FFR550         01/01         01/01         01/01         01/01         1100         1100         1100         1100         1100         1100         1100         1100         1100         1100         1100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                    | , MANUFACTURER     | SPEC.<br>THICK. | TEST RPT ND. | TEST<br>ENVR    | iest<br>Prejs | TEMP  | SMPT N<br>ENER R | O UF<br>EACT | FLASH FIR<br>POINT PT | רצוט<br>1157 | L USS | ч н<br>н   | MATL<br>CODE     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|-----------------|--------------|-----------------|---------------|-------|------------------|--------------|-----------------------|--------------|-------|------------|------------------|
| 0         Firsts         00000         Firsts         00000         01/01         11         11           0         Firsts         CUMUNE         CUM         00000         01/01         01/01           0         Firsts         CUMUNE         CUMUNE         CUMUNE         00000         01/01           0         Firsts         CUMUNE         CUMUNE         CUMUNE         01/01         01/01           1         Firsts         CUMUNE         CUMUNE         CUMUNE         01/01         01/01         01/01           1         Firsts         CUMUNE         CUMUNE         CUMUNE         01/01         01/01         01/01         01/01         01/01         01/01         01/01         01/01         01/01         01/01         01/01         0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1090               | CUMING             |                 | .71+5001-2   | X 09.           | 1000.0        |       | 0                | 10/1         |                       |              |       | 1 10       | BABH             |
| Contraction         Contraction <thcontraction< th=""> <thcontraction< th=""></thcontraction<></thcontraction<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1090               | CLMING .           |                 | 71-5901-3    | 60 X            | 1500-0        |       | 0                | 101          |                       |              |       |            | RARHI            |
| Contract                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1090               | CUMING             |                 | 71-5001-4    | õ               | 2000.0        |       | C                | 1/01         |                       |              |       | 1 10       | BABHU            |
| Contract                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1020               |                    |                 | 71-5001-5    | 60X             | 2500.0        |       | 0                | 1/01         |                       |              |       | 1 10       | BABMX            |
| 0         11-5-601-7         6.01         10.03         11-7         10.03           1/Cort 9         5-555         Contract Inc.         0750         77-3601-7         6.01         10.03         11.03           1/Cort 9         5-555         Contract Inc.         0750         77-3601-7         6.01         10.03         11.03           1/Cort 9         5-555         Contract Inc.         0750         77-3601-7         6.01         10.03         11.03           1/Cort 9         5-555         Contract Inc.         0750         77-3601-7         6.01         10.03         11.03         11.13           1/Cort 9         5-555         Contract Inc.         0770         77-3601-7         6.01         10.03         11.01         11.01           1/Cort 9         5-555         Contract Inc.         77-3601-7         10.01         10.04         11.11         11.01           2/Cort 9         5-555         Contract Inc.         77-365         11.23         10.10         11.01         11.11         11.01         11.01         11.01         11.01         11.01         11.01         11.01         11.01         11.01         11.01         11.01         11.01         11.01         11.01         11.01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1090               | CUM ING            |                 | 71-5001-6    | ğ               | 1000.0        |       | 0                | 0/04         |                       |              |       | 2          | ABAH             |
| Contract         Control         Contro         Control         Control <t< td=""><th>0601</th><th>CULI NG</th><th></th><td>11-5001-7</td><td>ž</td><td>1000.0</td><td></td><td>0</td><td>1/03</td><td></td><td></td><td></td><td>2</td><td>RARHX</td></t<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0601               | CULI NG            |                 | 11-5001-7    | ž               | 1000.0        |       | 0                | 1/03         |                       |              |       | 2          | RARHX            |
| Victor         Markane         Control inc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1090               | CUNTING            |                 | 71-5001-8    | ž               | 1500.0        |       | 0                | 1/03         |                       |              |       | 2          | RABHY            |
| VICAT 9     FORTSW CONNECTING     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     50750     5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | T 1090             | CUNTNG             |                 | 71-5001-9    | CDX<br>CDX      | 0.0006        |       |                  | 10/1         |                       |              |       | 2          |                  |
| LICAT 9         Eventsyn         Comment (me)         Comment (me) <thcomment (me)<="" th="">         Comment (me)</thcomment>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | T 2651/CAT 9       | CUNING             |                 | 70-2425      | ŝ               |               |       | 6                |              |                       |              |       | 2:         |                  |
| I/CAT         Wigs for the life         Mile         Mile <th>T 2651/CAT 9</th> <th>CUMING</th> <th></th> <td>70-2045-1</td> <td>ξo<sub>2</sub></td> <td>15.00.0</td> <td></td> <td>,<br/>,</td> <td>20/1</td> <td></td> <td></td> <td></td> <td>12</td> <td></td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | T 2651/CAT 9       | CUMING             |                 | 70-2045-1    | ξo <sub>2</sub> | 15.00.0       |       | ,<br>,           | 20/1         |                       |              |       | 12         |                  |
| I/CAT         WASSAN Contracting         Contact         Sector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2651/CAT 9         | CUNING             |                 | 70-2045-7    | Sox So          | 1000.0        |       | 1                |              | 4                     |              |       |            |                  |
| TUCATT         PERFASSING         CUT/NOT         PERFASSING         PERFEASING         PERFEAS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2651/ČAT 9         | CUMING             |                 | 70-2045-3    | Š               | 2.00          |       | C                |              | n                     | r            |       | 32         |                  |
| TICAT 9         EMEASING CAPING: INC         TO - 2005-5         A-25         Sec. 516         TI - 201           TICAT 9         EMEASING CAPING: INC         T1-2312         EMEASING CAPING: INC         T1-2341         EMEASING CAPING: INC         T1-2344         T2-2344         T1-2344                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2651/CAT 9         | CULING             |                 | 70-2045-4    | A-50            | 254.0         | 1.0.1 | •                |              |                       |              | -     |            |                  |
| ICAT 9         FERTION         T1-2312         GOV         D1/01         56         56         11           2-FT         PERTION         CMTIGE INC         71-2312         GOV         56         56         11           2-FT         PERTION         CMTIGE INC         71-2312         GOV         56         56         11           2-FT         PERTION         CMTIGE INC         71-2401-0         GOV         56         56         11           2-FT         PERTION         CMTIGE INC         71-2401-0         GOV         56         56         11         11           2-FT         EMERTION         CMTIGE INC         71-2401-0         GOV         773-0         514         11         11           2-FT         EMERTION         T1-2401-1         GOV         773-0         514         1000         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2651/CAT 9         | CLEAR              |                 | 70-2065-5    | 05 - <b>4</b>   | A 00 - 0      | 515   |                  |              |                       |              | -     | 3 2        |                  |
| L/Cart •         Exception Contract the first of th | 2651/CAT 9         | CHING              |                 | 71-2312      |                 |               |       | C                | 707 (        |                       |              |       |            |                  |
| Z=FT         Exerct for state to the file two states of the file two stwo stwo states of the file two states of the file two stw | 2651/CAT 9         | CUNING             |                 | 71-2312-1    | (DX             | 1500-0        |       | 2                |              | 54                    |              |       |            |                  |
| Z=FT         ENERGIA CUNING INC         T1-2460         A=50         D10-101         D10-101                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | T 2762-FT          | <b>Cum NG</b>      |                 | 71-2641      | SO<br>SO        |               |       | C                | `            |                       |              | -     |            |                  |
| Z-FT         ENERGIA CUNTURE INC.         T1-2401-0         CONT         Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2782-FT            | CUMING             |                 | 71-2601-1    |                 |               |       | • •              |              |                       |              |       |            | 100010<br>100010 |
| Z-FT         EMENSING CUNTING INC.         T1-2400         A=50         T73-0         518         569         569         569         569         569         569         569         569         569         569         569         569         569         569         713           ELASS BEADS         311 Co. ST. PAUL         71-2400         A=50         773-0         511         773-0         511         713         569         569         713         713         712-3000         713         712-3000         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712         712 <th>2762-FT</th> <th>Contract of</th> <th></th> <td>71-2401-2</td> <td></td> <td></td> <td></td> <td>2</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td>X 9 8 6 0</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2762-FT            | Contract of        |                 | 71-2401-2    |                 |               |       | 2                |              |                       |              | -     |            | X 9 8 6 0        |
| GLASS BEADS       Mr. (1)       T1-2600       T1-2600 <th>2762-FT</th> <th>CUMING</th> <th></th> <td>71-24012</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td>X9840</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2762-FT            | CUMING             |                 | 71-24012     |                 |               |       |                  |              |                       |              | -     |            | X9840            |
| GLASS BEADS       311 (0)       71-20001       4-50       71-2001       4-50       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001       71-2001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |                    |                 |              |                 |               |       |                  | D<br>n       | 2                     |              | _     | -          | x 99 - 0         |
| GLASS BEADS         In Co.         ST. PAUL         Total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | SUPPLEX 18         |                    |                 | 71-2400-1    |                 |               |       |                  |              |                       |              | •     | <b>;</b>   |                  |
| GLASS         BERNS         SH CG. ST. FAUL         CO.201100         N999         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | GLASS              | AM CO. ST. DAU     |                 |              |                 |               | *     |                  |              |                       |              |       | <b>C</b> : | F JOPF           |
| GLASS       BEADS       MILTON       TOTAL       TOTAL <t< th=""><th>GLASS READS</th><th></th><th></th><th></th><th></th><th></th><th>0001</th><th></th><th>552<br/>572</th><th></th><th></th><th>-</th><th></th><th>BETAX</th></t<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | GLASS READS        |                    |                 |              |                 |               | 0001  |                  | 552<br>572   |                       |              | -     |            | BETAX            |
| 11.4NS-3674       Maril Ton       STANDARD       71-2300       COX       STANDARD       71-2300       STAND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | GLASS READS        |                    |                 | 1-1002-02    |                 | 0-0001        | 000   |                  | 66N          |                       | •            | -     | <u>n</u>   | BEIAX            |
| 1370-11.485-3674       HMILTTOR       57.400.40       50       01/01       71-2309-1       60X       5000.00       50       01/01       7110         1370-11.485-3674       HMILTTOR       57.400.40       50       50       639       639       639       639       639       01       01         1370-11.485-3674       HMILTTOR       57.400.40       71-2309-1       60X       5000.00       00/04       639       639       639       01       01       11         1370-113.481.706       57.400.40       71-2309-1       60X       2000.00       00/04       639       639       639       01       01       11       11       11       11       200-1       60X       2000.00       00/04       01       11       11       11       11       11       200-1       60X       2000.00       00/04       11       11       11       11       20       00/04       01       01       11       11       11       11       11       11       11       200-0       00/04       50       00/04       11       11       11       11       11       11       11       11       11       11       11       11       11       11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 11.AKC.3676        |                    |                 | 1002-01-0    |                 | 0,002         | 1000  |                  |              |                       | •            | -     |            | 86 I A X         |
| \$1377-11.485-5674       HMTLTOK STANDARD       71-2309-7       60X       500.0       50       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       63       600 <th>270-11-045 -367</th> <th>HANTI THE STANDARD</th> <th></th> <th>17-2300-1</th> <th></th> <th>0-000</th> <th></th> <th></th> <th>10/1</th> <th></th> <th></th> <th>•-</th> <th></th> <th>DUBOX</th>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 270-11-045 -367    | HANTI THE STANDARD |                 | 17-2300-1    |                 | 0-000         |       |                  | 10/1         |                       |              | •-    |            | DUBOX            |
| 0.1370-136.will TON STANDARD       71-2309-3       500       000       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       639       630       00/04       10       11       10       11       10       11       10       11       10       11       10       11       10       11       10       11       230       630       500       00/04       60       10       11       10       10       11       10       11       10       11       10       11       10       11       10       11       10       11       10       11       10       11       10       11       10       11       10       11       10       11       10       11       10       11       10 <t< td=""><th>21370-11-ANS-2674</th><th>HART TO STANDAD</th><th></th><td></td><td>ŝ</td><td>0.0000</td><td></td><td>0</td><td>÷</td><td></td><td></td><td></td><td></td><td>0180X</td></t<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 21370-11-ANS-2674  | HART TO STANDAD    |                 |              | ŝ               | 0.0000        |       | 0                | ÷            |                       |              |       |            | 0180X            |
| 11-2305       500.0       00/04       639       639       639       639       639       0         11370-136       FAMTLTON STANDARD       71-2305       500.0       00/04       600       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | R1970-11-AMS-3474  | _                  |                 | 2-6062-11    | N N             | 0.00001       |       |                  | 69           | 63                    | -            | -     |            | XDBUQ            |
| Tile       Tile <thtile< th="">       Tile       Tile</thtile<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    | _                  |                 |              |                 | 3000.0        |       | •                |              | 63                    | •            | -     |            | D1180X           |
| 1370-17       TUNESTON       T1-2374       GUX       2500.00       50       00/04       A       10         1370-18.MNS-4926       HANILTON       STANDARD       T1-2375       GUX       2500.00       50       00/04       A       11         1370-18.MNS-4926       HANILTON       STANDARD       T1-2375       GUX       2500.00       50       01/01       7       11         1370-21       HANILTON       STANDARD       T1-2316       GUX       2500.00       50       01/01       7       11         1370-21       HANILTON       STANDARD       T1-2316       GUX       2500.00       00/04       A       11         1370-23       HANILTON       STANDARD       T1-2306       GUX       2500.00       00/04       A       10         1370-23       HANILTON       STANDARD       T1-2306-1       GUX       2500.00       00/04       A       10         1370-23       HANILTON       STANDARD       T1-2306-1       GUX       2500.00       00/04       A       10         1370-23       HANILTON       STANDARD       T1-2206-1       GUX       2500.00       00/04       A       10         1370-23       HANILTON       <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | B1370-158          |                    |                 | COG7-11      |                 |               |       | 5 (              | 0/04         |                       |              | -     |            | F I X X X        |
| 01370-10.4NS-4926       HAHLTON STANDARD       71-2307       600       50       00/04       71         01370-19       T1 ALLOY HARLTON STANDARD       71-2315       600       50       01/01       71         01370-21       HARLTON STANDARD       71-2315       600       50       01/01       71         01370-21       HARLTON STANDARD       71-2310       600       50       01/01       71         01370-23       HARLTON STANDARD       71-2310       600       50       00/04       651       61         01370-23       HARLTON STANDARD       71-2306       600       50       00/04       651       61         01370-23       HARLTON STANDARD       71-2306       600       00/04       651       61         01370-23       HARLTON STANDARD       71-2306       600       00/04       651       61         01370-23       HARLTON STANDARD       71-2306       600       00/04       61       67         01370-23       HARLTON STANDARD       71-2296       600       00/04       61       710         01370-32       HARLLTON STANDARD       71-2296       600       00/04       61       710         01370-32       HARLLTON STANDAR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | BISTO-17 TUNGSTON  |                    |                 | 71-2374      |                 |               |       |                  |              |                       |              | -     | 3:         |                  |
| B1370-19A TI ALLOY HANTLTON STANDARD       71-2375       GOX       2000.0       01/01         B1370-21       HANTLTON STANDARD       71-2315       GOX       2000.0       00/04       51       651       61       10         B1370-21       HANTLTON STANDARD       71-2310       GOX       2000.0       00/04       651       651       61       10         B1370-23       HANTLTON STANDARD       71-230.6       GOX       2000.0       00/04       651       61       0       11         B1370-23       HANTLTON STANDARD       71-230.6       GOX       600.0       00/04       651       61       10         B1370-23       HANTLTON STANDARD       71-230.6       GOX       600.0       00/04       651       61       10         B1370-32       HANTLTON STANDARD       71-230.6       GOX       600.0       00/04       61       10         B1370-32       HANTLTON STANDARD       71-2298       GOX       600.0       00/04       61       710         B1370-5       HANTLTON STANDARD       71-2298       GOX       2000.0       00/04       61       710         B1370-7       HANTLTON STANDARD       71-2298       GOX       2000.0       00/04                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 81370-16.AMS-4926  |                    |                 | 71-2307      | -               | 2506.0        |       |                  | 40/0         |                       |              | -     | ::         |                  |
| B1370-21         HMRLTON STANDARD         71-2310         GOX         2000.0         00/04         651         651         61         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63         63                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 81970-19A TI ALLOY |                    |                 | 71-2375      | -               | 2500.0        |       |                  | 10/1         |                       |              |       | 12         |                  |
| #1370-21       HANILTON STANDARD       71-2310-1       GOX       Tool       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651       651                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 12-04618           |                    |                 | 71-2310      |                 | 2000.0        |       |                  | 7070         |                       |              |       | • •        |                  |
| ###70-23A         M##TLTON STANDARD         71-2306         GOX 5000.0         00/04         4         10           #1370-23A         HAMTLTON STANDARD         71-2306         GOX 5000.0         00/04         A         10           #1370-23A         HAMTLTON STANDARD         71-2306         GOX 5600.0         00/04         A         10           #1370-30A         HAMTLTON STANDARD         71-2306         GOX 5600.0         00/04         A         10           #1170-30A         HAMTLTON STANDARD         71-2299         GOX 6600.0         00/04         A         10           #1370-5         HAMTLTON STANDARD         71-2299         GOX 5000.0         01/01         51A         710           #1370-5         HAMTLTON STANDARD         71-2296         GOX 1500.0         01/01         51A         710           #1370-5         HAMTLTON STANDARD         71-2296-1         GOX 1500.0         00/04         7         10           #1370-7         HAMTLTON STANDARD         71-2296-1         GOX 1500.0         00/04         7         10           #1370-7         HAMTLTON STANDARD         71-2290-1         GOX 1500.0         00/04         7         10           #1370-7         HAMTLTON STANDARD         7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 81370-21           |                    |                 | 71-2310-1    |                 | 1500.0        |       | •                | •<br>•       |                       |              |       | 2          |                  |
| BI370-23A     HAMILTON STANDARD     71-2306-1     G0X     6800.0     00/04     A 10       BI370-30A     HAMILTON STANDARD     71-2308     G0X     6800.0     00/04     A 10       BI370-32A     HAMILTON STANDARD     71-2308     G0X     6800.0     50.00/04     A 10       BI370-32A     HAMILTON STANDARD     71-2299     G0X     6800.0     50.00/04     A 11       BI370-5     HAMILTON STANDARD     71-2298     G0X     2000.0     50.00/04     A 11       BI370-7     HAMILTON STANDARD     71-2296-1     G0X     2000.0     51.0     51.8       BI370-7     HAMILTON STANDARD     71-2300     G0X     1500.0     60X     1500.0       BI370-7     HAMILTON STANDARD     71-2300-1     60X     1500.0     0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 81570-23A          |                    |                 | 71-2306      |                 | 5000.0        |       | õ                | )            |                       |              |       | 12         | FICHRY           |
| BI370-90A         HAMILTON STANDARD         71-230B         GOX         2000.0         00/04         A 10           B1370-92A         HAMILTON STANDARD         71-2299         GOX         6800.0         50         00/04         A 11           B1370-92A         HAMILTON STANDARD         71-2298         GOX         6800.0         50         00/04         A 11           B1370-5         HAMILTON STANDARD         71-2298         GOX         1500.0         51         518         A 11           B1370-7         HAMILTON STANDARD         71-2296-1         GOX         1500.0         61/01         518         D 13           B1370-7         HAMILTON STANDARD         71-2300-1         GOX         1500.0         01/01         518         D 13           B1370-7         HAMILTON STANDARD         71-2300-1         GOX         1500.0         600         26.0         10/04         D 13           B1370-7         HAMILTON STANDARD         71-2300-1         GOX         1500.0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 <t< td=""><th>AL370-23A</th><th>_</th><th></th><td>71-2306-1</td><td></td><td>6800.0</td><td></td><td>õ</td><td>0/04</td><td></td><td></td><td></td><td></td><td>FKMRX</td></t<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | AL370-23A          | _                  |                 | 71-2306-1    |                 | 6800.0        |       | õ                | 0/04         |                       |              |       |            | FKMRX            |
| Wall Tow Standard         71-2299         GOX 6800.0         50         00/04         AIL           Pail Tow Standard         71-2298         GOX 2000.0         00/01/01         710         710           Pail Tow Standard         71-2298         GOX 2000.0         00/04         710         710           Pail Tow Standard         71-2298         GOX 2000.0         01/01         518         518         01           Pail Tow Standard         71-2296-1         GOX 1500.0         00/04         518         01         710           Pail Tow Standard         71-2396-1         GOX 2000.0         00/04         518         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01         01 <th>V06-01 0 18</th> <th></th> <th></th> <td>71-2308</td> <td></td> <td>2000.0</td> <td></td> <td>õ</td> <td>0/04</td> <td></td> <td></td> <td></td> <td></td> <td>FLXXX</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | V06-01 0 18        |                    |                 | 71-2308      |                 | 2000.0        |       | õ                | 0/04         |                       |              |       |            | FLXXX            |
| #1370-5         MANILTON STANDARD         71-2298         GDX         2000.0         01/01         T         0           8:370-5         HAMILTON STANDARD         71-2296-1         GDX         1500.0         91/01         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1 <th>¥25-01618</th> <th></th> <th></th> <td>71-2299</td> <td>-</td> <td>5800.0</td> <td></td> <td>-</td> <td>104</td> <td></td> <td></td> <td></td> <td></td> <td>DMMRX</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ¥25-01618          |                    |                 | 71-2299      | -               | 5800.0        |       | -                | 104          |                       |              |       |            | DMMRX            |
| BE370-5         HAMILTON STANDARD         71-2295-1         GDX         1500.0         518         D 13           BE370-7         HAMILTON STANDARD         71-2300         GDX         2000.0         D         0         0         1         0         13         0         13         0         13         0         13         0         13         0         13         0         13         0         13         0         13         0         13         0         13         0         13         0         13         0         13         0         13         0         13         0         10         0         10         0         10         0         10         0         10         0         10         0         10         0         10         0         10         0         10         0         10         0         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10 <th10< th=""> <th10< th="">         10</th10<></th10<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 5-0-2              |                    |                 | 71-2298      |                 | 2000.0        |       |                  | 10/1         |                       |              |       |            | XXXX             |
| 81370-7 HAMILTON STANDARD 71-2300 G0X 2000.0 00/04 64 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 5-0-2              |                    |                 | 71-2296-1    | 20X             | 1500.0        |       |                  |              | 51                    |              | -     |            | XXXA             |
| 81376-7 HAMILTON STANDARD 71-2300-1 G0X 1500.0 444 444 613                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2-01618            |                    |                 | 71-2300      | ŝ               | 2000-0        |       | č                | 4            |                       |              |       |            | XXXAU            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 81376-7            |                    |                 | 71-2300-1    | X US            | 1500.0        |       |                  |              |                       |              |       |            |                  |

1.5

3

PACF 49

- --

MATERIAL TEST DATA BY MANUFACTURER S DESIGNATION AS OF 31 JAN 72

PAGE 50

Ę.

5 **F** 

A second second of the second of the first second sec

*r*.;

+ + 14

i n

Ţ

•

| SYX #1370-A       FMULTON STANDAD       FMULTON STANDAD       FMULTON STANDAD         SYX #1370-A       HMULTON STANDAD       FMULTON STANDAD       FUE 2302       EGX 2000-0         SYX #A1370-A       HMULTON STANDAD       FUE 2302       EGX 2000-0       FUE 2002         SYX #AND 18*       EON COMMING CORP       -0750       T1-2302       EGX 1970-0         SYX #AND 18*       EON COMMING CORP       -0750       T0-2037-1       EGX 1970-0         SYX #AND 18*       EON COMMING CORP       -0750       T0-2037-1       EGX 1900-0         SYX #AND 18*       EON COMMING CORP       -0750       T0-2037-1       EGX 1900-0         SYX #AND 18*       EON COMMING CORP       707-2037-4       EGX 2000-0       EGX 2000-0         SYX #AND 18*       EON COMMING CORP       707-2037-4       EGX 2000-0       EGX 2000-0         SYX #AND 18*       EON COMMING CORP       707-2037-4       EGX 2000-0       EGX 2000-0         SYX #AND 18*       EON COMMING CORP       707-2037-4       EGX 2000-0       EGX 2000-0         SYX #AND 18*       EON COMMING CORP       707-2037-4       EGX 2000-0       EGX 2000-0         SYX #AND 18*       EON COMMING CORP       707-2037-4       EGX 2000-0       EGX 2000-0         SYX #AND 18*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | > DESIGNATION MANUFACTURER    | THICK.     |           | ENVR       | PRESS 1        | TEMP        | ENER | REACT | INI Od | -     | 2000 |      |          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------|-----------|------------|----------------|-------------|------|-------|--------|-------|------|------|----------|
| Main for the standard         Consists Core         Consists Core <thconsists core<="" th=""> <thconsists core<="" th="">         Co</thconsists></thconsists>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ACT INC.                      |            |           | 200        |                |             |      |       |        |       |      |      |          |
| Man IL TOR STANDAD         TI-2390-1         GOX 1500.0           13         0000 CONNING CONP         0750         77-2390-1         MHH         779.0           14         0000 CONNING CONP         0750         77-2397-1         GOX 1500.0         90.0           14         0000 CONNING CONP         0750         77-2017-1         GOX 1500.0         90.0           15         0000 CONNING CONP         0750         77-2017-1         GOX 1500.0         90.0           16         0000 CONNING CONP         0750         77-2017-1         GOX 1500.0         90.0           16         0000 CONNING CONP         77-2017-1         GOX 1500.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0         90.0 <t< td=""><td></td><td></td><td>2062-11</td><td></td><td>0000Z</td><td></td><td></td><td>00/06</td><td></td><td></td><td></td><td></td><td></td></t<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |            | 2062-11   |            | 0000Z          |             |      | 00/06 |        |       |      |      |          |
| Image: Contract of the second secon                                                                                                                                                                                                                                                                                                                                                                      | MOI TIMM                      |            | 71-2302-1 |            | 1500.0         |             |      |       | ž      | 564   |      |      | DVXXXX   |
| B         DOW COMMING CONP         -0750         71-2590-1         NHH         779-00           DOM COMMING CONP         -0750         70-2097-1         60X         1000-0           DOM COMMING CONP         -0750         70-2097-1         60X         1000-0           DOM COMMING CONP         -0750         70-2097-1         60X         1000-0           DOM COMMING CONP         70-2097-1         60X         1000-0           DOM COMMING CONP         70-2097-4         60X         1000-0           DOM COMMING CONP         70-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | DON CORNING                   |            |           |            | 785.0          | 510         |      |       |        |       |      |      |          |
| Hold Communic Comp<br>Book Communic Comp<br>Communic Comp<br>Book Communic Comp<br>Book Communic Comp<br>Down Comm<br>Down Com<br>Down Com<br>Down Comm<br>Down Comm<br>Down Comm<br>Down Comp<br>Down Comm<br>Dow | DON COUNING                   |            |           |            | 729.0          | 501         |      |       |        |       |      |      |          |
| DOM COMMING COMP         0750         70-2057-1         600         1700.0           DOM COMMING COMP         70-2057-1         600         100.0           DOM COMMING COMP         70-2057-1         600         100.0           DOM COMMING COMP         70-2057-5         600         100.0           DOM COMMING COMP         70-2057-6         600         100.0           DOM COMMING COMP         70-2057-6         600         100.0           DOM COMMING COMP         70-2057-6         600         100.0           DOM COMMING COMP         70-2057-7         600         100.0           NUMBER         M         71-2061         600         100.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | DON CONVING                   | .0750      |           | X S        | 1500-0         | •           | 50   | A0100 |        |       |      |      |          |
| None         Construct Constrant Constrant Construct Constrant Construct Construct Construct C                                                                                                                                                                                                                                                                                                                                                                               |                               | 0750       | -         | 202        |                |             | 2    |       |        |       |      |      |          |
| Model         Construction         Construction <thconstruction< th="">         Construction</thconstruction<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |            | c         |            |                |             |      | 10/10 |        |       |      |      |          |
| Dev         COMPLEX         COMPLEX <thcomplex< th=""> <thcomplex< th=""> <thcompl< td=""><td></td><td></td><td>~</td><td>Ň</td><td>0.04</td><td></td><td></td><td></td><td>616</td><td>616</td><td></td><td></td><td></td></thcompl<></thcomplex<></thcomplex<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |            | ~         | Ň          | 0.04           |             |      |       | 616    | 616   |      |      |          |
| DOW COMMING CONF         TO-2037-4         GOX         You of the control of                                                                                                                                                                                                                                                                                                                                                                                                 | CONVINC                       |            |           | X          | 1000.0         |             |      |       | 371    | 371   |      |      |          |
| DOW COMMING CORP<br>MUDBER         TO-2037-4<br>but COMMING CORP<br>MUDBER         TO-2037-5<br>but COMMING COM                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | CORN INC                      |            |           | XQS        | 50-0           |             |      |       | 414    | 414   |      |      |          |
| DOW CONNING CORF         TO-2037-5         GOX         S000.0           MUDBER         DOW CONNING CORP         TO-2037-5         GOX         S000.0           MUDBER         MALESTOM RUBBER CO.         T1-2711-1         A-90         671.0           MUDBER         GLOVE         CANLESTOM RUBBER CO.         T1-2361         GOX         S00.0           MUDBER         GLOVE         CANLESTOM RUBBER CO.         T1-2361-10         GOX         S00.0 </td <td>CONVINC</td> <td></td> <td></td> <td>ECX</td> <td>100-0</td> <td></td> <td></td> <td></td> <td>207</td> <td>207</td> <td></td> <td></td> <td>ANOUN D</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | CONVINC                       |            |           | ECX        | 100-0          |             |      |       | 207    | 207   |      |      | ANOUN D  |
| NUMBER         Non-2005         <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |            | 2067-6    |            |                |             |      |       |        |       |      |      |          |
| MUDBER         Dev COMMING CORP         TO-2057-7         EDX         TOUD           NUDBER         NN         TO-2057-7         EDX         TOON         TO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |            |           |            |                |             |      |       |        |       |      |      | AXADAD - |
| DOW CONNING CORP<br>NUMBER         TO-2097-1         GOX         Z0000.0           NUMBER         NR         TO-2097-7         GOX         Z0000.0           NUMBER         NR         TO-2097-7         GOX         Z0000.0           NUMBER         NR         TO-2097-7         GOX         Z000.0           NUMBER         NR         TO-2017-1         A-90         671.0           NUMBER         RLDYE         TO-2017-1         A-90         671.0           NUMBER         GUARLESTON NUBBER         TO-2017-1         A-90         671.0           NUMBER         GLOYE         CHARLESTON NUBBER         TO-2017-1         A-90         671.0           NUMBER         GLOYE         CHARLESTON NUBBER         TO-2017-1         A-90         671.0           NUMBER         GLOYE         CHARLESTON NUBBER         TO-2017-1         GOX         2500.0           NUMBER         SEAL/LOS ANGLS         -0750         69-1566-1         GOX         2500.0           NUMBER         SEAL/LOS ANGLS         -0750         69-1566-1         GOX         2500.0           NUMBER         SEAL/LOS ANGLS         -0750         69-1566-1         GOX         2500.0           NUMER         SEAL/LOS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               |            |           | NUS<br>SUS | 0.00c1         |             |      |       | *      | 415   |      |      |          |
| Moder         To-2057-9         GCX         10000           NUMBER         NI         71-2711         A-90         671.0           NUMBER         GLOVE         CHANLES TON RUMBER CO.         71-2711         A-90         671.0           NUMBER         GLOVE         CHANLES TON RUMBER CO.         71-2711         A-90         671.0           NUMBER         GLOVE         CHANLES TON RUMBER CO.         71-2716         A-90         671.0           NUMBER         GLOVE         CHANLES TON RUMBER CO.         71-2716         A-90         671.0           NUMBER         GLOVE         CHANLES TON RUMBER CO.         71-2316-1         GOX         7000.0           NUMBER         GLOVE         SANCLS         67750         89-1566-1         GOX         710.0           NUMBER         SEAL/LOS ANGLS         07750         69-1566-1         GOX         7000.0           NAKER         SEAL/LOS ANGLS         07750         69-1566-1         GOX         7000.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | DATE CONNELING                |            |           | X          | 2000.0         |             |      |       | 234    | 234   |      |      | BADPXX   |
| MUNDER         DOW CORNING CORP         TO-2057-9         GOX         23.0           NUMBER         NI         T1-2711         A-90         671.0           NUMBER         NI         T1-2711         A-90         671.0           NUMBER         NI         T1-2711         A-90         671.0           NUMBER         CHARLES TOM RUBBER CO.         T1-2711         A-90         671.0           NUMBER         CHARLES TOM RUBBER CO.         T1-2341         60X         500.0           NUMBER         CHARLES TOM RUBBER CO.         T1-2341         60X         500.0           NUMBER         GLOVE         CHARLES TOM RUBBER CO.         T1-2341         60X         500.0           NUMBER         GLOVE         CHARLES TOM RUBBER CO.         T1-2341         60X         500.0           PARCEN         SEAL/LOS ANGLS         07750         69-1566-11         60X         25.0           PARCEN         SEAL/LOS ANGLS         07750         69-1566-12         60X         2500.0           PARCEN         SEAL/LOS ANGLS         07750         69-1566-12         60X         2500.0           PARCEN         SEAL/LOS ANGLS         07750         69-1566-12         60X         5000.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | DOK COMING                    |            |           | ¥09        | 1000.0         | <b>39</b> 6 |      |       |        |       |      |      | _        |
| NUMBER         NR         71-2711         A-50         653.0           NUMBER         NA         71-2711         A-50         653.0           NUMBER         NA         71-2711         A-50         653.0           NUMBER         NA         71-2711         A-50         653.0           NUMBER         CLOVE         NALESTON RUDBER CO.         71-2361         602         500.0           NUMBER         CLOVE         CHARLESTON RUDBER CO.         71-2361         602         500.0           NUMBER         FEAL/LOS ANGLS         MCIS         MCIS         500.0         500.0           PARCEN         SEAL/LOS ANGLS         0750         69-1564-11         602         25.0           PARCEN         SEAL/LOS ANGLS         07750         69-1564-11         602         200.0           PARCEN         SEAL/LOS ANGLS         07750         69-1564-12         602         200.0 </td <td>SON CORNING</td> <td></td> <td></td> <td><b>BOX</b></td> <td>25.0</td> <td></td> <td></td> <td></td> <td>454</td> <td>494</td> <td></td> <td></td> <td></td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SON CORNING                   |            |           | <b>BOX</b> | 25.0           |             |      |       | 454    | 494   |      |      |          |
| NUMBER         NR         TI-ZTIL-i         ACC         S00.0           NUMBER         CLOVE         CHARLESTOM RUBBER CO.         TI-ZTIL-i         ACC         500.0           NUMBER         CLOVE         CHARLESTOM RUBBER CO.         TI-ZTIL-i         ACC         500.0           NUMBER         CLOVE         CHARLESTOM RUBBER CO.         TI-ZTIL-i         ACC         500.0           PARKER         SEAL/LOS         MGLS         -0750         69-1564-1         GOX         25.0           PARKER         SEAL/LOS         MGLS         -0750         69-1564-1         GOX         2500.0           PARKER         SEAL/LOS         MGLS         -0750         69-1564-1         GOX         2000.0           PARKER         SEAL/LOS         MGLS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | RUBBER                        |            |           | 04-4       | 655.0          | 4AA         |      |       |        | 2     |      |      |          |
| NUMBER GLOVE       CHARLESTOM RUBGER CO.       71-2361       607       900.0         RUBBER GLOVE       CHARLESTOM RUBGER CO.       71-2361       607       900.0         PARKER SEAL/LOS ANGLS       MGLS       71-2361       607       900.0         PARKER SEAL/LOS ANGLS       0750       69-1366-10       607       300.0         PARKER SEAL/LOS ANGLS       0750       69-1366-110       607       300.0         PARKER SEAL/LOS ANGLS       07750       69-1366-110       607       300.0         PARKER SEAL/LOS ANGLS       07750       69-1366-110       607       3000.0         PARKER SEAL/LOS ANGLS       07750       69-1566-110       607       500.0         PARKER SEAL/LOS ANGLS       07750       69-1566-110       607       500.0         PARKER SEAL/LOS ANGLS       07750       69-1566-10       607       500.0         <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               |            |           |            |                |             |      |       |        |       |      |      |          |
| MURLER SEAL/LOS ANGLS         MILESTON RUBBER CO.         MILESTON RUBBER CO. <td>DIMPER CLARK PUARTECTON</td> <td></td> <td>DUCKAX</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | DIMPER CLARK PUARTECTON       |            |           |            |                |             |      |       |        |       |      |      | DUCKAX   |
| MUNDER GLOWE       COMMERS FIL/LOS MUELS       71-2361-1       GOX       500         PARKER SEAL/LOS MUELS       MOLES FIL/LOS MUELS       0750       69-1566-1       GOX       25.0         PARKER SEAL/LOS MUELS       MOLES FIL/LOS MUELS       0750       69-1566-1       GOX       25.0         PARKER SEAL/LOS MUELS       07750       69-1566-11       GOX       2500.0         PARKER SEAL/LOS MUELS       07750       69-1566-11       GOX       2000.0         PARKER SEAL/LOS MUELS       07750       69-1566-11       GOX       7700.0         PARKER SEAL/LOS MUELS       07750       69-1566-11       GOX       7700.0         PARKER SEAL/LOS MUELS       07750       69-1566-11       GOX       7700.0         PARKER SEAL/LOS MUELS       07750       69-1566-16       GOX       7700.0         PARKER SEAL/LOS MUELS       07750       69-1566-16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | RUDBER GLUVE LUARLESIUM       | <b>D</b> ( |           | Š          | 0.005          |             | 0    | 10/00 |        |       |      |      |          |
| TIL NUMBER CIO-         T1-2361-2         GCX         100.0           PARKER SEAL/LOS ANGLS         0.0750         69-1566-1         GCX         5.0           PARKER SEAL/LOS ANGLS         0.0750         69-1566-1         GCX         25.0           PARKER SEAL/LOS ANGLS         0.0750         69-1566-1         GCX         25.0           PARKER SEAL/LOS ANGLS         0.0750         69-1566-11         GCX         2500.0           PARKER SEAL/LOS ANGLS         0.0750         69-1566-11         GCX         500.0           PARKER SEAL/LOS ANGLS         0.0750                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | HODEK GLUYE CHARLESIUM KUBBER |            |           | Ň          | 500.0          |             |      | 70/00 |        |       |      |      |          |
| PARKER       SEAL/LOS       MGLS       69-1564-10       GOX       53.0         PARKER       SEAL/LOS       AMGLS       -0750       69-1564-11       GOX       2500.0         PARKER       SEAL/LOS       AMGLS       -0750       69-1564-11       GOX       2500.0         PARKER       SEAL/LOS       AMGLS       -0750       69-1564-12       GOX       2500.0         PARKER       SEAL/LOS       AMGLS       -0750       69-1564-13       GOX       2500.0         PARKER       SEAL/LOS       AMGLS       -0750       69-1564-14       GOX       2500.0         PARKER       SEAL/LOS       AMGLS       -0750       69-1564-14       GOX       7700.0         PARKER       SEAL/LOS       AMGLS       -0750       69-1564-14       GOX       7700.0         PARKER       SEAL/LOS       AMGLS       -0750       69-1564-14       GOX       7000.0         PARKER       SEAL/LOS       AMGLS       -0750       69-1564-14       GOX       5000.0         PARKER       SEAL/LOS       AMGLS       -0750       69-1564-14       GOX       5000.0         PARKER       SEAL/LOS       AMGLS       -0750       69-1564-19       GOX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | GLOVE CHARLESTON RUBBE        | co.        |           | Š          | 100.0          |             |      |       | 419    | 419   |      |      | UPOPXX   |
| PMRER SEAL/LOS ANGLS       69-1564-11       GOX       25.0         PMRER SEAL/LOS ANGLS       0.0750       69-1564-11       GOX       2000.0         PMRER SEAL/LOS ANGLS       0.0750       69-1564-14       GOX       2000.0         PMRER SEAL/LOS ANGLS       0.0750       69-1564-14       GOX       4000.0         PMRER SEAL/LOS ANGLS       0.0750       69-1564-14       GOX       4000.0         PMRER SEAL/LOS ANGLS       0.0750       69-1564-14       GOX       4000.0         PMRER SEAL/LOS ANGLS       0.0750       69-1564-14       GOX       4500.0         PMRER SEAL/LOS ANGLS       0.0750       69-1564-14       GOX       4500.0         PMRER SEAL/LOS ANGLS       0.0750       69-1566-14       GOX       4500.0         PMRER SEAL/LOS ANGLS       0.0750       69-1566-14       GOX       4500.0         PMRER SEAL/LOS ANGLS       0.0750       69-1566-14       GOX       4000.0         PMRER SEAL/LOS ANGLS <td>SEAL/LOS</td> <td>16LS</td> <td></td> <td>š</td> <td>5.0</td> <td></td> <td></td> <td></td> <td>725</td> <td>787</td> <td></td> <td></td> <td></td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SEAL/LOS                      | 16LS       |           | š          | 5.0            |             |      |       | 725    | 787   |      |      |          |
| PMRKEN SEAL/LOS MGLS       .0750       69-1566-11       GCX       15,00.0         PMRKEN SEAL/LOS ANGLS       .0750       69-1566-11       GCX       2500.0         PMRKEN SEAL/LOS ANGLS       .0750       69-1566-11       GCX       2000.0         PMRKEN SEAL/LOS ANGLS       .0750       69-1566-11       GCX       5000.0         PMRKEN SEAL/LOS ANGLS       .0750       69-1566-17       GCX       5000.0         PMRKEN SEAL/LOS ANGLS       .0750       69-1566-7       GCX       100.0         PMRKEN SEAL/LOS ANGLS       .0750       69-1566-7       GCX       100.0         PMR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | SEAL/LOS                      | HGLS       |           | XOS        | 25.0           |             |      |       | 578    | 746   |      | 0 13 | -        |
| PARKER       SEAL/LOS       ANGLS       -0750       69-1564-11       GOX       2000.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-12       GOX       2000.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-12       GOX       2000.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-14       GOX       7:00.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-14       GOX       7:00.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-14       GOX       4500.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-14       GOX       4500.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-14       GOX       4500.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-19       GOX       4500.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-19       GOX       4000.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-19       GOX       4000.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-19 <td>SEAL/LOS</td> <td>•<br/>•</td> <td></td> <td></td> <td>15 JO.C</td> <td></td> <td></td> <td>10/10</td> <td></td> <td></td> <td></td> <td></td> <td></td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | SEAL/LOS                      | •<br>•     |           |            | 15 JO.C        |             |      | 10/10 |        |       |      |      |          |
| FARKER SEAL/LOS ANGLS       .0750       69-1566-12       GOX       2500.0         PARKER SEAL/LOS ANGLS       .0770       69-1566-12       GOX       7700.0         PARKER SEAL/LOS ANGLS       .0770       69-1566-13       GOX       7700.0         PARKER SEAL/LOS ANGLS       .0770       69-1566-14       GOX       7900.0         PARKER SEAL/LOS ANGLS       .0770       69-1566-19       GOX       5000.0         PARKER SEAL/LOS ANGLS       .0770       69-1566-19       GOX       5000.0         PARKER SEAL/LOS ANGLS       .0750       69-1566-19       GOX       500.0         PARK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | SEAL/LOS                      | •          | 566-11    |            | 2000-0         |             |      | 01/04 |        |       |      |      |          |
| PARKER SEAL/LOS ANGLS       .0750       69-1566-14       GOX       3000.0         PARKER SEAL/LOS ANGLS       .0750       69-1566-14       GOX       4000.0         PARKER SEAL/LOS ANGLS       .0750       69-1566-14       GOX       4000.0         PARKER SEAL/LOS ANGLS       .0750       69-1566-16       GOX       4000.0         PARKER SEAL/LOS ANGLS       .0750       69-1566-16       GOX       4500.0         PARKER SEAL/LOS ANGLS       .0750       69-1566-16       GOX       4500.0         PARKER SEAL/LOS ANGLS       .0750       69-1566-16       GOX       4500.0         PARKER SEAL/LOS ANGLS       .0750       69-1566-19       GOX       5000.0         PARKER SEAL/LOS ANGLS       .0750       69-1566-19       GOX       5000.0         PARKER SEAL/LOS ANGLS       .0750       69-1566-19       GOX       500.0         PARKER SEAL/LOS ANGLS       .0750       69-1566-19       GOX       500.0         PARKER SEAL/LOS ANGLS       .0750       69-1566-16       GOX       500.0         PARKER SEAL/LOS ANGLS       .0750       69-1566-6       GOX       500.0         PARKER SEAL/LOS ANGLS       .0750       69-1566-7       GOX       500.0         PARKER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | R SEAL/LOS                    | У          | 566-12    |            | 2500-0         |             |      | 10/10 |        |       |      |      | CHOOK A  |
| FARKER       SEAL/LOS       ANGLS       -0750       09-1566-14       COX       -000.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-16       COX       4000.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-16       COX       4000.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-16       COX       4000.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-17       GOX       5000.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-17       GOX       5000.0         PARKER       SEAL/LOS       ANGLS       -0750       69-1566-17       GOX       5000.0         PARKER       SEAL/LOS       ANGLS       69-1566-7       GOX       5000.0         PARKER       SEAL/LOS       ANGLS       69-1566-7       GOX       100.0         PARKER       SEAL/LOS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CEAL / OC                     |            | 1 1 1 2   |            |                |             |      |       |        |       |      |      |          |
| FARKER       SEAL/LOS       ANGLS       OTFO       OFFO       OFFO <td></td> <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>20/10</td> <td></td> <td></td> <td></td> <td></td> <td></td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               | •          |           |            |                |             |      | 20/10 |        |       |      |      |          |
| PARKER SEAL/LUS ANGLS       -0750       69-1566-15       60X       4000.0         PARKER SEAL/LUS ANGLS       -0750       69-1566-16       60X       4500.0         PARKER SEAL/LUS ANGLS       -0750       69-1566-16       60X       4500.0         PARKER SEAL/LUS ANGLS       -0750       69-1566-16       60X       4500.0         PARKER SEAL/LUS ANGLS       -0750       69-1566-19       60X       5000.0         PARKER SEAL/LUS ANGLS       -0750       69-1566-19       60X       5000.0         PARKER SEAL/LUS ANGLS       -0750       69-1566-19       60X       5000.0         PARKER SEAL/LUS ANGLS       -0750       69-1566-4       60X       100.0         PARKER SEAL/LUS ANGLS       69-1566-4       60X       100.0       69-1566-4       60X       100.0         PARKER SEAL/LUS ANGLS       69-1566-4       60X       100.0       69-1566-4       60X       100.0         PARKER SEAL/LUS ANGLS       ANGLS       69-1566-4       60X       100.0       60X       500.0         PARKER SEAL/LUS ANGLS       ANGLS       69-1566-4       60X       100.0       60X       500.0         PARKER SEAL/LUS ANGLS       ANGLS       69-1566-4       60X       500.0       60X <td></td> <td>•</td> <td></td> <td>ŝ</td> <td>00.</td> <td></td> <td></td> <td>20/10</td> <td></td> <td></td> <td></td> <td></td> <td></td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               | •          |           | ŝ          | 00.            |             |      | 20/10 |        |       |      |      |          |
| PARKER SEAL/LOS ANGLS       •0750       69-1566-16       GOX       4500.0         PARKER SEAL/LOS ANGLS       •0750       69-1566-17       GOX       5000.0         PARKER SEAL/LOS ANGLS       •0750       69-1566-17       GOX       5000.0         PARKER SEAL/LOS ANGLS       •0750       69-1566-19       GOX       500.0         PARKER SEAL/LOS ANGLS       •0750       69-1566-19       GOX       500.0         PARKER SEAL/LOS ANGLS       •0750       69-1566-20       GOX       500.0         PARKER SEAL/LOS ANGLS       •0750       69-1566-7       GOX       500.0         PARKER SEAL/LOS ANGLS       69-1566-7       GOX       100.0       60.0         PARKER SEAL/LOS ANGLS       69-1566-7       GOX       1000.0       60.0       60.0       1000.0 </td <td>SEAL/LUS</td> <td>•<br/>•</td> <td>500-15</td> <td>XDS</td> <td>4000-0</td> <td></td> <td></td> <td>10/10</td> <td></td> <td></td> <td></td> <td></td> <td></td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | SEAL/LUS                      | •<br>•     | 500-15    | XDS        | 4000-0         |             |      | 10/10 |        |       |      |      |          |
| PARKER SEAL/LOS ANGLS         0750         69-1566-17         GUX         5000.0           PARKER SEAL/LOS ANGLS         07750         69-1566-19         GUX         5000.0           PARKER SEAL/LOS ANGLS         07750         69-1566-19         GUX         5000.0           PARKER SEAL/LOS ANGLS         07750         69-1566-19         GUX         5000.0           PARKER SEAL/LOS ANGLS         079-1566-20         GUX         500.0           PARKER SEAL/LOS ANGLS         069-1566-7         GUX         50.0           PARKER SEAL/LOS ANGLS         069-1566-7         GUX         100.0           PARKER SEAL/LOS ANGLS         069-1566-7         GUX         1000.0           PARKER SEAL/LOS ANGLS         079-1566-7         GUX         1000.0           PARKER SEAL/LOS ANGLS         0790         09-1566-7         GUX         1000.0           PARKER SEAL/LOS ANGLS         0790         09-1566-7         GUX         1000.0           PARKER SEAL/LOS ANGLS         0790         0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SEAL/LOS                      | •          | 566-16    | ŝ          | 4500.0         |             |      | 10/10 |        |       |      |      | CHDOXX   |
| PARKER SEAL/LOS ANGLS         •0750         69-1566-19         GOX         4500.0           PARKER SEAL/LOS ANGLS         •0750         69-1566-19         GOX         500.0           PARKER SEAL/LOS ANGLS         •0790         69-1566-19         GOX         500.0           PARKER SEAL/LOS ANGLS         •0790         69-1566-19         GOX         500.0           PARKER SEAL/LOS ANGLS         69-1566-19         GOX         50.0           PARKER SEAL/LOS ANGLS         69-1566-1         GOX         50.0           PARKER SEAL/LOS ANGLS         69-1566-1         GOX         50.0           PARKER SEAL/LOS ANGLS         69-1566-6         GOX         100.0           PARKER SEAL/LOS ANGLS         69-1566-7         GOX         100.0           PARKER SEAL/LOS ANGLS         69-1566-7         GOX         100.0           PARKER SEAL/LOS ANGLS         69-1566-7         GOX         1000.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SEAL/LOS                      | •<br>•     | 566-17    | × 09       | 5000.0         |             | -    | 40/40 |        |       |      |      |          |
| PARKER SEAL/LOS ANGLS         •0750         69-1566-19         G0X         500.0           PARKER SEAL/LOS ANGLS         69-1566-2         60X         90.0           PARKER SEAL/LOS ANGLS         69-1566-2         60X         90.0           PARKER SEAL/LOS ANGLS         69-1566-3         60X         100.0           PARKER SEAL/LOS ANGLS         69-1566-5         60X         100.0           PARKER SEAL/LOS ANGLS         69-1566-5         60X         100.0           PARKER SEAL/LOS ANGLS         69-1566-5         60X         100.0           PARKER SEAL/LOS ANGLS         69-1566-7         60X         1000.0           PARKER SEAL/LOS ANGLS         69-1566-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SEAL/LOS                      | •<br>•     | 566-18    | Š          | <b>\$500.0</b> | -           | 200  | 00/04 |        |       |      |      |          |
| PARKER SEAL/LOS ANGLS         69-1566-2         G0X         50.0           PARKER SEAL/LOS ANGLS         69-1566-2         G0X         50.0           PARKER SEAL/LOS ANGLS         69-1566-3         G0X         50.0           PARKER SEAL/LOS ANGLS         69-1566-3         G0X         50.0           PARKER SEAL/LOS ANGLS         69-1566-7         G0X         50.0           PARKER SEAL/LOS ANGLS         69-1566-7         G0X         50.0           PARKER SEAL/LOS ANGLS         69-1566-7         G0X         500.0           PARKER SEAL/LOS ANGLS         69-1566-7         G0X         500.0           PARKER SEAL/LOS ANGLS         69-1566-7         G0X         500.0           PARKER SEAL/LOS ANGLS         69-1566-7         G0X         1500.0           PARKER SEAL/LOS ANGLS         0750         69-1566-7         G0X         1900.0           PARKER SEAL/LOS ANGLS         0750         69-1566-7         G0X         1300.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SEAL/LOS                      | s<br>s     | 566-19    | 60X        | 5000.0         |             | 200  | 01/02 |        |       |      |      | _        |
| PARKER SEAL/LOS ANGLS         69-1566-20         60X         6.2           PARKER SEAL/LOS ANGLS         69-1566-3         60X         50.0           PARKER SEAL/LOS ANGLS         69-1566-4         60X         50.0           PARKER SEAL/LOS ANGLS         69-1566-7         60X         500.0           PARKER SEAL/LOS ANGLS         69-1566-7         60X         1500.0           PARKER SEAL/LOS ANGLS         69-1566-7         60X         1500.0           PARKER SEAL/LOS ANGLS         69-1566-7         60X         1500.0           PARKER SEAL/LOS ANGLS         0750         69-1566-7         60X         1000.0           PARKER SEAL/LOS ANGLS         0750         69-1566-7         60X         1000.0 <td>SEAL/LOS</td> <td>s</td> <td>566-2</td> <td>20X</td> <td>90-06</td> <td></td> <td></td> <td></td> <td>ARG</td> <td>722</td> <td></td> <td></td> <td></td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SEAL/LOS                      | s          | 566-2     | 20X        | 90-06          |             |      |       | ARG    | 722   |      |      |          |
| PARKER SEAL/LOS ANGLS         69-1566-3         60X         50X         50.0           PARKER SEAL/LOS ANGLS         69-1566-4         G0X         100.0         0           PARKER SEAL/LOS ANGLS         69-1566-5         G0X         50.0         0           PARKER SEAL/LOS ANGLS         69-1566-6         G0X         100.0         0           PARKER SEAL/LOS ANGLS         69-1566-7         G0X         1000.0         0           PARKER SEAL/LOS ANGLS         0.0750         69-1566-7         G0X         1000.0           231         71-2659-1         7100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SEAL/LOS                      | HOLS STATE | 566-20    | 20X        |                | 1000        |      |       | 000N   | 0000  |      |      |          |
| PARKER SEAL/LOS ANGLS         69-1566-4         GOX         100.0           PARKER SEAL/LOS ANGLS         69-1566-4         GOX         50.0.0           PARKER SEAL/LOS ANGLS         69-1566-7         GOX         1000.0           PARKER SEAL/LOS ANGLS         69-1566-7         GOX         1000.0           PARKER SEAL/LOS ANGLS         0750         69-1566-7         GOX         1000.0           PARKER SEAL/LOS ANGLS         712-2659-1         MHH         730.0           -231         PERMACEL TAPE CORP         71-2650-1         MHH         730.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | I SEAL/LOS                    | IGL S      | 566-3     | SUX        |                |             |      |       | 503    | 5.7.2 |      |      |          |
| PARKER SEAL/LOS ANGLS         69-1566-5         60x         50x         60x         50x         50x<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SEAL/LOS                      | MGL S      | 566-4     | COX        | 0.001          |             |      |       | 2      | 200   |      |      |          |
| PARKER SEAL/LOS ANGLS         69-1566-6         60x         1000.7           PARKER SEAL/LOS ANGLS         69-1566-7         30x         1500.0           PARKER SEAL/LOS ANGLS         0750         69-1566-7         30x         1000.0           PARKER SEAL/LOS ANGLS         0750         69-1566-7         30x         1000.0           ELT         71-2659-1         MMH         730.0         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SFAL /1 DS                    |            | 566-4     |            |                |             |      |       | 444    | 444   |      |      |          |
| PARKER SEAL/LOS ANGLS         OPTISOGO         OUNDATION           PARKER SEAL/LOS ANGLS         69-1566-7         50X 1500.0           PARKER SEAL/LOS ANGLS         0750 69-1566-9         50X 1000.0           ELT         71-2659-1         MHH 730.0           -211         PERMACEL TAPE CORP         71-2651                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SEAL / DC                     |            |           |            |                |             |      |       |        |       |      | •    |          |
| PARKER SEAL/LCS ANGLS         0.1500-1         0.0750         0.1500-1         0.000-0           PARKER SEAL/LCS ANGLS         0.750         69-1566-9         GOX         2000-0         0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0         1000-0<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | SCAL/LUS                      |            | 0-002     |            |                |             |      |       | 4 C    |       |      | -    | -        |
| ELT PERMACEL TAPE CORP 0750 07-1500-0 040 040 040 050 000.0<br>ELT 71-2659 MMH 791.0<br>211-2659-1 MMH 791.0<br>-211 PERMACEL TAPE CORP 71-2651 MMH 902.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |            |           |            |                |             |      |       |        | 5 6 6 |      | -    |          |
| FELT - PERMACEL TAPE CORP 71-2659-1 MMH 700.0<br>FELT - PERMACEL TAPE CORP 71-2659-1 MMH 700.0<br>P-211 PERMACEL TAPE CORP 71-2659-1 MMH 802.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               | •••        |           |            |                |             |      |       | 545    | 545   |      | -    | _        |
| FELT         71-2659         MMH         791.0           FELT         71-2659-1         MMH         730.0           P-211         PERMACEL         TAPE         CORP         71-2651         MMH         802.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SEAL/LUS                      | ņ          | •         | è.         | 1000.0         |             |      | 00/06 |        |       |      | -    |          |
| PERMACEL TAPE CORP 71-2601 MMH 902-0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               |            |           | HWH        | 791.0          | 525         |      |       |        |       |      | r 15 | DUEFXX   |
| P-21 PERMACEL TAPE CORP 71-2601 MMH AC2.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | •                             |            | 1-6602-11 | I          | 730.0          | 5           |      |       |        |       |      | -    |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               |            | 71-2601   | III        | 802.0          | 542         |      |       |        |       |      | -    | EBFVXX   |

• • • • • •

MATERIAL TEST DATA BY MANUFACTURER S DESIGNATION LS (1F 31 ,12, 72

| NTME         F=21         FEMALEI         TPS. (20)         TPS. (20)<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | MFGR S DESIGNATION | MANUF AC TURER     | SPEC.<br>THICK. | TEST RPT NU. | TES T<br>ENVR | TEST<br>PRESS | TEMP        | I MP T<br>E NER | ND OF<br>REACT | FLASH<br>Print | FIRF<br>PT | PACP N |     | <b>⊢</b> ~ | HATL<br>CODE |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|-----------------|--------------|---------------|---------------|-------------|-----------------|----------------|----------------|------------|--------|-----|------------|--------------|
| Model         The cost         The cost <t< td=""><td></td><td>PERMACEL TAPE CORP</td><td></td><td>71-2681-1</td><td>HWH</td><td>795.0</td><td>540</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>CBFV</td></t<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    | PERMACEL TAPE CORP |                 | 71-2681-1    | HWH           | 795.0         | 540         |                 |                |                |            |        |     |            | CBFV         |
| Process         Memodel I. Take Core         T1-7:00-1         GGN         G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    | PERMACEL TAPE CORP |                 | 71-2403      | X O S         | 250.0         |             |                 | 00/04          |                |            |        | •   |            | F-BCN        |
| 3       1       01/01       01/01       01/01         3       3       01/01       01/01       01/01       01/01         3       01/01       01/01       01/01       01/01       01/01         3       01/01       01/01       01/01       01/01       01/01         3       01/01       01/01       01/01       01/01       01/01         3       01/01       01/01       01/01       01/01       01/01         3       01/01       01/01       01/01       01/01       01/01         3       01/01       01/01       01/01       01/01       01/01         3       01/01       01/01       01/01       01/01       01/01         3       01/01       01/01       01/01       01/01       01/01         3       01/01       01/01       01/01       01/01       01/01         3       01/01       01/01       01/01       01/01       01/01         3       01/01       01/01       01/01       01/01       01/01         3       01/01       01/01       01/01       01/01       01/01         3       01/01       01/01       01/01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    | PERMACEL TAPE CCRP |                 | 1-2403-1     | Š             | 75.0          |             |                 |                | 475            | 476        |        | -   |            | EBCN         |
| 3       5       7       100       10       11       10         3       6       5       7       10       10       11       10         3       6       5       7       10       10       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | TAPE 56            | ST.                |                 | 70-2172      | č0X           | 1500.0        |             |                 | 10/10          |                |            |        | -   |            | DZCC         |
| ************************************                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | TAPE 56            | st.                |                 | 70-2172-1    | ×09           | 1000.0        |             |                 |                | 194            | 194        |        | -   |            | DZCC         |
| W CID       ST       PARIL       70-2172-3       GCX       1000-0       51,4       11         W CID       ST       PARIL       71-2487-1       L=50       700-0       51,4       11         W CID       ST       PARIL       71-2487-1       L=50       700-0       51,4       11       11         W CID       ST       PARIL       71-2487-1       L=50       700-0       51,4       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11 <td>TAPE 56</td> <td>ST.</td> <td></td> <td>70-2172-2</td> <td>60X</td> <td>1000.0</td> <td></td> <td></td> <td></td> <td>212</td> <td>212</td> <td></td> <td>0</td> <td></td> <td>0200</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | TAPE 56            | ST.                |                 | 70-2172-2    | 60X           | 1000.0        |             |                 |                | 212            | 212        |        | 0   |            | 0200         |
| 11       11-240-1       1-50       55.0       55.0       51.0         11       11-240-1       12-240-1       12-50       1500.0       51.1         11       11       11-240-1       1200.0       51.1       11.1         11       11       11       1200.0       51.1       11.1         11       11       11       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1       11.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | TAPE 56            | ST.                |                 | 70-2172-3    | X05           | 1000.0        | 308         |                 |                |                |            |        | Ļ   |            | D2CC         |
| 31       Consisting with the state of the s | TAPE 56            | <u>\$</u> 1.       |                 | 71-2487      | A-50          | 824.0         | 519         |                 |                |                |            |        | -   |            | DZCC         |
| 9.9       9.00       01/31       322       323       71         9.9       9.00       51       9.00       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51       51<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | TAPE 56 .          | CO. 51.            |                 | 71-2487-1    | A-50          | 760.0         | 404         |                 |                |                |            |        |     |            | 0200         |
| 9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TAPE 59            | CO. ST.            |                 | 70-2175      | X09           | 1500.0        |             |                 | 10/10          |                |            |        | -   | 01         | DYCB         |
| 9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TAPE 59            | CO. ST.            |                 | 70-2173-1    | XOS           | 1000.0        |             |                 |                | 232            | 232        |        | 1   | 13         | OVCB         |
| 39       310       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       411       41                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TAFE 59            | CO. 51.            |                 | 70-2173-10   | 20S           | 50-0          |             |                 |                | 201            | 501        |        | -   | 13         | OYCB         |
| 99       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91       91 <td< td=""><td>TAPE 59</td><td>CO. ST.</td><td></td><td>70-2173-11</td><td>ŝ</td><td>100.0</td><td></td><td></td><td>•</td><td>471</td><td>471</td><td></td><td></td><td>1</td><td>DYCB</td></td<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TAPE 59            | CO. ST.            |                 | 70-2173-11   | ŝ             | 100.0         |             |                 | •              | 471            | 471        |        |     | 1          | DYCB         |
| 365       567       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       266       2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    | CO. ST.            |                 | 70-2173-12   | GOX           | 500-0         |             |                 |                | 416            | 416        |        | •   | 13         | DYCR         |
| 39       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10 <td< td=""><td></td><td>CD. ST.</td><td></td><td>70-2173-13</td><td>Ň</td><td>0.0001</td><td></td><td></td><td></td><td>264</td><td>264</td><td></td><td></td><td></td><td>DYCB</td></td<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    | CD. ST.            |                 | 70-2173-13   | Ň             | 0.0001        |             |                 |                | 264            | 264        |        |     |            | DYCB         |
| 99       1000       51       2000       223       279       013         99       1000       51       AUL       70-2173-15       603       5000       552       275       013         99       1100       51       AUL       70-2173-16       603       5000       552       575       613       500       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652       652 <td></td> <td><b>CO.</b> 51.</td> <td></td> <td>70-2173-14</td> <td>20X</td> <td>1500.0</td> <td></td> <td></td> <td></td> <td>196</td> <td>196</td> <td></td> <td></td> <td></td> <td>DYCB</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    | <b>CO.</b> 51.     |                 | 70-2173-14   | 20X           | 1500.0        |             |                 |                | 196            | 196        |        |     |            | DYCB         |
| 99       1000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       2000       <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    | co. st.            |                 | 70-2173-15   | XOS           | 2000-0        |             |                 |                | 225            | 225        |        |     |            | DYCB         |
| 99       91       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664       664                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    | CO. ST.            |                 | 70-2173-16   | X US          | 3000-0        |             |                 |                | 265            | 265        |        |     |            | DYCB         |
| 99         NUCCONSTRUME         70-2179-19         GUX         50.0         652         652         613           99         NUCCONSTRUME         70-2179-2         GUX         5000.0         50         01/01         223         273         213           99         NUCCONSTRUME         70-2179-2         GUX         5000.0         50         01/01         223         273         213           99         NUCCONSTRUME         70-2179-6         GUX         5000.0         50         01/01         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213         213 <td>TAPE 59</td> <td>CO. 57.</td> <td></td> <td>70-2173-18</td> <td>Š</td> <td>25.0</td> <td></td> <td></td> <td></td> <td>664</td> <td>664</td> <td></td> <td></td> <td></td> <td>0YCB</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | TAPE 59            | CO. 57.            |                 | 70-2173-18   | Š             | 25.0          |             |                 |                | 664            | 664        |        |     |            | 0YCB         |
| 99       1100       510       223       223       223       223       223       223       223       223       223       223       223       223       223       223       223       223       223       223       223       223       223       223       223       213       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       233       2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TAPE 59            | CO. ST.            |                 | 70-2173-19   | CUX<br>COX    | 50.0          |             |                 |                | 652            | 652        |        | د.  | 13         | CYCB         |
| 59       34       CO. 51. PAU       70-2173-3       G0X       5000.0       50       01/01       2       11         59       34       CO. 51. PAU       70-2173-4       G0X       5000.0       50       01/01       2       11         59       34       CO. 51. PAU       70-2173-4       G0X       5000.0       50       01/01       2       11         59       34       CO. 51. PAU       70-2173-5       G0X       500.0       50       01/01       2       11         59       34       CO. 51. PAU       70-2173-5       G0X       1000.0       50       01/01       2       11         59       34       CO. 51. PAU       70-2173-9       G0X       500.0       01/01       1       12         59       34       CO. 51. PAU       71-2478       A-50       74.4       410       1       1       15       1       15       1       15       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | TAPE 59            | sī.                |                 | 70-2173-2    | Š             | 3000.0        |             |                 |                | 223            | 223        |        | -   | 53         | DVCB         |
| 59       WCGs       51       70-2173-4       60X       500.00       50       01/01       2       11         59       WCGs       57       PAUL       70-2173-5       60X       500.00       50       01/01       2       11         59       WCGs       57       PAUL       70-2173-5       60X       500.00       50       01/01       7       11         59       WCGs       57       PAUL       70-2173-6       60X       1000.0       50       01/01       7       11         59       WCGs       57       PAUL       70-2173-6       60X       500.00       50       01/01       7       11         59       WCGs       57       PAUL       71-2478       A-50       73.0       474       10         59       WCGs       57       PAUL       71-2478       A-50       73.0       474       10         59       WCGs       57       PAUL       71-2478       A-50       73.0       474       10         50       51       PAUL       71-22291       A-50       73.0       474       10         60       51       71-22291       A-50       73.0 <th< td=""><td>TAPE 59</td><td>51.</td><td></td><td>70-2173-3</td><td>X09</td><td>5000.0</td><td></td><td></td><td>10/10</td><td></td><td></td><td></td><td>~</td><td>11</td><td>DVCB</td></th<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | TAPE 59            | 51.                |                 | 70-2173-3    | X09           | 5000.0        |             |                 | 10/10          |                |            |        | ~   | 11         | DVCB         |
| 59       M CO. 57. PAU.       70-2173-5       GOX       2000.0       50       01/01       2       11         59       M CO. 57. PAU.       70-2173-6       GOX       1000.0       50       01/01       2       11         59       M CO. 57. PAU.       70-2173-6       GOX       1000.0       50       01/01       2       11         59       M CO. 57. PAU.       70-2173-6       GOX       500.0       01/01       7       11         59       M CO. 57. PAU.       70-2173-9       GOX       500.0       01/01       7       11         59       M CO. 57. PAU.       70-2173-9       GOX       500.0       01/01       7       11         59       M CO. 57. PAU.       71-224791       A-50       733.0       474       10       7       11         59       M CO. 57. PAU.       71-224191       A-50       775.0       474       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11       11 <td>TAPE 59.</td> <td>51.</td> <td></td> <td>70-2173-4</td> <td>X09</td> <td>0*000+</td> <td></td> <td></td> <td>10/10</td> <td></td> <td></td> <td></td> <td>. •</td> <td>11</td> <td>DYCB</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | TAPE 59.           | 51.                |                 | 70-2173-4    | X09           | 0*000+        |             |                 | 10/10          |                |            |        | . • | 11         | DYCB         |
| 55       70       70       2173-6       60X       1000.0       50       01/01       7       11         59       31       60X       500.0       50       01/01       7       10         59       31       60X       500.0       50       01/01       7       11         59       31       60X       500.0       50       01/01       7       10         59       31       60X       500.0       500.0       50       01/01       7       10         59       31       60       51       70       7       00       7       10       10       10       11       10       11       10       10       10       11       10       11       10       10       11       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | TAPE 59            | <b>50. 51.</b>     |                 | 70-2173-5    | ž             | 2000.0        |             |                 | 10/10          |                |            |        |     |            | OVCE         |
| 39       37       CO- 571       PAUL       70-2173-7       GOX       500.0       50       01/0 <sup>-</sup> 7       10         59       31       CO- 571       PAUL       70-2173-9       GOX       500.0       01/0 <sup>-</sup> 7       10         59       31       CO- 571       PAUL       71-2478       A-50       734.0       474.       7       10         59       31       CO- 571       PAUL       71-2478       A-50       734.0       474.       7       10         59       31       CO- 571       PAUL       71-24478       A-50       734.0       474.       7       10         50       51       PAUL       71-2448       A-50       775.0       474       10       7       15       7       15         50       31       CO- 57       PAUL       71-2491       A-50       775.0       49       7       15         61       31       CO- 57       PAUL       71-25291       NHH       775.0       49       7       15         61       31       CO- 57       PAUL       71-25291       NHH       775.0       507       7       15         61                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | TAVE 59            | CO. ST.            |                 | 70-2173-6    | ŝ             | 1000.0        |             |                 | 01/01          |                |            |        |     |            | DVCB         |
| 59       34       CO. 57       PAUL       70-2173-8       GGX       100.0       01/0 <sup>-</sup> 7       10         59       34       CO. 57       PAUL       70-2173-9       GOX       500.0       00/04       10         59       34       CO. 57       PAUL       71-2478       A-50       74.0       47       71         59       34       CO. 57       PAUL       71-2478       A-50       74.0       71       71         50       34       CO. 57       PAUL       71-2409       GOX       250.0       00/04       71       71         60       37       CO. 57       PAUL       71-2409       GOX       750.0       00/04       71       71         61       34       CO. 57       PAUL       71-2409       GOX       70       97       10         61       34       CO. 57       PAUL       71-2269       A-50       77.0       97       11       11         61       34       CO. 57       PAUL       71-2269       A-50       77.0       97       11       11         61       71-2269       A-50       77.0       491       71       15       15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TAPE 59            | 50- ST-            |                 | 70-2173-7    | COX<br>COX    | 500.0         |             |                 | 01/01          |                |            |        | ~   |            | 01.08        |
| 99       300       575       PAUL       70-2173-9       GOX       500.0       00/04       A       10         99       300       575       PAUL       71-2478       A-50       734.0       474.       A       10         99       300       575       PAUL       71-2478       A-50       734.0       474.       A       10         90       300       575       PAUL       71-2478       A-50       733.0       494.       00/04       A       10         91       500       510       71-2409       60X       75.0       794.0       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71 <th71< th=""> <th71< th=""> <th71< th=""></th71<></th71<></th71<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | TAPE 59            | co. st.            |                 | 70-2173-8    | ŝ             | 1000.0        |             |                 | 01/0-          |                |            |        |     |            | CVCB         |
| 99       34       CO. 57. PAUL       71-2478       A-50       734.0       474.       115         10       37       CO. 57. PAUL       71-2478-1       A-50       733.0       494       115         10       37       CO. 57. PAUL       71-2478-1       A-50       75.0       94       115         11       37       CO. 57. PAUL       71-2409       GOX       75.0       97       00       97       10         11       37       CO. 57. PAUL       71-2261-1       A-50       775.0       97       11       11         11       37       CO. 57. PAUL       71-2261-1       A-50       779.0       97       11       11         11       37       CO. 57. PAUL       71-2269       A-90       779.0       498       71       15         11       37       CO. 57. PAUL       71-2269       A-90       779.0       498       71       15         11       37       CO. 57. PAUL       71-2529       A-90       754.0       498       71       15         11       37       CO. 57. PAUL       71-2529       A-90       71       71       71       15         11       200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | TA76 59            | 5 T.               | •               | 70-2173-9    | 60 X          | 500.0         |             |                 | *0/00          |                |            |        | •   | •          | OYCB         |
| 99       300       570       570       494         100       310       571       600       575.0       494         111       310       571       75.0       491       75.0       491         111       310       571       600       572       542       542       542       743       15         111       310       605       574       75.0       775.0       491       775.0       601       775.0       775.0       775.0       775.0       713       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716       716 </td <td>TAPE 59</td> <td>st.</td> <td></td> <td>71-2478</td> <td>A50</td> <td>734.0</td> <td>474</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>DYCB</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | TAPE 59            | st.                |                 | 71-2478      | A50           | 734.0         | 474         |                 |                |                |            |        |     |            | DYCB         |
| 60       91       CO. 57. PAUL       71-2409       GOX       250.0       00/C4       A         61       31       60.57. PAUL       71-2409-1       GOX       75.0       542       542       0       13         61       31       60.57. PAUL       71-2261-1       A-50       779.0       497       542       542       72       7       15         61       31       60.57. PAUL       71-2261-1       A-50       779.0       497       75.0       779.0       77       7       15         67       31       60.57. PAUL       71-2261-1       A-50       779.0       497       7       7       7       15         67       31       60.57. PAUL       71-2269-1       744       75.0       407       7       15         74       31       60.57. PAUL       71-2269-1       745       A-50       75.0       500       7       7       15         74       31       60.57. PAUL       71-22690       71-2540       500       71       15         74       31       60.57. PAUL       71-2530       71-2540       500       71       71         74       31       70.57.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | TAPE 59            | CO- ST-            |                 | 71-2478-1    | A-5C          | 733.0         | 464         |                 |                |                |            |        | -   |            | DYCB         |
| 60       30       60       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       542       74       15         74       30       CD- ST       71-2529-1       NHH       778.0       607       71       15         74       30       CD- ST       A-10       71-2529-1       NHH       773.0       5010       16       71       15         74       30       CD- ST       A-10       71-2530-1       NH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | TAPE 60            | co. \$1.           |                 | 71-2409      | š             | 250.0         |             |                 | 00/04          |                |            |        |     | 2          | 0220         |
| 61       30       CO. 57. PAUL       71-2261       A-50       779.0       497       7       15         61       30       CO. 57. PAUL       71-2261-1       A-50       779.0       497       7       15         67       30       CO. 57. PAUL       71-2261-1       A-50       778.0       497       7       15         67       30       CO. 57. PAUL       71-2529       NMH       778.0       607       7       15         74       30       CO. 57. PAUL       71-2549       NMH       778.0       607       7       15         74       30       CO. 57. PAUL       71-2549       NMH       778.0       607       7       15         74       30       CO. 57. PAUL       71-2549       NMH       801.0       51       7       15         74       30       CO. 57. PAUL       71-2540       NMH       801.0       51       7       15         74       30       CO. 57. PAUL       71-2540       NMH       801.0       51       7       15         74       30       CO. 57. PAUL       71-2530       NMH       817.0       51       7       15         74                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | P346 60            | ŝ1.                |                 | 71-2409-1    | 60X           | 75.0          |             |                 |                | 542            | 542        |        | -   | 5          | DZCO         |
| 61       3M       CO. 57. PAUL       71-2261-1       A-50       R.80       516       7       15         67       3M       CO. 57. PAUL       71-2229       WHH       778.0       498       7       15         67       3M       CO. 57. PAUL       71-2229       WHH       778.0       607       7       15         74       3M       CO. 57. PAUL       71-2445       A-50       755.0       500       7       7       7       7       15         74       3M       CO. 57. PAUL       71-2445       A-50       750.0       607       7       7       7       15       7       15         74       3M       CO. 57. PAUL       71-2445-1       A-50       591.0       464       7       15       7       15         74       3M       CO. 57. PAUL       71-2530       MH       817.0       511       7       15         74       3M       CO. 57. PAUL       71-2530       MH       773.0       514       7       15         74       3M       CO. 57. PAUL       71-2530       MH       773.0       541       7       15         74       3M       CO. 57. PAUL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | TPPE 61 .          | <b>S</b> T.        |                 | 71-2251      | A-50          | 779.0         | 497         |                 |                |                |            |        |     | 15         | 0220         |
| 67       39       CO. ST. PAUL       T1-2529       NMH       754.0       498       T       T         74       39       CO. ST. PAUL       T1-2529-1       NHH       778.0       607       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T       T<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    | <b>54</b> -        |                 | 71-2261-1    | A-50          | R28.0         | 516         |                 |                |                |            |        |     | 5          | DZCU         |
| 67     30     67     57     67     67     67     67     71-2529-1     NWH     778.0     607     7     15       74     33     COS. 57:     PAUL     71-2445     A-50     725.0     500     7     15       74     38     COS. 57:     PAUL     71-2445     A-50     591.0     464     7     15       74     38     COS. 57:     PAUL     71-2530     NMH     801.0     464     7     15       74     38     COS. 57:     PAUL     71-2530     NMH     801.0     514     7     15       74     38     COS. 57:     PAUL     71-2530     NMH     817.0     514     7     15       74     38     COS. 57:     PAUL     71-25686     NMH     773.0     598     7     15       74     38     COS. 57:     PAUL     71-25686     NMH     773.0     598     7     15       74     38     COS. 57:     PAUL     71-26866     NMH     773.0     598     7     15       74     38     COS. 57:     PAUL     71-26866     NMH     773.0     541     7     15       74     38     COS. 57:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    | CO. ST.            |                 | 71-2529      | Ĩ             | 754.0         | 864         |                 |                |                |            |        |     | 15         | EBBG         |
| 74       3M CO. ST. PAUL       71-2445       A-50       725.0       500       715         74       3M CO. ST. PAUL       71-2445-1       A-50       591.0       464       7       7         74       3M CO. ST. PAUL       71-2445-1       A-50       591.0       464       7       7         74       3M CO. ST. PAUL       71-25300       MMH       801.0       511       7       7         74       3M CO. ST. PAUL       71-2530-1       MMH       817.0       514       7       7         74       3M CO. ST. PAUL       71-25806       MMH       773.0       594       7       7         74       3M CO. ST. PAUL       71-26866       MMH       773.0       598       7       7         74       3M CO. ST. PAUL       71-26866       MMH       773.0       598       7       7         74       3M CO. ST. PAUL       71-26866       MMH       773.0       541       7       7         74       3M CO. ST. PAUL       71-26866       MMH       773.0       541       7       7         74       3M CO. ST. PAUL       71-26864       MMH       773.0       541       7       7       7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    | CD. ST.            |                 | 71-2529-1    | IXX           | 778.0         | <b>×</b> 07 |                 |                |                |            |        | -   | 15         | ERBG         |
| 74       3M CO. ST. PAUL       71-2445-1       A-50       591.0       4.4       T IS         74       3M CO. ST. PAUL       71-2530       NMH       801.0       511       T IS         74       3M CO. ST. PAUL       71-2530-1       NMH       801.0       511       T IS         74       3M CO. ST. PAUL       71-2530-1       NMH       817.0       514       T IS         74       3M CO. ST. PAUL       71-2686       NMH       773.0       698       T IS         74       3M CO. ST. PAUL       71-2686-1       NMH       773.0       541       T IS         74       3M CO. ST. PAUL       71-2686-1       NMH       773.0       541       T IS         74       3M CO. ST. PAUL       71-2686-1       NMH       773.0       541       T IS         74       3M CO. ST. PAUL       71-2686-1       NMH       773.0       541       T IS         74       3M CO. ST. PAUL       71-2686-1       NMH       773.0       541       T IS         74       3M CO. ST. PAUL       71-2080-0       90.0       90.0       90.0       7 IS         74       3M CO. ST. PAUL       71-2080-0       70.00       90.0       90.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | FAME 74            | CO. ST.            |                 | 71-2445      | A-50          | 725.0         | 500         |                 |                |                |            |        |     | 15         | EBCB         |
| 74       3M CD. SY. PAUL       71-2530       NMH 801.0 511       712         74       3M CD. SY. PAUL       71-2530-1       NMH 817.0 514       714         74       3M CD. SY. PAUL       71-2686       NMH 817.0 514       715         74       3M CD. SY. PAUL       71-2686       NMH 773.0 698       715         74       3M CD. SY. PAUL       71-2686       NMH 773.0 598       715         74       3M CD. SY. PAUL       71-2686-1       NMH 773.0 598       715         74       3M CD. SY. PAUL       71-2686-1       NMH 773.0 598       715         74       3M CD. SY. PAUL       71-2686-1       NMH 773.0 598       715         74       3M CD. SY. PAUL       71-2686-1       NMH 773.0 591       715         74       3M CD. SY. PAUL       71-2686-1       NMH 773.0 591       715         74       3M CD. SY. PAUL       71-2686-1       NMH 773.0 591       715         74       3M CD. SY. PAUL       71-2686-1       NMH 773.0 541       715         74       3M CD. SY. PAUL       71-2686-1       NMH 773.0 541       715                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | TAPE 74            | CO• ST.            |                 | 71-2445-1    | A-50          | 591.0         | 404         |                 |                |                |            |        | -   | 15         | EBCB         |
| 74         3M CO. ST. PAUL         71-2530-1         NMH         B17.0         514         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         T         <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | TAPE 74            | CO. S1.            |                 | 71-2530      | Ĭ             | 801.0         | 511         |                 |                |                |            |        | •   | 5          | ERC8         |
| 74 34 20.57. PAUL 71-2686 MMH 773.0 698 T 15<br>74 34 256LASS FILLED/DIXON CORP 70 10-78 60X 6.2 1000 N999 N999 Y 13<br>24 10-78 50X 5.2 1000 N999 N999 N999 Y 13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TAPE 74            | co. sr.            |                 | 71-2530-1    | INI           | 817.0         | 514         |                 |                |                |            |        | -   | 15         | Eaca         |
| 74 3M CO. ST. PAUL 71-2686-1 MMH 789.0 541 7 15<br>M (*256LASS FILLED/DIXON CORP 10-78 60X 6.2 1000 N999 N999 Y 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TAPE 74            | CO+ ST+            |                 | 71-2686      | III           | 773.0         | 698         |                 |                |                |            |        | •   | 51         | EBCB         |
| (*256LASS FILLED)DIXON CORP 10-78 60X 6.2 1000 N999 N999 Y 13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | TAPE 74            | s1.                |                 | 71-2686-1    | IXX           | 789.0         | 541         |                 |                |                |            |        | -   |            | EBCB         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ( *256LASS         | EDIDIYON CODD      |                 |              | 202           |               |             |                 |                |                |            |        |     |            |              |

**..**.

1

; † †

さき かんざいざい しかかる あまい かいがん おお手 こうしんかき しょうりきんい きまい イント ちいち すい しんしき きい

المراجع المراجع المراجع والمراجع المراجع المراجع المراجع

. • . 1

the second second second second

:

PAGE 51

The second second

ě

MATERIAL TEST CATA BY MANUFACTURER S DESIGNATION AS OF 31 JAN 72

í

Ą

|                      | MANUTAC TURER                                               | SPEC.         | TEST RPT NO. | . TEST<br>ENVR | TEST<br>Prest | TEAP ENER | IMPT NO OF<br>ENER REACT | F FLASH<br>T POINT | 4 FIRE<br>F PT | DIST | HT<br>LOSS | α    | MATL<br>CODE  |
|----------------------|-------------------------------------------------------------|---------------|--------------|----------------|---------------|-----------|--------------------------|--------------------|----------------|------|------------|------|---------------|
| TEFLON 1.25GLASS FIL | FILLED DIXON CORP                                           |               | 10-78-1      | XOS            | 16.5          | 1000      |                          | 961                | 066N           |      |            | Y 13 | FJCPI         |
| TEFLON 1.25GLASS FIL | FILLED WIXON CORP                                           |               | 10-73-1      | č05            | 16.5          | 1000      |                          | 9.61               | N 999          |      |            |      |               |
| 1 ( -296LASS         | _                                                           | •0750         | 70-2099      | 203            | 1500.0        |           | 50 00/01                 | •                  |                |      |            |      |               |
| I C.25GLASS          | FILLEDIDIXON CORP                                           | 40150<br>0150 | 70-2099-1    | 202            | 1500.0        |           | 00/04                    |                    |                |      |            | A 10 |               |
| I CASSOLASS          |                                                             |               | 2-6602-02    | ŝ              | 1000-0        |           |                          | 786                |                |      |            |      |               |
| N 1.25GLASS          |                                                             |               | 70-20993     | XOS            | 1000.0        |           |                          | 779                | 778            |      |            |      |               |
| 1 .25GLASS           | FILLED DE XON CORP                                          | •0150         | 10-209-3     | XQS            | 1500.0        | 50        | 10/00 0                  |                    |                |      |            |      |               |
| 1 1-25GLASS          | FILLEDILIDUTO NITROGEN CORP                                 | •0750         | 10-78-10     | ¥83            | 1500.0        | 20        | 0/10 0                   | _                  |                | •    |            |      |               |
|                      | NI TROGEN C                                                 | -0750         | 10-78-11     | XOS            | 2000-0        | S02       | -                        |                    |                |      |            |      | FJCPIA        |
|                      | NI TROGEN C                                                 | .0750         | 10-78-12     | COX<br>COX     | 2500-0        | 200       | -                        |                    |                |      |            |      |               |
|                      | NITROGEN C                                                  | -0750         | 10-78-13     | XQS            | 3000.0        | 20        | -                        | r<br>N             |                |      |            |      | FJCP1         |
| 1 (-256LASS          | NE TROGEN C                                                 | -0750         | 1-81-01      | XOS            | 3500.0        | NON NO    | -                        |                    |                |      |            |      |               |
| I L-25GLASS          | NITROGEN C                                                  | .0750         | 10-78-15     | Š              | 4000-0        | 20        |                          | -                  |                |      |            |      | FJCPIA        |
| I C-25GLASS          | NTTROGEN C                                                  | -0750         | 10-78-2      | 60X            | 2500.C        |           | 10/00                    | ۍ.                 |                |      |            |      |               |
| 1 2.256LASS          |                                                             | +0750         | E-92-01      | Š              | 3000.0        |           | 0/10                     | 1                  |                |      |            |      |               |
| 1 (-250LASS          | FILLEDILIQUED NETROGEN CORP                                 | • 0 7 5 0     | 10-78-4      | 60X            | 3500.0        |           | 10/10                    | 1                  |                |      |            |      |               |
| 1 ( -25GLASS         | ALTROGEN C                                                  | •0150         | 10-78-5      | XQS            | 4000.0        |           | 0110                     | 6                  |                |      |            |      |               |
| 1 5-25GLASS          | NETROGEN C                                                  | •0750         | 10-78-6      | X03            | 4500.0        |           | 20/10                    | 2                  | •              |      |            |      |               |
| 1 1-256LASS          | HITROGEN C                                                  | •0750         | 10-78-7      | ×09            | 5000.0        |           |                          | 2                  |                |      |            |      |               |
| I (-256LASS          | HITROGEN C                                                  | •0150         | 10-78-6      | XOU            | 500.0         | 200       |                          | ~                  |                |      |            |      | _             |
| 1 ( -256LASS         | METROCEN C                                                  | •0750         | 10-78-9      | Š              | 1000.0        | 20        |                          | ~                  |                | •    |            |      |               |
| C-25GLASS            | MITROGEN C                                                  |               | 70-1923      | X09            | 1500.0        |           | Ť                        | *                  |                |      |            |      | -             |
| 1 ( -25GLASS         | NITROGEN C                                                  |               | 70-1923      | žõ             | 1500.0        | 500       | -                        | 4                  |                |      |            |      |               |
|                      | N ADDREN C                                                  |               | 70-1923      | XOS            | 1500.0        | ด         | -                        | <b>.</b>           |                |      |            |      | _             |
|                      |                                                             |               | 70-1923      | B              | 1200-0        |           | <b>*0/00</b>             | *                  |                |      |            |      |               |
| TIL SCHROOM AND LICE | FILLEVILIQUIS BLINUSEN LUKP<br>Eti edan Truta Mitereen Frod | 06/0+         | 1-6261-0/    |                | 1500.0        | č         | -                        |                    |                |      |            |      |               |
| ALL COLUMN           | NITENCEN C                                                  | 0250          |              |                |               |           |                          | • ~                |                |      |            |      |               |
| I 25GLASS            | NITROGEN C                                                  |               | 70-1923-4    | A-50           |               |           | 5                        | •                  |                |      |            |      |               |
| 1 4-25GLASS          | MITROGEN C                                                  |               | 70-1923-5    | A-50           |               | 206       |                          |                    |                |      |            |      |               |
| (-256LASS            | NI TROGEN C                                                 |               | 70-1923-6    | ž              | 1500.0        |           |                          | <b>à</b> 87        | 687            |      |            |      |               |
| _                    | -                                                           | .0750         | 14-01        | COX<br>COX     | A.            |           | 40/00                    | و.                 |                |      |            |      | -             |
|                      |                                                             | •0150         | 10-41-1      | Š              | 4-1           |           |                          | \$                 |                |      |            |      |               |
|                      |                                                             | 0620-         | 2-14-01      | 20X            | 5000-0        | 20        | 00/00 0                  |                    |                |      |            |      | -             |
|                      |                                                             |               | 10-41-3      | ğ              | 16.5          | 1000      |                          | 666N               | 566N           |      |            |      |               |
| _                    | PLASTIC                                                     |               | 1-11-01      | COX<br>COX     | 1000.0        | 735       |                          |                    |                |      |            |      | _             |
|                      | _                                                           |               | 10-41-5      | ×09            | 1000.0        |           |                          | 736                | 736            |      |            |      |               |
| Sur I                |                                                             |               | 71-2842      | X09            | 5000.0        | 50        |                          | ÷.                 |                |      |            |      | Ŷ             |
|                      |                                                             |               | 71-2842-1    | Š              | 3000.0        |           | 01/0                     | 1                  |                |      |            |      |               |
| ANS                  |                                                             |               | 71-2842-2    | 80X            | 2000.0        |           | 10/10                    | -1                 |                |      |            |      | AZCOXX        |
| _                    | ш                                                           |               | 71-2842-3    | ŝ              | -             |           | 40/00                    | ÷                  |                |      |            |      |               |
|                      | TWO-DOL +                                                   |               | 70-1962      | A-50           |               | 200       |                          |                    |                |      |            |      | -             |
| _                    | THOUND .                                                    |               | 70-1962-1    | A-50           | 171           | 504       | 1                        |                    |                |      |            |      | <b>CUPOXX</b> |
|                      | E.I. DUPONT CD. INC.                                        |               | 70-1042-2    | <<br>•         |               |           |                          |                    |                |      |            |      |               |

PAGE 52

~\*\* \*\*\*

あるというないであるというないというないであるというないであると、ないないで、そのであるようなである

يد مر

Ξ.

ì

| MFGR S    | DESIGNATION       | MANUFACTukER          | SPEC.<br>THICK. | TEST RPT NO. | TES T<br>ENVR | TEST<br>PRESS | TEST LI<br>TEMP EI | ENER P | NU OF F<br>REACT P | FLASH F<br>POINT F | FIRE PR()P<br>PT DIST | DP WT | а I<br>I I | MATL<br>CUDE |
|-----------|-------------------|-----------------------|-----------------|--------------|---------------|---------------|--------------------|--------|--------------------|--------------------|-----------------------|-------|------------|--------------|
| TEFL.ON   | FEP               | E+I+ DUPONT CO++INC+  |                 | 70-1962-3    | A-50          | 730.0         | 502                |        |                    |                    |                       |       | 1 15       |              |
| TEFLON    | FEP               | E.I. DUPONT CO INC.   |                 | 70-1962-4    | INN           | 818.O         | 567                |        |                    |                    |                       |       | 1          |              |
| TEPLON    | FEP               | 0.00                  |                 | 70-1962-5    | I             | 790.0         | 506                |        |                    |                    |                       |       |            |              |
| TEFL ON   | FRICTION HASHER   | PMENT                 |                 | 71-2776-1    | COX<br>COX    | 2500.0        |                    | U      | 02/02              |                    |                       |       |            |              |
| TELLON    |                   |                       |                 | 712776-2     | ž             | 2000.0        |                    | Č      | 10/10              |                    |                       |       |            | CHCNXX       |
| TEFLON    |                   |                       |                 | 71-2776-3    | GOX           | 1500.0        |                    | C      | 1/02               |                    |                       |       |            |              |
| TEFL ON   |                   | EQUIPMENT             |                 | 71-2776-4    | ×93           | 1000.0        |                    | Ū      | 00/04              |                    |                       |       |            | CHCNXX       |
| TEFL IN   | INPRES (1 ASS FAB | DODGE FIBERS CORP     |                 | 71-2406      | COX<br>COX    | 250.0         |                    | Ŭ      |                    |                    |                       |       | A 16       |              |
| TERLOW    |                   | DODGE FIBERS          |                 | 71-2406-1    | Š             | 75.0          |                    |        |                    | 82 B               | R28                   |       |            |              |
| TEFLON    | IMPREG GLASS FAB  | DODGE FIBERS          |                 | 71-2406-10   | COX<br>COX    |               | 1000               |        | z                  |                    | 066N                  |       | L 13       | -            |
| TERCH     |                   | DODGE                 |                 | 71-2406-11   | X05           | 100.0         |                    |        |                    | 773                | 573                   |       |            |              |
|           | INPREC GLASS FAR  | DODGE FIBERS          |                 | 71-2408-12   | SCIX<br>S     | 500.0         |                    |        |                    | 734                | 734                   |       |            |              |
| YER ON    | IMPREG GLASS FAB  | DODGE FIBERS          |                 | 71-2406-13   | ×09           | 1000.0        |                    |        |                    | 684                | 684                   |       |            |              |
| NEFL ON   | INPREG SLASS FAB  | DODGE FIBERS          |                 | 71-2406-14   | 60X           | 1500.0        |                    |        |                    | 575                | 675                   |       |            |              |
| TERON     |                   | DODGE FIBERS          |                 | 71-2406-15   | Š             | 2000.0        |                    |        |                    | 650                | 650                   |       |            | BFCNIA       |
| NO 1434   | INPREG            | DODGE                 |                 | 71-2406-16   | × CO          | 5000.0        |                    | 50     | 00/04              |                    |                       |       |            |              |
| TCPLON    | INPREG GLASS      | DODGE                 |                 | 71-2406-2    | Š             | 2500.0        |                    | Ŭ      | 10/10              |                    |                       |       |            | BFCNIA       |
| TEFLON    | IMPREG GLASS      | DODGE FIBER           |                 | 71-2406-3    | 60X           | 1500.0        |                    | Ű      | 20/10              |                    |                       |       |            |              |
| 100 000   | THPREG GLASS      | DODGE FIBERS          |                 | 71-2406-4    | Š             | 1000.0        |                    | Ū      | 10/10              |                    |                       |       |            |              |
| TERLOW    | INPREG GLASS      | DODGE FIBERS          |                 | 71-2406-5    | GOX           |               |                    | 5      | 0/04               |                    |                       |       | A 10       |              |
| TER. OF   | INPREG GI ASS     | DODGE FIBERS          |                 | 71-2406-8    | Ň             | 25.0          | 1000               |        | z                  |                    | 566N                  |       |            |              |
| No Liak   | INPRES GLA        | DOCGE FIBERS COR      |                 | 71-2406-9    | COX           |               |                    |        |                    | 788                | 788                   |       |            |              |
|           | LINER HOSE        | 0                     |                 | 71-2947      | à             | 2500.0        |                    |        | 00/04              |                    |                       |       | 4          |              |
|           |                   | PRIXER-MANULFIN CORP. |                 | 71-294/-1    |               | 2000.0        |                    |        |                    |                    |                       |       | 4 4        | FECUAN       |
|           | LINEA MORE 010    |                       |                 | 2-1-200-12   |               |               |                    |        | 10/10              |                    |                       |       |            |              |
|           |                   |                       |                 | 71-2447-1    |               | 2000-0        |                    |        | 01/03              |                    |                       |       |            |              |
| TECH ON   | A STAF            | PARKER-HANNIFIN COR7  |                 | 71-2947-5    | SOX           | 1500.0        |                    |        | 00/00              |                    |                       |       | A 10       |              |
| TERLON    |                   |                       |                 | 71-2834      | XOS           | 2500.0        |                    | 50     | 00/00              |                    |                       |       | A 11       |              |
| TERLON    | ٠                 |                       |                 | 71-2834-1    | 60X           | 2500+0        |                    |        | 10/10              |                    |                       |       |            |              |
| のと北       | +                 |                       |                 | 71-2834-2    | Š             | 2000.0        |                    | -      | 01/03              |                    |                       |       | -          |              |
| TER OF    | +                 | JANESBURY CORP        |                 | 71-2634-3    | ×09           | 1500.0        |                    | •      | D0/04              |                    |                       |       | -          |              |
| - ALEN OF | TAPE              |                       |                 | 70-1958      | A-50          | 723.0         | 486                |        |                    |                    |                       |       |            | DYCWXX       |
|           | TAPE              |                       |                 | 70-1958-1    | A-50          | 154.0         | 515                |        |                    |                    |                       |       |            |              |
| TEALON    | TAPE              | ENDUS TRIES.          |                 | 71-2485      |               | 756.0         | 200                |        |                    |                    |                       |       | н,         |              |
|           | TAPE              | INCOUSTRIES.          |                 | 71-2485-1    | A-50          | 532.0         | 451                |        |                    |                    |                       |       |            | S DYCNXX     |
| TERON     | TAPE              | INDUS IN LES          |                 |              | A-70          | 0.108         |                    |        |                    |                    |                       |       | -          |              |
|           |                   | INDUS IN LES          |                 | 71-2485-3    |               |               | 210                |        |                    |                    |                       |       | - 1        |              |
|           |                   | INDUS IN LES          |                 | ri-2463-4    |               |               | 074                |        |                    |                    | 000                   |       | -          |              |
|           |                   | DUPONI CO.            |                 | 08-1100      | 608           |               | 0001               |        |                    |                    | 555 N                 |       | -i-<br>> > | -            |
| TEFLON    | TFE               | DUPONT CO.            |                 | 68-1106-1    |               | 22°0          | 1000               |        |                    | 827                | 666N                  |       | ~          |              |
|           | TFE<br>TEC        | E-I DUPUNI CO-INC-    |                 | 68-1106-2    | 203           | 50.0          |                    |        |                    | 226                | 402                   |       | -          | -            |
|           |                   |                       |                 |              |               |               |                    |        |                    | 466                | 745                   |       | c          | XXACAC K     |

· • ·

-- - 4

•

· · · · · · · · · · · ·

÷ -

 $\dot{\gamma}$ 

.

We have sold I to sold To

A REAL PROPERTY AND A REAL PROPERTY OF

ł

5.0

, . . , . . , . . 25

Ľ

A State In the

MATERIAL TEST DATA RY MANUFACTURER S DESIGNATION AS OF 31 JAN 72

| HEGR S DESIGNATION                                                       | MANUFACTURER                                   | SPEC.  | TEST RPT NO. | TEST       | TEST   | TEST | TAMI | NO 0F  | FLASH       | FIRF        | pRC,P WT   |               |            | MATL   |
|--------------------------------------------------------------------------|------------------------------------------------|--------|--------------|------------|--------|------|------|--------|-------------|-------------|------------|---------------|------------|--------|
|                                                                          |                                                | THICK. |              |            | PRESS  | TEMP | ENER | REACT  | ⊥wlUa       |             | <b>_</b> 1 | ss :          | с<br>т     | COE    |
| TERLON TEE                                                               | E.1. DUPONT CO INC.                            |        | 68-1106-5    | COX<br>COX | 500.0  |      |      |        | 712         | 712         |            | C             |            | DKCNXX |
|                                                                          | E.I. DUPONT COINC.                             |        | 68-1106-6    | 60 X       | 1000-0 |      |      |        | 699         | 664         |            |               |            | DKONKK |
| TEPLON TFE                                                               | - DUPONT                                       |        | 68-1106-7    | Š          | 1500.0 |      |      |        | <b>69</b> 2 | 692         |            | 20            |            | DKCNXX |
| _                                                                        | E.I. DUPONT CO. INC.                           |        | 68-1106-R    | GOX        | 2000.0 |      |      |        | 718         | 719         |            |               | 13 0       | DKCNXX |
| _                                                                        | E.I. DUPONT CO., INC.                          |        | 70-1-        | A-50       | 347.0  | 450  |      |        |             |             |            | -             |            | DKCNXX |
| <u> </u>                                                                 |                                                |        | 70-1959-1    | A-50       | 758.0  | 502  |      |        |             |             |            | -             |            | DKCNXX |
| _                                                                        | E-I- LUPONT CO., INC.                          |        | 70-1959-2    | A-50       | 771.0  | 502  |      |        |             |             |            |               |            | DKCNXX |
| -                                                                        | - DUPONT -                                     |        | 70-1959-3    | ĬŴŴ        | 761.0  | 500  |      |        |             |             |            | +             | 15 01      | DKCNXX |
| _                                                                        | . DUPONT                                       |        | 70-1959-4    | INE        | 767.0  |      |      |        |             |             |            | <b>}</b>      |            | DKCNXX |
| -                                                                        | DUPONT                                         |        | 70-1974      | A-50       | 202+0  | •    |      |        |             |             |            | -             | _          | DUCNXX |
| _                                                                        | . DUPONT                                       |        | 70-1974-1    | A-50       | 786.0  | 499  |      |        |             |             |            | F             |            | DUCNXX |
|                                                                          | DUPUNT                                         |        | 70-1974-2    | A-50       | 771.0  | 500  |      |        |             |             |            | -             |            | DUCNXX |
| 3-1                                                                      | E.I. DUPONT COINL.                             |        | 70-1974-3    | A-50       | 748.0  | 464  |      |        |             |             |            |               |            | DUCNXX |
| H                                                                        |                                                |        | 67-0145      | XOS        | 1027.0 |      |      |        | 596         | 594         |            | ٥             | 13 04      | DKCOXX |
|                                                                          |                                                |        | 67-0146-1    | ŝ          | 1087.0 |      |      |        | 58.3        | 6<br>8<br>6 |            | c (           |            | DXCDXX |
|                                                                          |                                                |        | 2-9+10-29    | X D D      | 1110.0 |      |      |        | 619         | 619         |            | C             |            | DACCXX |
|                                                                          |                                                |        | 67-0146-3    | Š          | 1565.0 |      | 1    |        | 677         | 677         |            | 0             |            | DKCDXX |
|                                                                          |                                                | • 0150 | 1602-01      | X 09       | 1500.0 |      | 20   | 00/04  |             |             |            | ₹ '           |            | CNXX   |
|                                                                          |                                                | •0150  | 1-1602-02    | Š          | 1500.0 |      |      | 00/07  |             |             |            | 4             |            | DKCNXX |
| Ľ                                                                        |                                                |        | 2-1602-04    |            | 1000.0 |      | i    |        | 782         | 782         |            |               | _          | DKCNXK |
|                                                                          |                                                |        | 70-2030      | Š          | 1500.0 |      | 20   | GO /04 |             |             |            | ∢ ∘           |            | ELCNXX |
|                                                                          |                                                |        | 10-2030-1    | 203<br>203 | 1500.0 |      |      | 00/04  |             |             |            | < (           | -          | ELCNXX |
|                                                                          | INSULECTRO CURP                                |        | 2-0602-02    | ŝ          | 0.000  |      |      |        |             | 141         |            | 0 (           |            |        |
| ICTLUM THE TEAL STRUME<br>TEAL ON THE DECING TO                          | ELE RIPORT COL                                 |        | 70-2030-3    |            | 1000.0 |      | 0    | 70700  | 181         | 181         |            |               | Ш<br>П     |        |
|                                                                          | Colo DURDAT FO. INC.                           |        |              |            |        |      | 00   |        |             |             |            | 4             |            |        |
| TEPLON ILEAKEDIN 17<br>TEPLON TPE-DESIN 79                               | Fals DUPONT COSTINCS                           |        | 70-1004-1    |            | 1500-0 |      |      | *0/00  | 200         | 5 00        |            | ≪ ⊂           |            |        |
|                                                                          |                                                |        | 71-2699      | Ň          | 6500.0 |      | 50   | 00/00  |             |             |            | <b>&gt;</b> 4 |            | CXN220 |
| ·                                                                        | MANUFACTORING                                  |        | 71-2699-1    | K09        | 6500-0 |      | 1    | 10/10  |             |             |            | с<br>С        |            | DKCNXX |
| TFE.9-18                                                                 |                                                |        | 71-2699-2    | 60 X       | 5000.0 |      |      | 10/10  |             |             |            | 0             |            | DKCNXX |
| TFE.9-10                                                                 | MANUFACTORING                                  |        | 71-2699-3    | ŝ          | 4000-0 |      |      | 10/10  |             |             |            | 0             |            | DKCNXX |
| TEFLOW 3651                                                              | GAC                                            |        | 71-2279      | A-50       | 809.0  | 502  |      |        |             |             |            |               | 15 01      | DKCNXX |
|                                                                          |                                                |        | 71-2279-1    | A-50       | 830.0  | 511  | i    |        |             |             |            | <b></b>       | -          | DKCNYX |
| GLASS                                                                    |                                                |        | 71-233       | ×09        | 2500.0 |      | 50   | 00/04  |             |             |            | •             | -          | CHCOFW |
| GLASS                                                                    |                                                |        | 71-2833-1    | š          | 2500.0 |      |      | 01/01  |             |             |            | с ,           | -          | CHCOFM |
| TEFLOW(+18 GLASS FILLED)JAMESBURY<br>TEEP ANG -18 CLASS ETLIED)JAMESBURY | FILLED)JAMESBURY CORP<br>ETLIED)JAMESBURY CORP |        | 71-2833-2    | 200        | 2000-0 |      |      | 10/10  |             |             |            | <b>۰</b> -    | -          | CHCOFN |
| ISH (MI . IS GLASS FILLED                                                |                                                |        | 11-2433-3    | 203        | 1500.0 |      |      | 00/04  |             |             |            | 4             |            | CHCOFW |
| TEFLOW-GLASS FILLED                                                      |                                                |        | 71-2424      | Ň          | 14.7   |      | 20   | 00/07  |             |             |            | ▲ ·           |            | FUCPIA |
| TEFLUM-GLASS FILLED                                                      |                                                |        | 1-5252-11    |            | 14.7   |      | 2002 | 40/00  |             |             |            | 4             |            | FJCPIA |
|                                                                          |                                                |        | 71-2424-2    | 60X        | 1000.0 |      | 20   | 00/06  |             |             |            | ◀ ·           | í.         | FJCPIA |
|                                                                          |                                                |        | 71-2424-3    | ŝ          | 1000.0 |      | 200  | 00/07  |             |             |            | 4             |            | FJCPIA |
| TEFLOM-GLASS FILLED                                                      | DIXIN CORP<br>Dixey read                       |        | 1201-02      | × 20       | 1500.0 |      | 50   | 00/04  |             |             |            | < ⊦           |            | FJCPIA |
|                                                                          |                                                | 0000   | 1261-02      | 3          | 1500.0 |      |      | 20/10  |             |             |            |               | 1 i<br>2 : |        |
|                                                                          |                                                |        | 1-1761-01    |            | n•met  |      |      | +0/00  |             |             |            | t             |            |        |

₽Å?E 54

- --

þ

;

1

51

×,

1

5

4

.......

てきたいのない

あいい いろう うちしまんしい

...

.

1

:

. 1 .

. . . . . .

41. 42 C.K.

i

 $e^{-i\Gamma t}$  ;  $F_{i}$ 

MATERIAL TEST DATA BY MAMUFACTURER S DESIGNATION AS DF 31 JAN 72

| NPGR 5 DESIGNATION  | MANUFACTUREP            | SPEC.<br>THICK. | TEST RPT NO. | TEST<br>ENVR | TEST<br>PRESS | TEST<br>TEMP | ENER<br>ENER | NO UF<br>REACT | FLASH<br>POINT | F 1 R F 1<br>P T 0 | PR(.C WT<br>DIST LOSS | 4 H | CODE      |
|---------------------|-------------------------|-----------------|--------------|--------------|---------------|--------------|--------------|----------------|----------------|--------------------|-----------------------|-----|-----------|
| TEFLON-GLASS FILLED | DIXON CORP              |                 | 70-1921-10   | 60 X         | 25.0          | 1000         |              |                | 266N           | 6.56N              |                       |     | 3 FJCPIA  |
|                     |                         |                 | 70-1921-11   | COX          | 50.0          |              |              |                | 954            | ± 56               |                       |     | FJCPI     |
|                     |                         |                 | 921-1        | 60 X         | 5000.0        |              | 50           | 70/00          |                |                    |                       |     |           |
|                     |                         |                 | 70-1921-13   | X05          | 1000.0        |              |              | 00/04          |                |                    |                       |     | u.        |
|                     | -                       |                 | 70-1921-14   | COX          | 1500.0        |              |              | 10/10          |                |                    |                       | -   | 10 FJCPIA |
|                     |                         |                 | 7            | 60X          | 2500.0        |              |              | 10/10          |                |                    |                       |     | i d')( a  |
|                     |                         |                 | 921-1        | Š            | 1500.0        |              |              |                | 642            | 642                |                       |     |           |
|                     |                         |                 | 70-1921-17   | 60X          | 1 000-0       | 702          |              |                |                |                    |                       |     | u.        |
|                     |                         |                 | 70-1921-18   | <u>8</u>     | 100.0         |              |              |                | 272            | 272                |                       |     |           |
|                     |                         | • 0050          | 70-1921-2    | 60X          | 1500.0        |              | 200          | 01/03          |                |                    |                       |     | u,        |
|                     |                         |                 | 70-1921-3    | х<br>СЭ      | 50-0          |              |              |                | 977            | 778                |                       |     | FJCP1     |
|                     |                         |                 | 70-1921-4    | 60 X         | 1000.0        |              |              |                | 742            | 742                |                       |     | чL        |
|                     |                         |                 | 70-1921-5    | X<br>C<br>C  | 500.0         |              |              |                | 714            | 714                |                       |     |           |
|                     | DIXON CORP              |                 | 70-1921-6    | 80X          | 1000.0        |              |              |                | 693            | 693                |                       |     |           |
|                     |                         |                 | 70-1921-7    | COX          | 2000.0        |              |              |                | 662            | 662                |                       |     |           |
|                     |                         |                 | 70-1921-8    | 20X          | 1500.0        | 642          |              |                |                |                    |                       |     |           |
|                     |                         |                 | 70-1921-9    | Š            | 1000.0        | 702          |              |                |                |                    |                       |     |           |
|                     |                         |                 | 71-2832      | ç0X          | 2500.0        |              | 50           | 00/01          |                |                    |                       |     |           |
| -                   |                         |                 | 71-2832-1    | ŝ            | 5000.0        |              |              | 00/04          |                |                    |                       |     |           |
| _                   |                         |                 | 71-2832-2    | 60X          | 5000.0        |              |              | 01/01          |                |                    |                       |     | 0 CHCOXX  |
| _                   |                         |                 | 71-2832-3    | õ            | 4000+0        |              |              | 01/01          |                |                    |                       |     |           |
|                     |                         |                 | 71-2832-4    | GDX          | 3000.0        |              |              | 10/10          |                |                    |                       |     | 0 CHCOXX  |
| _                   |                         |                 | 71-2832-5    |              | 2500.0        |              |              | 01/03          |                |                    |                       |     |           |
|                     | PARKER-HANNIFIN CORP    |                 | 71-2832-6    | X            | 2000-0        |              |              | 10/10          |                |                    |                       |     | -         |
|                     |                         |                 | 1-2832-1     |              | 0.0041        |              |              | 00/03          |                |                    |                       |     |           |
|                     |                         |                 | 71-2254      | A-50         | 820.0         | 513          |              |                |                |                    |                       |     | _         |
| K.                  | GAC                     |                 | 71-2254-1    | A-50         | 0.975         |              |              |                |                |                    |                       |     |           |
|                     |                         |                 | 71-2886-1    | XO2          | 6000.0        | -            | 200          | 00/04          |                |                    |                       |     | _         |
|                     | Jerk work               |                 | 71-2086-2    | Š            | 6000.0        |              |              | 02/02          |                |                    |                       |     |           |
|                     | LAK NOWN                |                 | 71-2886-3    | 203          | 5500.0        |              |              | 02/02          |                |                    |                       |     |           |
|                     | UNKNOWN                 |                 | 71-2886-4    | õ            | 5000.0        |              |              | 10/00          |                |                    |                       |     |           |
|                     | CINK NOWN               |                 | -2885-5      | CO X         | 4500.0        |              |              | 01/01          |                |                    |                       |     | 0 HZE0H0  |
|                     | NACAXAN                 |                 | 71-2886-6    | Š            | 4000-0        |              |              | 01/02          |                |                    |                       |     |           |
|                     | CHKNON                  |                 | 71-2886-7    | X D S        | 3500.0        |              |              | 01/02          |                |                    |                       |     | -         |
| -                   |                         |                 | 71-2086-8    | Š            | 3000.0        |              |              | 00/04          |                |                    |                       |     |           |
|                     | SPARTA MANUFACTORING CO |                 | 71-2699-4    | 60X          | 3000-0        |              |              | 01/01          |                |                    |                       |     | _         |
|                     | J                       |                 | 71-2699-5    | Š            | 2500.0        |              |              | 10/10          |                |                    |                       |     |           |
|                     | SPARTA MANUFACTORING C  |                 | 71-2699-6    | <b>X</b> 09  | 2000.0        |              |              | <b>70/00</b>   |                |                    |                       |     | -         |
| SERVER SHEATH       | CON THOL                |                 | 71-2249      | Š            | 1500.0        |              | 50           | 00/04          |                |                    |                       |     |           |
|                     | CONTROL PRODUCTS. INC.  |                 | 71-2249-1    | 60X          | 1500.0        |              |              | v0/00          |                |                    |                       |     | _         |
| CONTED              |                         |                 | 71-2599      | A-50         | 8             | 492          |              |                |                |                    |                       |     |           |
|                     | :                       |                 | 71-2599-1    | A-50         | ÷.            | 471          |              |                |                |                    |                       |     |           |
|                     |                         |                 | 70-2064      | IWN          | 63            | 448          |              |                |                |                    |                       |     |           |
| TPE/PIDERGLAS TAPE  |                         |                 | 70-2064-1    | IXX          | 0 463         | 450          |              |                |                |                    |                       |     |           |

₽**∆**∿Ē 55

7

ş

1.

イネ

٦

•

.

- -

•

• • • • •

-

۱

. •

.

. .

:

• • •

こうちょうかい あま ちゃう たまち ざいてきからかま ちょうちょう ちょう ちょう しん しんき オール・・・・

. ....

•

1

it and the second

!

1

MATERIAL FEST DATA BY MANUFACTURER S ULSIGNATION AS DF 31 JAN 72

----

;

. .

| Treation         Treation         Total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | NFGR S DESTGNATION    | MANUFACTURER   | SPEC.<br>THICK. | TEST RPT NO. | ENVR       | TEST<br>PRESS | TEMP I | ENCR. | NO OF F | POINT | FIRE PROP<br>PT DIST | TH LOS | 2 H K    | ~ - | CODE       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|-----------------|--------------|------------|---------------|--------|-------|---------|-------|----------------------|--------|----------|-----|------------|
| Divent/Ya-L         Cost         5000-0         5000-0         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511         511                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                       |                |                 | 71-2950      | žõõ        | 3000-0        |        | 20    | 00/04   |       |                      |        | ٩        |     | UCNB       |
| Montrivation         Titophone         Construction         Construction <td></td> <td></td> <td></td> <td>71-2950-1</td> <td>COX<br/>SOX</td> <td>5000.0</td> <td></td> <td>-</td> <td>40/00</td> <td></td> <td></td> <td></td> <td>4</td> <td>-</td> <td>UCN6 S</td>                                                                                                                                                                                                                                                                                                                                                                                                                                  |                       |                |                 | 71-2950-1    | COX<br>SOX | 5000.0        |        | -     | 40/00   |       |                      |        | 4        | -   | UCN6 S     |
| Monery/M-L. GOR         T1-295(-3)         GXX         OD(0)         571         571         571         571           SAMERT TIOUSTRIES         T1-200-1         COX         COX         COX         COX         T1-201         T1           SAMERT TIOUSTRIES         T1-200-1         COX         COX         COX         COX         T1-201         T1         T1           SAMERT TIOUSTRIES         T1-220-1         COX         COX         COX         COX         T1-201         T1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       |                |                 | 71-2950-2    | Š          | 3000,0        |        |       | 10/10   |       |                      |        | 3        |     | UC NB      |
| Defentivation         Construction         T1-200-1         A=50         Second         S00         S11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |                |                 | 71-2950-3    | 60X        | 0.000         |        | •     | 10/10   |       |                      |        | *        | -   | UCNBS      |
| Benefit / Marcial         T1-260-1         A-50         Two of 15         T1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | EVTETRAFTCH           |                |                 | 71-2605      | A-50       |               | 8      |       |         |       |                      |        | -        |     | <b>SUD</b> |
| Reserver         Disorder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | S/TETRAFTCH           | DUPONT/N. CORE |                 | 71-2605-1    | A-50       |               | 515    |       |         |       |                      |        | -        | _   | JCNXX      |
| Exactive transisties         11-2232-1         60X         500000         50         00004         110           CLANST WETALS, INC.         71-2280-1         60X         50000         50         00/04         11           CLANST WETALS, INC.         71-2280-1         60X         50000         50         00/04         11           REACTIVE WETALS, INC.         71-2280-1         60X         50000         50         00/04         11           REACTIVE WETALS, INC.         71-2280-1         60X         50000         50         00/04         11           REACTIVE WETALS, INC.         71-2280-1         60X         50000         50         00/04         11           REACTIVE WETALS, INC.         71-2280-1         60X         50000         50         00/04         11           REACTIVE WETALS, INC.         71-2280-1         60X         50000         50         00/04         11           REACTIVE WETALS, INC.         71-2280-1         60X         50000         50         00/04         11           REACTIVE WETALS, INC.         71-2291-1         60X         50000         50         00/04         11           REACTIVE WETALS, INC.         71-2291-1         60X         500000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                |                 | 71-2252      | ×09        |               |        |       |         | 571   | 571                  |        | 0        |     | CX dOd     |
| Constraint         Constraint <thconstraint< th="">         Constraint         Constrai</thconstraint<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                       |                |                 | 1-2252-14    | SOX<br>SOX | 500.0         |        | ŝ     | 40/00   |       |                      |        | <        |     | PDPXX      |
| Construction         Ti-2200         Edit value         Edit val                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                |                 | 71-2252-2    | ž          | 500.0         |        | 1     | 00/04   |       |                      |        | <        |     | POP X      |
| Construction         T-2200-1         Gamma (000)         Monoclassical (000)         Monoclassical(                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                |                 | 71-2280      | EOX        |               |        | -     | 00/04   |       |                      |        | ~        | _   | TMTXX      |
| Reactive         Reactive         Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |                |                 | 71-2280-1    |            | ABOO-D        |        |       | 40/00   |       |                      |        | •        |     | TMTX.      |
| REMATTIVE         REMATTIVE <t< td=""><td></td><td></td><td></td><td></td><td>22</td><td>1500.0</td><td></td><td>ç</td><td>40/00</td><td></td><td></td><td></td><td></td><td>_</td><td>NCNXX</td></t<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                |                 |              | 22         | 1500.0        |        | ç     | 40/00   |       |                      |        |          | _   | NCNXX      |
| REACTIVE         RETAILS         INC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                       |                |                 |              |            |               |        | R     |         |       |                      |        |          |     | NCNE       |
| REALTIVE RETAINS INC.         Total status         Tota                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                       |                |                 |              |            | 4             | 607    |       |         |       |                      |        |          |     | FMTXO      |
| FEALTIVE RETAINS INC.       70-1944-4       A-50       822.0       531       W999       W999       W999       M919         FEALTIVE RETAINS INC.       70-1944-4       A-50       822.0       500       00/04       W999       W999       M919       M11         D-3344411104       STANDARD       71-2291       GOX 6800.0       000       50       00/04       W999       W999       M919       M11         D-3344411104       STANDARD       71-2291       GOX 6800.0       000       00       M999       M999       M11         D-3344411104       STANDARD       71-2291       GOX 6800.0       000       M999       M999       M11         D-3344411104       STANDARD       71-2291       GOX 1120.0       M999       M999       M11         D-334441       71-2201       71-2201       000/04       M999       M999       M11         D-334411       71-2204       71-2204       71-2204       M999       M999       M11         D-334411       71-2204       71-2204       000/04       M999       M11       M11         D-34411       71-2204       71-2204       71-2204       71-200       000/04       M11         D-34411                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |                |                 | 70-1044-2    |            |               |        |       |         |       |                      |        | . #      |     | FMT X      |
| Result If the first is indicated by the strate is indited by the strate is indicated by the strate is indi |                       |                |                 |              |            |               |        |       |         |       |                      |        | - 1-     |     | FMTX       |
| Realizities         Realizities <threalizities< th=""> <threalizities< th=""></threalizities<></threalizities<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |                |                 |              |            |               |        |       |         |       |                      |        | • •      |     | ENTY       |
| P-39MANTLTON         T-2291-1         GOX         F300-0         L000         MMM MARL         MMMM MARL         MMMM MARL <thm< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>1000</td><td></td><td></td><td>000</td><td>0000</td><td></td><td>- 4</td><td></td><td></td></thm<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                       |                |                 |              |            |               | 1000   |       |         | 000   | 0000                 |        | - 4      |     |            |
| C-33MANTLTON STANDAND         T1-2291         GUX 6800.0         D0         U000         N999         N999         N11           0.0000         11-2201-1         60X 6800.0         0000         1000         1099         1199         119           0.0000         11-2201-1         60X 1500.0         0000         403         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-21         11-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       | RETALS         |                 | 20-1944-5    |            | 0.0041        | 1000   | Ċ     |         | ***   | アナシフ                 |        | •        |     |            |
| P-J3MUNITION STANDARD         71-2291-1         GOX         BOX         HOS         M959         M11           EXC         MDSENDINT ENC. CONP         71-20061         A-50         771-0         501         00/04         A11         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ACARDIDE SVSKALDI 0-1 |                |                 | 71-2291      | Š          | 6800-0        |        | 20    |         |       |                      |        | <        |     |            |
| Current Enc.         Control         T1-2506-1         A-50         T1-0         499         T1-10         400         100         400         400         400         400         400         400         400         400         400         400         400         400         400         400         400         400         400         400         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410         410                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ACARCIDE SVSKAL270-   |                |                 | 71-2291-1    | COX<br>COX | m             |        |       | ~       | 689   | 6667                 |        | <        | _   | Í          |
| Carc         T1-2506-1         A-50         698.0         483         T0           MDSENDIT ENC. CONF         T1-2999         GUX         1500.0         50         00/04         11           MDSENDIT ENC. CONF         T0-1999         GUX         1500.0         100         00/04         11           MDSENDIT ENC. CONF         T0-1999         GUX         1500.0         100         00/04         11           MDSENDIT ENC. CONF         T0-1999         GUX         1500.0         100         00/04         11           VARFLEX CONF         T0-1999         GUX         1500.0         100         11         11           VARFLEX CONF         T1-2404-1         A-50         T77.0         501         01         11           VARFLEX CONF         T1-2404-1         A-50         T77.0         501         10         11           TED MN         CO-100         T0-214-1         GUX         1500.0         100         11         11           TED MN         CO-100         T1500.0         00/04         13         10         11         11         12           TED MN         CO-100         T1500.0         100         00/04         100         10 <t< td=""><td>MAD TON, WECKEL</td><td>GAC</td><td></td><td>71-2506</td><td>A-50</td><td></td><td>664</td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td>WAW 1</td></t<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | MAD TON, WECKEL       | GAC            |                 | 71-2506      | A-50       |               | 664    |       |         |       |                      |        | -        |     | WAW 1      |
| Instant fac. Cont         To-1989         COX         1500.0         50         00/04         11           Instant fac. Cont         To-1989         COX         1500.0         00/04         11         11           Instant fac. Cont         To-1989         COX         1500.0         00/04         11         11           Instant fac. Cont         To-1989         COX         1500.0         00/04         11         11           Variation         Exc. Cont         To-1989         COX         1500.0         00/04         11         11           Variation         Exc. Cont         To-1989         COX         1500.0         00/04         11         11           Variation         Exc. Variation         0.750         12-2314-1         COX         1500.0         100         11         11         11           Feb         Derent         Cox         1500.0         00/04         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11         11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ABTIN/DICK FL         | C.M.C.         |                 | 71-2506-1    | A-50       |               | 483    |       |         |       |                      |        | <b>}</b> | -   |            |
| MOSENONT         ENC. CORP         70-1999         GUX         1500-0         1000         1335         100           YMPLEX         CORP         71-248-1         A-50         77.0         0000         735         7         7         7         15           YMPLEX         CORP         71-248-1         A-50         77.0         0000         7         7         7         15           YMPLEX         CORP         71-248-1         A-50         77.0         0000         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ACLASS INSERATION     | ENG.           |                 | 70-1989      | XQS        | 1500.0        |        | 50    | 40/00   |       |                      |        | <        |     | 160X       |
| Indication         Example         TO-1999-1         Cax         ISO0.0         IOO         ISO         ISO <thiso< th="">         ISO         <thiso< th="">         ISO         ISO</thiso<></thiso<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ACIASS PUSH AT SOM    | ENG.           |                 | 70-1989      | 50X        | 1750.0        |        |       |         |       |                      |        | <        |     |            |
| VARFLEX CORP         71-2464         A-50         777.0         501         711.0         501           TED MM         CORP         71-2464         A-50         777.0         501         771.0         501           TED MM         -2752         70-2214         GOX         1500.0         50         00/04         711.1           TED MM         -2752         70-2214         GOX         1500.0         50         00/04         711.1         711.1           E-1         DUPDMY         CO-1MC         0750         70-2214-1         GOX         1500.0         50         00/04         711.1           E-1         DUPDMY         CO-1MC         0750         67-0600-1         GOX         50         00/05         711.1           E-1         DUPOMY         CO-1MC         67-0600-1         GOX         50         00/05         711.1           E-1         DUPOMY         CO-1MC         67-0600-1         GOX         50.0         00/05         711.1           E-1         DUPOMY         CO-1MC         67-0600-10         20.0         1000         72.1         111           E-1         DUPOMY         CO-1MC         6700000         20.0         1000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ACTAC SAME ATTON      |                |                 | 70-1989-1    | Š          | 1500.0        | -      |       |         |       | 0002                 |        | <        |     | JG9X       |
| 15. Steve       VARTEX CORP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                       | CORP           |                 | 71-2484      | A-50       |               |        |       |         |       |                      |        | +-       |     | 10.1       |
| XFN 300. NI PLATED M       -C755/ 70-2214       GGX 1500.0       50       00/04       A 10         XFN 300. NI PLATED M       C0750       70-2214-1       GGX 1500.0       50       00/04       A 11         XFN 300. NI PLATED M       C0750       70-2214-1       GGX 1500.0       50       00/04       A 11         XFN 10. NI PLATED M       C00-1MC       0750       70-2214-1       GGX 1500.0       50       00/04       A 11         XFN 11       E-11       DUPOMT C00-1MC       67-0808-10       GCX 25:0       1000       B 33       N999       A 11         XFN 1       E-11       DUPOMT C00-1MC       67-0808-10       GCX 25:0       1000       N999       A 11         XFN 1       E-11       DUPOMT C00-1MC       67-0808-10       GCX 10.00       N999       N999       A 11         XFN 1       E-11       DUPOMT C00-1MC       67-0808-10       GCX 1000       N999       N999       A 11         XFN 1       E-11       DUPOMT C00-1MC       67-0808-10       GCX 50.0       N999       A 11         XFN 1       E-11       DUPOMT C00-1MC       67-0808-9       GCX 10000       N999       N999       N 13         XFN 1       E-11       DUPOMT C00-1MC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                       |                |                 | 1-4840-1     | A-50       |               | 767    |       |         |       |                      |        | -        |     | JOLF       |
| SP-1       E-1       GOX       50.0       00       90       90       90         SP-1       E-1       DUPONT       CO-1MC       975000       50       00       90       90       90         SP-1       E-1       DUPONT       CO-1MC       975000       50       00       90       90       90       813       813       813       813         SP-1       E-1       DUPONT       CO-1MC       67-0800-1       GOX       50       00/05       933       909       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813       813 <t< td=""><td></td><td></td><td>- 07.55</td><td>70-2214</td><td>XOS</td><td>-</td><td></td><td></td><td>00/04</td><td></td><td></td><td></td><td>4</td><td></td><td>000</td></t<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                       |                | - 07.55         | 70-2214      | XOS        | -             |        |       | 00/04   |       |                      |        | 4        |     | 000        |
| SP-1       E-1       DUPONT CO. INC.       OT-0804       GCX       25.0       100°       833       N999       N999         SP-1       E-1       DUPONT CO. INC.       OT-0804       GCX       25.0       100°       833       N999       813         SP-1       E-1       DUPONT CO. INC.       OT-0804-10       GCX       25.0       100°       833       N999       813         SP-1       E-1       DUPONT CO. INC.       OT-0804-10       GCX       5000       00/05       843       843       813         SP-1       E-1       DUPONT CO. INC.       OT-0804-10       GCX       50.0       100°       843       813         SP-1       E-1       DUPONT CO. INC.       OT-0804-5       GCX       50.0       100°       845       845         SP-1       E-1       DUPONT CO. INC.       67-0804-5       GCX       100°       901       901       901       913         SP-1       E-1       DUPONT CO. INC.       67-0804-5       GCX       100°       845       845       845       845       845       845       845       845       845       845       845       845       845       845       845       845       84                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                       |                |                 | 70. 221 4-1  | A G        | 16.00 D       |        | 80    | A0, 00  |       |                      |        |          |     | X (John    |
| Fert       Error       Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                       |                | AC. 04          |              |            |               |        | 2     |         | 0000  | 0000                 |        | 6        |     | KCD 2      |
| SP-I       E-1       DUPONT       CO. Inc.       O750       G 7 - 000-10       G 20       D 00       D 3         SP-I       E-1       DUPONT       CO. Inc.       O750       G 7 - 000-10       G 20       D 00       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3       D 3 <thd 3<="" th=""> <thd 3<="" th=""> <thd 3<="" th="">       D 3       D 3       <thd< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>10001</td><td></td><td>•</td><td></td><td>0000</td><td></td><td>. 0</td><td></td><td>2003</td></thd<></thd></thd></thd>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |                |                 |              |            |               | 10001  |       | •       |       | 0000                 |        | . 0      |     | 2003       |
| SP-1       E-1       Diametry Continue       OP90       N949       N94                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                       |                |                 | 1-0000-10    |            |               | 2007   | 000   | 30100   |       | 5 4 4 N              |        | 4 م      |     |            |
| SP-1       E-1       DUPCNIT       CO INC.       67-0008-10       GOX       15.5       1000       M999       N999       N       13         SP-1       E-1       DUPCNIT       CO INC.       67-0008-2       60X       15.5       1000       845       845       13         SP-1       E-1       DUPCNIT       CO INC.       67-0008-3       60X       150.0       901       901       901       913         SP-1       E-1       DUPCNIT       CO INC.       67-0008-5       60X       150.0       911       913       913         SP-1       E-1       DUPCNIT       CO INC.       67-0008-5       60X       150.0       911       913       913       913       913       913       913       913       913       914       913       913       914       914       914       914       914       913       913       913       913       914       913       914       914       914       914       914       914       914       914       914       914       914       914       914       914       914       914       914       914       914       914       914       914       914       91                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                | 06/0.           | 01-0000-10   | N S        | 5             |        | 2.5   |         |       |                      |        | 4        |     |            |
| SP-1     E-1     UNPOINT CDIMC     57-0808-2     GOX     50.0     1000     640     N999     R 13       SP-1     E-1     DUPCNIT CDIMC     67-0808-3     GUX     50.0     0     901     901     901       SP-1     E-1     DUPCNIT CDIMC     67-0808-5     GUX     50.0     0     845     901     901       SP-1     E-1     DUPCNIT CDIMC     67-0808-5     GUX     1500.0     845     671     901       SP-1     E-1     DUPCNIT CDIMC     67-0808-5     GUX     1500.0     845     901     901       SP-1     E-1     DUPCNIT CDIMC     67-0808-5     GUX     1500.0     845     901     901       SP-1     E-1     DUPCNIT CDIMC     67-0808-5     GUX     1500.0     845     901       SP-1     E-1     DUPCNIT CDIMC     67-0808-9     GUX     1500.0     937     913       SP-1     E-1     DUPCNIT CDIMC     67-0808-9     60X     500.0     937     913       SP-1     E-1     DUPCNIT CDIMC     67-0808-9     60X     500.0     937     913       SP-1     E-1     DUPCNIT CDIMC     67-0808-9     60X     500.0     537     913 <td></td> <td>INCOME .</td> <td></td> <td>67-0808-10</td> <td>Ň</td> <td>lú.5</td> <td>1000</td> <td></td> <td>-</td> <td>565</td> <td>656N</td> <td></td> <td>&lt; .</td> <td></td> <td>KUUX.</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                       | INCOME .       |                 | 67-0808-10   | Ň          | lú.5          | 1000   |       | -       | 565   | 656N                 |        | < .      |     | KUUX.      |
| SP-1       E-1       DUPONT CO INC.       67-0808-3       GUX       5/0       901       901       901       901       91         SP-1       E-1       DUPONT CO INC.       67-0808-5       GUX       1/0.0       845       845       01       911       911         SP-1       E-1       DUPONT CO INC.       67-0808-5       GUX       1/0.0       845       845       845       01       911       913         SP-1       E-1       DUPONT CO INC.       67-0808-5       GUX       1/000.0       845       845       845       01       913         SP-1       E-1       DUPONT CO INC.       67-0808-5       GUX       1/000.0       657       657       01       13         SP-1       E-1       DUPONT CO INC.       67-0808-9       GUX       1500.0       597       597       01       13         SP-1       E-1       SUPONT CO INC.       67-0908-9       GUX       1500.0       597       597       01       13         SP-1       F.1       DUPONT CO INC.       67-0908-9       GUX       500.0       597       597       01       13         SP-1       F.1       DUPONT CO INC.       67-0808                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                       | - CUPONT -     |                 | 57-0808-2    | X<br>09    | 50.0          | 1000   |       |         | 048   | 566N                 |        | ĸ        | _   | KCDX       |
| SP-I         E-i         DUPCNT CO-INC.         67-0808-5         GCX         1/0.0         845         845         0         13           SP-I         E-i         DUPCNT CO-INC.         67-0808-5         GCX         500.0         727         727         0         13           SP-I         E-i         DUPCNT CO-INC.         67-0808-5         GCX         500.0         727         727         0         13           SP-I         E-i         DUPCNT CO-INC.         67-0808-6         GCX         1000.0         657         657         0         13           SP-I         E-i         DUPCNT CO-INC.         67-0808-6         GCX         1500.0         657         594         594         594         594         597         0         13           SP-I         E-i         DUPCNT CO-INC.         67-0808-9         GCX         500.0         594         594         597         0         13           SP-I         E-i         DUPCNT CO-INC.         67-0808-9         GCX         500.0         594         597         0         13           SP-I         E-i         DUPCNT CO-INC.         67-0808-9         GCX         500.0         0         0         10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                       | THO-MA .       |                 | 67-0808-3    | X          | 50.0          |        |       |         | 106   | 106                  |        | ٥        |     | XCOX       |
| SP-1     E-1     DUPTINT     Continue     67-0808-5     60X     500.0     727     727     727     72       SP-1     E-1     DUPTINT     Continue     67-0808-5     60X     1000.0     657     657     0     13       SP-1     E-1     DUPTINT     Continue     67-0808-7     60X     1000.0     657     657     0     13       SP-1     E-1     DUPTINT     Continue     67-0808-7     60X     1000.0     594     0     13       SP-1     E-1     DUPTINT     Continue     67-0808-9     60X     500.0     594     0     13       SP-1     E-1     DUPTINT     Continue     67-0808-9     60X     500.0     594     0     13       SP-1     E-1     DUPDINT     Continue     67-0808-9     60X     500.0     594     0     13       SP-1     E-1     DUPDINT     Continue     0750     67-0808-9     60X     500.0     600     600     60X     500.0     600     60X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                       | - Burgurt      |                 | 67-0608-4    | Š          | 100.0         |        |       |         | 845   | 845                  |        | ٥        |     | XCOX       |
| SP-1     E-1     OUPONT CD-1 NC     67-0808-6     GUX     1000.0     657     657     0     13       SP-1     E-1     DUPONT CD-1 NC     67-0808-7     GUX     1500.1     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594     594                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                       | DUBPTIC:       |                 | £7-0808-5    | Š          | 500.0         |        |       |         | 727   | 727                  |        | ٥        | 13  | XCOX       |
| SP-1         E = 1         DUPONT CD-INC         57-0808-7         GOX 1500.0         594 594         0 13           SP-1         E = 7         DUPONT CD-INC         67-0908-9         GOX 2000.0         587 387         0 13           SP-1         E // 6 // 2000.0         67-0908-9         GOX 2000.0         587 387         0 13           SP-1         E // 6 // 2000.0         67-0908-9         GOX 2000.0         587 387         0 13           SP-1         E // 6 // 2000.0         67-0908-9         GOX 2000.0         0 0 // 0999         N 9999         N 9999         A 10           SP-1         F-1         DUPONT CD-11HC         -0750         67-0808-9         GOX 2000.0         0 0 // 0999         N 9999         A 10           SP-1         F-1         DUPONT CD-11HC         -0750         67-0808-9         GOX 2000.0         0 0 // 0999         N 9999         A 10           SP-1         F-1         DUPONT CD-11HC         -0750         67-0808-9         GOX 2000.0         0 0 // 0999         A 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       | Dim Children   |                 | A 7-0808-6   | SOX.       | 1000-0        |        |       |         | 657   | 657                  |        | 0        | _   | XCDX       |
| SP-1         E-7         DUFUNT CD-11MC         67-0508-6         GOX         2000.0         587         587         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         581         500         581         500         581         601         500         581         601         500         601         500         601         500         601         500         601         500         601         500         601         500         601         500         601         500         601         500         601         500         601         500         601         500         601         501         501         501 <td></td> <td></td> <td></td> <td>57-0A0A-7</td> <td>S S</td> <td>1500-0</td> <td></td> <td></td> <td></td> <td>594</td> <td>594</td> <td></td> <td>0</td> <td></td> <td>XCDX</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                |                 | 57-0A0A-7    | S S        | 1500-0        |        |       |         | 594   | 594                  |        | 0        |     | XCDX       |
| SP-1         E /s         F/s         F/s </td <td></td> <td>• c</td> <td>_</td> <td>KCOX.</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                       |                |                 |              |            |               |        |       |         |       |                      |        | • c      | _   | KCOX.      |
| SP-1         E /s = 1 = 1/2001 C0.41MC         -0750 = 67-0008-9         GOX 5000.0         00/05         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A         A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                |                 |              |            |               | 0000   |       | -       | 0000  | DOON                 |        | . 6      |     | XUUX       |
| SP-1         College         College         College         College         College         College         College         A 10           SP-1         Felloweart         College         College         College         College         A 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       |                |                 | 6-0000-10    |            |               |        |       |         |       |                      |        | . •      |     |            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                | • 0 7 5 0       | 67-0808-9    |            | 0.000         |        |       |         |       |                      |        | ( <      |     |            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                |                 | 1991-00      | 3          |               |        |       |         |       |                      |        | I        |     |            |

PAGE 55

.

, ....

1

1

;

. . . . . . . .

こうしょう いっかい いたいなか いっち かまくみてかたちょうかいさく たみったい あんせき かきまま あったのちょう あまった なまま かんなまま かまま ほうかん なまま かんない かんしょう しょう かいしょう かいしょう かんしょう かんしょう かんしょう かんしょう かんしょう かんしょう しょうしょう

MATERIAL TEST DATA RY MANUFACTURER S DESIGNATION AS OF 31 JAN 72

| Construction         Construction<                                                                 | MFGR 5 DESIGNATION | MANUFACTURER               | SPEC.<br>THILK. | TEST RPT ND.     | TEST<br>ENVR | TEST<br>PRESS | TEST 11<br>TEMP EI | THPT NC | NO DE FLASH<br>React Point | AL FIR'<br>NT PT | PROP WT |     | MATL<br>CORE |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------------------|-----------------|------------------|--------------|---------------|--------------------|---------|----------------------------|------------------|---------|-----|--------------|
| SF1       E11       E11       DUPONT (CO.114C;<br>S110)       TO 1881-7       GUX 1000-0       M14       M14 <td></td> <td>. DUPONT</td> <td></td> <td>70-1881-1</td> <td>XO3</td> <td>50.0</td> <td></td> <td></td> <td>6</td> <td></td> <td></td> <td>-</td> <td></td>                                                                                                                                                                                                                                                           |                    | . DUPONT                   |                 | 70-1881-1        | XO3          | 50.0          |                    |         | 6                          |                  |         | -   |              |
| Statistic         Constraint         Constraint <thconstraint< th="">         Constraint         <thconstraint< th="">         Constraint         Constraint</thconstraint<></thconstraint<>                                                              |                    | DIPONT                     |                 | 70-1881-2        | GuX          | 100.0         |                    |         | 6                          |                  |         |     |              |
| SF1         E11         E11 <td></td> <td>. OUPONT CO. INC</td> <td></td> <td>70-1881-3</td> <td>COX<br/>COX</td> <td>500.0</td> <td></td> <td></td> <td>8</td> <td></td> <td></td> <td></td> <td></td>                                                                                                                                                              |                    | . OUPONT CO. INC           |                 | 70-1881-3        | COX<br>COX   | 500.0         |                    |         | 8                          |                  |         |     |              |
| Fill         Elit         Dipert         Constraint         Dipert         Constraint         Dipert         Dipert <thdipert< th=""> <thdipert< th=""> <thdiper<< td=""><td></td><td>.I. DUPONT CO INC</td><td></td><td>70-1881-4</td><td>CCX</td><td>0</td><td></td><td></td><td>66</td><td></td><td></td><td>-</td><td></td></thdiper<<></thdipert<></thdipert<>                    |                    | .I. DUPONT CO INC          |                 | 70-1881-4        | CCX          | 0             |                    |         | 66                         |                  |         | -   |              |
| Fill         Elitowny Continc.         70-1881-6         60x         73.0         9939         9000           Fill         Bellowny Continc.         70-1881-6         60x         7.0         971         971         971           Fill         Bubbart Continc.         70-1881-6         60x         7.0         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971         971                                                                                                                                                                                                                                                                                                                                 |                    | TNCAUD .I.                 |                 | 70-1881-5        | X OʻJ        | 1500.0        |                    |         | ÷                          |                  | ,       | -   |              |
| 51-1       51-1       51-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1       50-1                                                                                                                                                                                                                                                                                                                                                                                             |                    | TUDDINT C                  |                 | 70-1881-6        | 60X          | 25.0          |                    |         | 66N                        |                  |         |     | DXC          |
| Si-11       E:1:0000011 (00:1)(G.       T-000001 (00:1)(G.       T-000000 (00:1)(G.       T-0000000 (00:1)(G.       T-000000 (00:1)(G. |                    | T NO DO T                  |                 | 70-1981-7        | č03          | 50.0          |                    |         | 56N                        |                  |         | -   |              |
| 57-21       67-1000       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951       951                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    | TNO COL                    |                 | 70-1881-8        | X US         | - 0           |                    |         | 56                         |                  | _       |     |              |
| 57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21       57-21 <td< td=""><td></td><td>- MIPUNT</td><td></td><td>M9-0329</td><td>Ň</td><td>5.0</td><td>1020</td><td></td><td>. 40</td><td></td><td></td><td>-</td><td>DKCDG</td></td<>                                                                                                                                                                            |                    | - MIPUNT                   |                 | M9-0329          | Ň            | 5.0           | 1020               |         | . 40                       |                  |         | -   | DKCDG        |
| SP-21         E-1         DUPONT         COLINIC         OT10         M=0397+10         EXX         S0000         To0         To0 <thto0< th=""> <thto0< th=""> <thto0< th=""></thto0<></thto0<></thto0<>                                                                                                                                                                                                                                                                                                |                    | DIPONT                     |                 | 1-000-0H         | COX          |               | 1000               |         | . 6                        |                  | _       |     | DKCUG        |
| SP-21         E1         DUPONT C01MC         0730         DOTO         DOTO <thdoto< th="">         DOTO         <thdoto< th=""></thdoto<></thdoto<>                                                                                                                                                                                                                                                                 |                    | . DUPONT                   | •0750           | M9-0399-10       |              |               |                    | 8       |                            |                  |         | ~   | DXCDG        |
| SP-21         E1:         DUPONT         Cont.NLC         Me-0399+12         GX         6.2         1000         NGGG         J         J           SP-21         E1:         DUPONT         Cont.NLC         Me-0399+13         GX         50.0         NGG         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         J         <                                                                                                                                                                                                                                                                                                                                                                                                         |                    | + DUPONT                   | .0750           | M9-0399-11       |              | 5000.0        | ×                  |         |                            |                  |         | _   | DKC03        |
| \$F-21       \$F-1       \$F-1       \$F-2                                                                                                                                                                                                                                                                                       |                    | DUPONT .                   |                 | M9-0399-12       |              |               |                    |         |                            |                  | -       | -   | B DKCDC      |
| 5P-21       E-1       01000A7       G0.1       50.0       0000       955       010         5P-21       E-1       0100A7       G0.1       100.0       951       011         5P-21       E-1       0100A7       G0.1       100.0       11       011         5P-21       E-1       010A7       G0.1       100.0       11       011         5P-21       E-1       010A7       G0.1       100.0       11       010       11         5P-21       E-1       010A7       G0.1       100.0       11       11       11       11       11       11       11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    | . DUPONT                   |                 | M9-0399-13       | GUX          |               | 1000               |         | 66N                        | z                | _       | -   | DKCD6        |
| SP-21       E-1. DUPONT C01NG.       M9-0999-3       GOX       50.0       935       935       0       13         SP-21       E-1. DUPONT C01NG.       M9-0999-5       GOX       500.0       935       935       0       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13       13 <td></td> <td>•1• DUPOVT</td> <td></td> <td>2-66E0-6M</td> <td>60X</td> <td></td> <td>1000</td> <td></td> <td>25</td> <td>z</td> <td>_</td> <td></td> <td>B UKCDC</td>                                                                                                                                                                                                                                                                                                  |                    | •1• DUPOVT                 |                 | 2-66E0-6M        | 60X          |               | 1000               |         | 25                         | z                | _       |     | B UKCDC      |
| SP-21       E1: DUPONT (CO.:NGC       W9-0999-5       GOX 1000.0       921       011         SP-21       E1: DUPONT (CO.:NGC       W9-0999-5       GOX 1000.0       935       835       935       013         SP-21       E1: DUPONT (CO.:NGC       W9-0999-5       GOX 1000.0       931       513       730       730       730       730       730       731       730       731       730       731       730       731       730       731       730       731       730       731       730       731       730       731       730       731       730       731       730       731       730       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731       731                                                                                                                                                                                                                                                                                                                                                                                                           |                    | VI. DUPONT                 |                 | H9-0399-3        | COX<br>COX   | 50.0          |                    |         | 6                          |                  |         | -   |              |
| SP-21         E1:         DUPONT         Clock (Correction)         M9-0399-5         GUX         S00.0         M35         M35         M10           SP-21         E1:         DUPONT         Clock (M)         M9-0399-5         GUX         100.0         13         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643         643 </td <td></td> <td>TNOQUC .1.</td> <td></td> <td>M9-0399-4</td> <td>Š</td> <td>100.0</td> <td></td> <td></td> <td>6</td> <td></td> <td></td> <td></td> <td></td>                                                                                                                                                             |                    | TNOQUC .1.                 |                 | M9-0399-4        | Š            | 100.0         |                    |         | 6                          |                  |         |     |              |
| SP-21       E-1: DUPONT CONC.       M9-U399-5       GOX 1000.0       730       730       D       D         SP-21       E-1: DUPONT CONC.       M9-U399-5       GOX 1500.0       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645       645 <t< td=""><td></td><td>.I. DUPONT</td><td></td><td>M9-0399-5</td><td>COX<br/>COX</td><td>500.0</td><td></td><td></td><td>68</td><td></td><td></td><td>~</td><td>DKCDC</td></t<>                                                                                                                                                                                                                                                |                    | .I. DUPONT                 |                 | M9-0399-5        | COX<br>COX   | 500.0         |                    |         | 68                         |                  |         | ~   | DKCDC        |
| SP-21         E-1:         DUPONT         GON: INC.         OP399-7         GON         ISO00.0         M13                                                                                                                                                                                                                                                                                                                                  |                    | PUPONT .                   |                 | 9-66E0-6W        | č0X          | 1000.0        |                    |         | ~                          |                  |         | ~   | B DKCD:      |
| SP-21       E::       DUPONY COINC.       ::?-0399-8       GCX 2000.0       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613       613                                                                                                                                                                                                                                                                                                                                                                                                                                |                    | . DUPONT                   |                 | M9-0399-7        | COX<br>COX   | 1500.0        |                    |         | 49                         |                  |         | ~   | DKCDC        |
| SP-21       E-10       0UPONT       CO.11KC       -075C       M-00000       GOX       4500.00       M-00000         SP-21       E-10       DUPONT       CO.11KC       70-1880       GOX       2000.00       50       00/01       A       10         SP-21       E-10       DUPONT       CO.11KC       70-1880       GOX       500.00       50       00/01       A       11         SP-21       E-10       DUPONT       CO.11KC       70-1880-1       GOX       500.00       50       00/01       A       11       11         SP-21       E-11       DUPONT       CO.11KC       70-1880-1       GOX       100.00       50       00/01       50       11         SP-21       E-11       DUPONT       CO.11KC       70-1880-1       GOX       100       57       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745       745                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    | <ul> <li>DUPONY</li> </ul> |                 | L                | š            | 2000.0        |                    |         |                            |                  | -       | ~   | BKCD(        |
| SP-21       E-1: DUFONT CCO.INC:       70-1880       G7X       2000.0       50       00/04       A 11         SP-21       E-1: DUFONT CCO.INC:       70-1880-1       G0X       500.0       50       00/04       A 11         SP-21       E-1: DUFONT CCO.INC:       70-1880-2       G0X       500.0       50       13         SP-21       E-1: DUFONT CCO.INC:       70-1880-3       G0X       500.0       760       10       13         SP-21       E-1: DUFONT CCO.INC:       70-1880-3       G0X       100.0       760       10       13         SP-21       E-1: DUFONT CCO.INC:       70-1880-5       G0X       100.0       760       10       13         SP-21       E-1: DUFONT CCO.INC:       70-1880-5       G0X       100.0       760       13         SP-21       E-1: DUFONT CCO.INC:       70-1880-5       G0X       100.0       760       13         SP-21       E-1: DUFONT CCO.INC:       70-1880-5       G0X       10000       573       13         SP-21       E-1: DUFONT CCO.INC:       70-1880-5       G0X       760       100       13         SP-21       E-1: DUFONT CCO.INC:       70-1880-5       G0X       573       070       13                                                                                                                                                                                                                                                                                                                                                                                 | N                  | . DUPONT                   | • 075C          | M9-0399-9        |              | 4500.0        |                    | 00      | 10/                        |                  |         | -   |              |
| SP-21       E-10       DUFONT       CO-114C       70-1880       GGX       200:0       50       00/04         SP-21       E-10       DUFONT       CO0-14C       70-1880-1       GOX       500:0       749       749       71         SP-21       E-10       DUFONT       CO0-14C       70-1880-3       GOX       500:0       745       745       745       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71       71 <td>S</td> <td>. DUPONT</td> <td></td> <td>70-1880</td> <td></td> <td>2000.0</td> <td></td> <td></td> <td>104</td> <td></td> <td></td> <td></td> <td></td>                                                                                                                                                                                                                                                                                                          | S                  | . DUPONT                   |                 | 70-1880          |              | 2000.0        |                    |         | 104                        |                  |         |     |              |
| SP-21       E-10       DUPONT CO.INC.       70-1880-1       GOX       90.0       894       894       894       0       0       13         SP-21       E-10       DUPONT CO.INC.       70-1880-2       GOX       100.0       761       160       0       13         SP-21       E-10       DUPONT CO.INC.       70-1880-3       GOX       100.0       760       160       0       13         SP-21       E-10       DUPONT CO.INC.       70-1880-5       GOX       100.0       760       160       0       13         SP-21       E-10       DUPONT CO.INC.       70-1880-5       GOX       1000.0       760       760       160       13         SP-21       E-10       DUPONT CO.INC.       70-1880-5       GOX       500.0       13       740       16       13         SP-21       E-10       DUPONT CO.INC.       70-1880-5       GOX       500.0       13       740       13         SP-21       E-10       DUPONT CO.INC.       71-5003-5       GOX       500.0       1000       13       12         SP-21       E-10       DUPONT CO.INC.       71-5003-5       GOX       500.0       1000       11       10 </td <td>S</td> <td>•1• DUPONT</td> <td></td> <td>79-1880</td> <td></td> <td>2000.0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td>                                                                                                                                                                                                                                                          | S                  | •1• DUPONT                 |                 | 79-1880          |              | 2000.0        |                    |         |                            |                  |         | -   |              |
| SP-21       E-1       DUPONT CO.INC.       70-1880-2       60X       100:0       78.1       681       0       1         SP-21       E-1       DUPONT CO.INC.       70-1880-5       60X       500:0       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.6       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5       78.5                                                                                                                                                                                                                                                                                                                                                                                          | S                  | .I. DUPONT                 |                 | 70-1880-1        | Š            | 50° 0         |                    |         | 8                          |                  | •       | -   |              |
| SP-21       E-1       DUFONT COMMC       700-1880-3       GOX       500.0       765       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       775       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776       776                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    | •I • DUPONT                |                 | 70-1880-2        | 60X          | 100.0         |                    |         | æ                          |                  |         | ~   |              |
| SP-21       E-1       DUPONT COIMC.       70-1880-5       GOX       1000.0       760       160       101       3         SP-21       E-1       DUPONT COIMC.       70-1880-5       GOX       1500.0       666       0       13         SP-21       E-1       DUPONT COIMC.       70-1880-5       GOX       2500.0       676       666       0       13         SP-21       E-1       DUPONT COIMC.       70-1880-7       GOX       2500.0       0999       0999       0999       13         SP-21       E-1       DUPONT COIMC.       70-1880-7       GOX       5000.0       00/04       11       13         SP-21       E-1       DUPONT COIMC.       71-5003       GOX       5000.0       00/04       11       10       13         SP-21       E-1       DUPONT COIMC.       71-5003-5       GOX       5000.0       00/04       11       10       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       110       1                                                                                                                                                                                                                                                                                                                                                                                                                              |                    | .INOCUD .I.                |                 | 70-186()-3       | Š            | 500.0         |                    |         | 35                         |                  |         | -   |              |
| SP-21       E-1       DUPONT CO.INC       70-1880-5       GUX 1500.0       666       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | S                  | .I. DUPONT CO. INC         |                 | 70-1880-4        | 60 X         | 1000.0        |                    |         | 76                         |                  |         | -   |              |
| SP-21       E-1       DUPONT       CO-1880-6       GOX       25.0       DOO       D       B73       573       573       D       D       D         SP-21       E-1       DUPONT       CO-1880-7       GOX       5000       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D <thd< th="">       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       <thd< th="">       D       <thd< th=""> <thd< th=""></thd<></thd<></thd<></thd<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    | . DUPONT                   |                 | 70-1880-5        | Š            | 1500.0        |                    |         | ž                          |                  |         | -   |              |
| SP-21       E-1       DUPONT CD-INC.       70-1880-7       GOX       50.0       1000       1099       N999       N109       N109 <thn109< th=""> <thn109< th=""> <thn109< td=""><td></td><td>. DUPONT</td><td></td><td>70-1880-6</td><td>60 X</td><td>2000.0</td><td></td><td></td><td>50</td><td>•</td><td>-</td><td>-</td><td></td></thn109<></thn109<></thn109<>                                                                                                                                                                             |                    | . DUPONT                   |                 | 70-1880-6        | 60 X         | 2000.0        |                    |         | 50                         | •                | -       | -   |              |
| SP-21         E-1         DUPDNT         CO1800-4         GOX         50.0         1000         N999         N999         N994         N10           SP-21         E-11         DUPDNT         COL<1NG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    | . DUPONT                   |                 | 70-1880-7        | ŝ            | 25.0          | 1000               |         | 6N                         | ~                | •       | -   | -            |
| SP-21       E-1       DUPDNT CD-1NC       71-5003       GGX 5000.0       50 00/04       A       11         SP-21       E-1       DUPDNT CD-1NC       71-5003-1       GOX 5000.0       00/04       A       10         SP-21       E-1       DUPONT CD-1NC       71-5003-3       GOX 5000.0       00/04       A       10         SP-21       E-1       DUPONT CD-1NC       71-5003-3       GOX 2000.0       01/01       7       10         SP-21       E-1       DUPONT CD-1NC       71-5003-4       GOX 2000.0       01/02       7       10         SP-21       E-1       DUPONT CD-1NC       71-5003-4       GOX 5000.0       01/03       7       10         SP-21       E-1       DUPONT CD-1NC       71-5003-4       GOX 5000.0       01/02       7       10         SP-21       E-1       DUPONT CD-1NC       71-5003-6       GOX 4500.0       01/02       7       10         SP-21       E-1       DUPONT CD-1NC       71-5003-6       GOX 4500.0       01/02       7       10         SP-21       E-1       DUPONT CD-1NC       71-5003-6       GOX 4000.0       01/01       7       10         SP-21       E-1       DUPONT CD-1NC                                                                                                                                                                                                                                                                                                                                                                                                     |                    | - DUPONT -                 |                 | 70-1880-9        | COX<br>COX   | 50.0          |                    |         | z                          | Z                | ~       | -   | _            |
| SP-21       E-1       DUPONT       CD0.11MC       71-5003-1       GUX       S000.00       00/04       A       IO         SP-21       E-1       DUPONT       CD0.11MC       71-5003-3       GUX       2500.00       01/01       7       10         SP-21       E-1       DUPONT       CD0.11MC       71-5003-3       GUX       5000.00       01/01       7       10         SP-21       E-1       DUPONT       CD0.11MC       71-5003-4       GUX       5000.00       01/03       7       10         SP-21       E-1       DUPONT       CD0.11MC       71-5003-4       GUX       5000.00       01/03       7       10         SP-21       E-1       DUPONT       CD0.11MC       71-5003-4       GUX       4500.00       01/02       7       10         SP-21       E-1       DUPONT       CD0.11MC       71-5003-4       GUX       4500.00       01/02       7       10         SP-21       E-1       DUPONT       CD0.11MC       71-5003-9       GUX       4500.00       01/01       7       10         SP-21       E-1       DUPONT       CD0.11MC       71-5003-9       GUX       4500.00       01/01       7                                                                                                                                                                                                                                                                                                                                                                                                                              |                    | - DUPONT                   |                 | 71-5003          | Š            | 5000-0        |                    |         | 104                        |                  |         |     |              |
| SP-21         E-1         DUPONT COINC.         71-5003-7         GOX         2500.0         01/01         1         1           SP-21         E-1         DUPONT COINC.         71-5003-3         GOX         5000.0         00/04         7         10           SP-21         E-1         DUPONT COINC.         71-5003-4         GOX         5000.0         00/04         7         10           SP-21         E-1         DUPONT COINC.         71-5003-4         GOX         5000.0         01/01         7         10           SP-21         E-1         DUPONT COINC.         71-5003-6         GOX         5000.0         01/02         7         10           SP-21         E-1         DUPONT COINC.         71-5003-6         GOX         5000.0         01/01         7         10           SP-21         E-1         DUPONT COINC.         71-5003-9         GOX         4000.0         01/01         7         10           SP-21         E-1         DUPONT COINC.         71-5003-9         GOX         01/01         7         10           SP-21         E-1         DUPONT COINC.         71-5003-9         GOX         4000.0         01/01         7         10                                                                                                                                                                                                                                                                                                                                                      |                    | - PUPONT -                 | -               | 71-5003-1        | COX          | 2 000 • 0     |                    | 8       | 104                        |                  |         |     |              |
| SP-21       E-1       DUPONT CO-INC.       71-5003-3       GGX       2000.0       00/04       7       10         SP-21       E-1       DUPONT CO.INC.       71-5003-4       GOX       5000.0       01/03       7       10         SP-21       E-1       DUPONT CO.INC.       71-5003-5       GOX       5000.0       01/03       7       10         SP-21       E-1       DUPONT CO.INC.       71-5003-6       GOX       5000.0       01/03       7       10         SP-21       E-1       DUPONT CO.INC.       71-5003-6       GOX       4500.0       01/01       7       10         SP-21       E-1       DUPONT CO.INC.       71-5003-6       GOX       4500.0       01/01       7       10         SP-21       E-1       DUPONT CO.INC.       71-5003-9       GOX       4500.0       01/01       7       10         SP-21       E-1       DUPONT CO.INC.       71-5003-9       GOX       4000.0       01/01       7       10         SP-21       E-1       DUPONT CO.INC.       71-5003-9       GOX       4000.0       01/01       7       10         SP-21       E-1       DUPONT CO.INC.       71-5003-9       GOX       40                                                                                                                                                                                                                                                                                                                                                                                                             |                    | . DUPONT                   |                 | 71-5003-7        | ŝ            | 2500.0        |                    | ō       | 10/1                       |                  |         |     |              |
| SP-21       E-1       DUPONT CD-INC.       71-5003-4       60X 5000.0       01/03       7       10         SP-21       E-1       DUPONT CD-INC.       71-5003-5       60X 4500.0       01/02       1       10         SP-21       E-1       DUPONT CD-INC.       71-5003-6       60X 4500.0       01/02       7       10         SP-21       E-1       DUPONT CD-INC.       71-5003-6       60X 4500.0       01/02       7       10         SP-21       E-1       DUPONT CD-INC.       71-5003-9       60X 4500.0       01/01       7       10         SP-21       E-1       DUPONT CD-INC.       71-5003-9       60X 4500.0       01/01       7       10         SP-21       E-1       DUPONT CD-INC.       71-5003-9       60X 4000.0       01/01       7       10         SP-21       E-1       DUPONT CD-INC.       71-5003-9       60X 4000.0       01/01       7       10         SP-21       L01       1062       E-1       DUPONT CD-INC.       71-5003-9       60X 4000.0       01/01       7       10         SP-21       L01       1062       60X 4000.0       01/01       7       10       10       10       10       10 <t< td=""><td></td><td>. DUPONT</td><td></td><td>71-5003-3</td><td>X DO</td><td>2000.0</td><td></td><td>8</td><td>104</td><td></td><td></td><td>-</td><td></td></t<>                                                                                                                                                                                                                                    |                    | . DUPONT                   |                 | 71-5003-3        | X DO         | 2000.0        |                    | 8       | 104                        |                  |         | -   |              |
| SP-21     E-1:     DUPONT CD::INC.     71-5003-5     GUX 4500.0     00/04     A 10       SP-21     E-1:     DUPONT CO.:INC.     71-5003-6     GUX 4500.0     01/02     71     71       SP-21     E-1:     DUPONT CO.:INC.     71-5003-6     GUX 4500.0     01/02     71     71       SP-21     E-1:     DUPONT COINC.     71-5003-6     GUX 4500.0     01/01     71     71       SP-21     E-1:     DUPONT COINC.     71-5003-7     GUX 4500.0     01/01     71     71       SP-21     E-1:     DUPONT COINC.     71-5003-9     GUX 4500.0     01/01     71     71       SP-21     E-1:     DUPONT COINC.     71-5003-9     GUX 4000.0     01/01     71     71       SP-21     L01 1062     E-1:     DUPONT COINC.     71-5665     GUX 4000.0     01/01     710                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>N</b> 1         | • DUPONT                   |                 | 71-5003-4        | Š            | 5000.0        |                    | 0       | 60/1                       |                  |         |     |              |
| SP-21         E-1         DUPONT COINC.         71-5003-6         GOX 5000.0         01/02         1         10           SP-21         E-1         DUPONT COINC.         71-5003-7         GUX 4500.0         01/01         7         13           SP-21         E-1         DUPONT COINC.         71-5003-9         GOX 4000.0         01/01         7         13           SP-21         E-1         DUPONT COINC.         71-5003-9         GOX 4000.0         01/01         7         10           SP-21         E-1         DUPONT COINC.         71-5003-9         GOX 4000.0         01/01         7         10           SP-21         LOT 1062         71-5003-9         GOX 4000.0         01/01         7         10           SP-21         LOT 1062         71-5565         GOX 4000.0         01/01         7         10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    | 1N0400 •1•                 |                 | -200 <u>-</u> 1/ | 603          | 0.0064        |                    | 2       | 104                        |                  |         |     |              |
| SP-zi         E-if         UUPDNT CU-FINC         TI-SUG-F         UU         UU         UI         I         U           SP-zi         E-if         DUPDNT CO-FINC         71-5003-8         GOX 40000.0         01/01         710         710           SP-zi         E-if         DUPDNT CO-FINC         71-5003-9         GOX 4000.0         01/01         710         710           SP-zi         E-if         DUPONT CO-FINC         71-5565         GOX 4000.0         01/01         710         710                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    | -J - DUPONT CO - INC       |                 | 71-5003-6        | ŝ            |               |                    | 00      | 20/1                       |                  |         |     |              |
| SP-21         E-1         DUPDNT CO-INC         71-5003-8         GUX         400000         01/01         1         10           SP-21         E-1         DUPDNT CO-INC         71-5003-9         GDX         5500.0         00/04         4         10           SP-21         LOT 1062         E-1         DUPDNT CO-INC         71-2565         GDX         4000.0         00/04         4         10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    | • [+ DUPUNI CO+1WC         |                 | 7-6006-17        |              | 0.0004        |                    | 5       | 10/1                       |                  |         |     |              |
| SP-21         E-1         DUPONT CD-11MC         71-5003-9         6UX         5500-0         00/04           SP-21         LOT 1062         E-1         DUPONT CD-11MC         71-2565         GOX         4000-0         01/01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    | · DUPDNT CO. · INC         |                 | 71-5003-8        | Š            | 0.0004        |                    | 0       | 10/1                       |                  |         | - · |              |
| SP-21 LOT 1062 E.I. DUPUNT CO.INC. 71-2565 GOX 4000.0 01/01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 59-21              | E .I . DUPONT              |                 | 6-6006-11        | 203          | 0-0040        |                    | 5       | 4u/1                       |                  |         | _   |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | SP-21 LOT          | E.I. DUPONT                |                 | 71-2565          | 20X          | 000           |                    | 0       | 10/1                       |                  |         | -   |              |

1

е .

``

<u>.</u>

PACE 57

ę

The second by the second second

` .

••• - MATERIAL TEST DATA BY MAMUFACTURER S DESIGNATION AS UF 31 JAN 72

i

| 1         11-284-1         300.0         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         100000         01/01         01/01           1         11/1111/11         000000         01/01<                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | NFGA S DESIGNATION | Ā    | MANUFACTURER     | 4 N N N N N N N N N N N N N N N N N N N | SPEC.<br>THICK. | TEST RPT NO.       | TEST       | TEST<br>PRESS | TEST<br>1EMP | ENER<br>ENER | NO OF<br>REACT | FLASH    | FIRE<br>PT | PROF NT<br>DIST LOSS | Q | T MATL<br>T CODE |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------|------------------|-----------------------------------------|-----------------|--------------------|------------|---------------|--------------|--------------|----------------|----------|------------|----------------------|---|------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SP-21              | 1062 | E-1- DUPONT CO.  | INC.                                    |                 | 71-2565-2          | 202        |               | _            |              | 20/10          |          |            |                      | • |                  |
| 11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1       11-2547-1                                                                                                                                                                                                          | SP-21              | 1062 | E-I & DUPDNY CO  | INC.                                    |                 | 71-2565-3          | EOX        | 25.00.1       |              | -            |                |          |            |                      |   | O DKCOGE         |
| 1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 5 -21              | 1062 | E-I- DUPONT CO.  | INC.                                    |                 | 71-2565-4          | ŝ          |               |              |              |                |          |            |                      |   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SP-21              | 1068 | FLODYNE CONTROLS | JK<br>Z                                 |                 | 71-2697            |            | 4600.         |              |              |                |          |            |                      |   |                  |
| 5-211       101       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100 <td< td=""><td>SP-21</td><td>1068</td><td>FLOOTHE CONTROLS</td><td>1.10</td><td></td><td>71-7407-1</td><td>202</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>                                                                                                                                                                                                                                         | SP-21              | 1068 | FLOOTHE CONTROLS | 1.10                                    |                 | 71-7407-1          | 202        |               |              |              |                |          |            |                      |   |                  |
| S-F411       E-1       COMMA                                                                                                                                                                                                                                                                                                                                                           | SP-21              | 1068 | FLOOTNE CONTROLS | TWC                                     |                 | 71-2407-2          |            |               | 5.4          |              | 10/10          |          |            |                      |   |                  |
| 1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | SP-211             |      | Tunday           |                                         |                 | 2                  | 5          | 2000          | ~            |              | 40/00          |          |            |                      |   |                  |
| 1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |      |                  |                                         |                 |                    | ŝ          | 2000-1        | •            | 20           | 90/06          |          |            |                      |   |                  |
| 1       5       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       100.00       1                                                                                                                                                                                                                                                                                                                |                    |      |                  | ••••                                    |                 | 6481-0/            | ŝ          | 2000-0        | ~            |              | 00/00          |          |            |                      |   |                  |
| 1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1                                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |      |                  |                                         |                 | 70-1879-1          | Š          | 100.          | ~            |              |                | 830      | 830        |                      |   |                  |
| Farmer         Farmer<                                                                                                                                                                                                                                |                    |      |                  |                                         |                 | 70-1879-2          | X09        | 500.0         | ~            |              |                | 653      |            |                      |   |                  |
| 5 - 211       5 - 10 - 10 - 10 - 100       7 - 11 - 211 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200       5 - 200 <td></td> <td></td> <td></td> <td></td> <td></td> <td>6-6463-54</td> <td>Š</td> <td>1000.</td> <td>~</td> <td></td> <td></td> <td>618</td> <td></td> <td></td> <td></td> <td></td>                                                                           |                    |      |                  |                                         |                 | 6-6463-54          | Š          | 1000.         | ~            |              |                | 618      |            |                      |   |                  |
| F=1:         Dervert         CO-1017-5         CO<1000         You                                                                                                                                                                                                                                                                                                                                             |                    |      |                  |                                         |                 | 70-1:79-4          | XOS        | 1500-0        | ~            |              |                | 550      |            |                      |   |                  |
| F-11         F-11         DWT MT         COL HK         Th-1177-75         GOX         Th-1100         MMM                                                                                                                                                                                                                                                                                                                                         |                    |      | IN DUPCHT        | INC.                                    |                 | 70-1679-5          | ŝ          | 50-           |              |              |                |          |            |                      |   |                  |
| S-2011         S-10         <                                                                                                                                                                                                                                                                                                    |                    |      | - DUPON'         | R.                                      |                 | 70-1879-5          | SOX.       |               |              |              |                | 0001     | 016        |                      |   |                  |
| Service         Service         Dispension         Contract         T1-2315         Gat         Service         Dispension         Contract         Dispension         Di                                                                                                                             | ÷                  |      | THUMAN =         | INC.                                    |                 | 70-1879-7          | ŝ          |               |              |              |                | ****     | 555N       |                      |   |                  |
| L SP-211         Control         Contro         Control <thcontrol< th=""> <th< td=""><td></td><td></td><td>- DUPONT</td><td></td><td></td><td>71-281E</td><td>32</td><td></td><td></td><td></td><td></td><td>アンシス</td><td>666N</td><td></td><td></td><td></td></th<></thcontrol<> |                    |      | - DUPONT         |                                         |                 | 71-281E            | 32         |               |              |              |                | アンシス     | 666N       |                      |   |                  |
| State         Durbent         Construct         T1-2317-1         Construct         Control         State         State<                                                                                                                                                                                                                                                           |                    |      | Sient's          |                                         |                 |                    |            | *00cz         | ~            |              | 10/10          |          |            |                      |   |                  |
| 5       000001       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       0000       00000       00000       00000                                                                                                                                                                                                                                                                                                                                                                                                 |                    |      |                  |                                         |                 | 1-6167-7/          | ŝ          | 2000-         | •            |              | 01/01          |          |            |                      |   |                  |
| 5:1       000001       00000       500       500       600       500       600       500       600       500       600       500       600       500       600       500       600       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650       650                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ٦,                 |      |                  |                                         |                 | 71-2515-2          | XOS        | 1500.0        |              |              | 40/00          |          |            |                      |   |                  |
| 5-1       000001       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601       601 <t< td=""><td></td><td></td><td></td><td>• • •</td><td></td><td>E0-0202</td><td>Š</td><td>5</td><td></td><td></td><td></td><td>857</td><td>006N</td><td></td><td></td><td></td></t<>                                                                                                                                                                                                                                                              |                    |      |                  | • • •                                   |                 | E0-0202            | Š          | 5             |              |              |                | 857      | 006N       |                      |   |                  |
| F1:       000000000000000000000000000000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                    |      |                  |                                         |                 | H9-0295-1          | XOS        | 25.0          | ~            |              |                | 836      | 2.5.5      |                      |   |                  |
| E::       DUPONT CO.: 11(2.       .0750       M9-0239-11       G0X       500.0       00/04         E::       DUPONT CO.: 11(2.       .0750       M9-0239-11       G0X       400.0       01/03         E::       DUPONT CO.: 11(2.       .0750       M9-0239-11       G0X       400.0       01/03         E::       DUPONT CO.: 11(2.       .0750       M9-0239-11       G0X       400.0       01/03         E::       DUPONT CO.: 11(2.       .0750       M9-0239-11       G0X       400.0       01/03         E::       DUPONT CO.: 11(2.       .0750       M9-0239-11       G0X       400.0       01/03         E::       DUPONT CO.: 11(2.       .0750       M9-0239-11       G0X       500.0       01/03         E::       DUPONT CO.: 11(2.       .0750       M9-0239-16       G0X       500.0       01/03         E::       DUPONT CO.: 11(2.       .0750       M9-0239-16       G0X       500.0       01/04         E::       DUPONT CO.: 11(2.       .0750       M9-0239-16       G0X       500.0       01/04         E::       DUPONT CO.: 11(2.       .0750       M9-0239-16       G0X       500.0       01/04         E::       DUPONT CO.: 11(2.                                                                                                                                                                                                                                                                                                                                                                                       |                    |      | INDADC +         |                                         |                 | <b>10-02020-10</b> | XOS        | 2000.0        | ~            |              |                | 454      |            |                      |   |                  |
| E-1:       DUPONT       COLINC:       -0750       M:-0239-12       COX       4000.0       01/01         E-1:       DUPONT       COLINC:       -0750       M:-0239-12       COX       4500.0       01/01         E-1:       DUPONT       COLINC:       -0750       M:-0239-12       COX       4500.0       01/01         E-1:       DUPONT       COLINC:       -0750       M:-0239-115       COX       4500.0       01/01         E-1:       DUPONT       COLINC:       M:9-0239-116       COX       500.0       00/01       2500       2500       2500       2500       2500       2500 <t< td=""><td></td><td></td><td>- DUPONT</td><td></td><td>0150</td><td>M9-0295-21</td><td><b>X09</b></td><td>3500.0</td><td></td><td></td><td>00/07</td><td><u>}</u></td><td>5</td><td></td><td></td><td></td></t<>                                                                                                                                                                                           |                    |      | - DUPONT         |                                         | 0150            | M9-0295-21         | <b>X09</b> | 3500.0        |              |              | 00/07          | <u>}</u> | 5          |                      |   |                  |
| E-1:       DUPONT CO.:NC.       0750       W-0239-13       COX 4500.0       50       01/01         E-1:       DUPONT CO.:NC.       0750       W-0239-14       GOX 4000.0       50       00/01         E-1:       DUPONT CO.:NC.       0750       W-0239-14       GOX 5000.0       50       00/01         E-1:       DUPONT CO.:NC.       0750       W-0239-14       GOX 5000.0       50       00/01         E-1:       DUPONT CO.:NC.       0750       W-0239-14       GOX 5000.0       50       00/01         E-1:       DUPONT CO.:NC.       0750       W-0239-14       GOX 5000.0       50       00/01         E-1:       DUPONT CO.:NC.       0750       W-0239-16       GOX 1000.0       50       00/01         E-1:       DUPONT CO.:NC.       0759       W-0239-16       GOX 1000.0       50       00/01         E-1:       DUPONT CO.:NC.       N9-0239-16       GOX 1000.0       500       590       590       590         E-1:       DUPONT CO.:NC.       N9-0239-16       GOX 1000.0       500       590       590       590       590         E-1:       DUPONT CO.:NC.       N9-0239-17       GOX 1000.0       500       500       590       590                                                                                                                                                                                                                                                                                                                                                                                      |                    |      | · DUPONT         |                                         | 0750            | #i-0295-12         | Š          | 4000-1        |              |              | 50/10          |          |            |                      |   |                  |
| E-1:       DUPONT COINC.       .0750       M9-0295-15       GGT       5000.0       50       01/04         E-1:       DUPONT COINC.       .0750       M9-0295-15       GGT       5000.0       50       00/01         E-1:       DUPONT COINC.       .0750       M9-0295-15       GGT       5000.0       50       00/01         E-1:       DUPONT COINC.       .0750       M9-0295-15       GGT       4000.0       50       01/04         E-1:       DUPONT COINC.       .0750       M9-0295-16       GGT       500       00/01         E-1:       DUPONT COINC.       .0750       M9-0295-16       GGT       500       50       00/01         E-1:       DUPONT COINC.       M9-0295-16       GGT       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |      | . DUPONT         |                                         | 0750            | H9-0295-13         | COX        | 4500-0        |              |              | 10/10          |          |            |                      |   |                  |
| E-1       0UPONT CO.: NC.       .0750       19-0295-15       GCX       500.00       50       00/01         E-1       0UPONT CO.: NC.       .0750       19-0295-16       GCX       500.00       50       00/01         E-1       0UPONT CO.: NC.       .0750       19-0295-16       GCX       500.00       50       00/01         E-1       0UPONT CO.: NC.       .0750       19-0295-16       GCX       500.00       875       870         E-1       0UPONT CO.: NC.       19-02295-16       GCX       500.00       593       593       593       870         E-1       0UPONT CO.: NC.       19-02295-5       GCX       500.00       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593                                                                                                                                                                                                                                                                                                                                                                                                                    | A MOL              |      | - DUPONT         |                                         | 0750            | H9-0295-14         | COX        | 5000-0        |              |              |                |          |            |                      |   |                  |
| 6-11       DUPONT       CC.1 NC.       -0750       N9-0295-16       CO.       N0         6-11       DUPONT       CO.1 NC.       N9-0295-16       CO.       N0       N1       N1         6-11       DUPONT       CO.1 NC.       N9-0295-16       CO.       N0       N1       N1       N1         6-11       DUPONT       CO.1 NC.       N9-0295-16       CO.       N1       N1 <td< td=""><td></td><td></td><td>. OUPONT</td><td></td><td>0150</td><td>M9-0295-15</td><td>EOK</td><td></td><td></td><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>                                                                                                                                                                                                                                                                                         |                    |      | . OUPONT         |                                         | 0150            | M9-0295-15         | EOK        |               |              | 2            |                |          |            |                      |   |                  |
| 6-11       0000017       COL-1MC       0000017       COL-1MC       0000017       COL-1MC       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017       0000017                                                                                                                                                                                                                                                                             | A HOL              |      | · DUPONT         |                                         | 0750            | M9-0205-14         | ŝ          |               |              |              |                |          |            |                      |   |                  |
| E-1       DUPONT CO. INC.       MO-0295-16       COX       50.0       593       693       870         E-1       DUPONT CO. INC.       M9-0295-1       GOX       50.0       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       593       594       506                                                                                                                                                                                                                                                                                                                                                                                                                                           | TON A              |      | - DUPONT         |                                         |                 | H9-02957           |            |               | •            |              |                |          |            |                      |   |                  |
| F-1       DUPONT CO.INC.       M9-0295-2       GOX 50.0       B59       B70         F-1       DUPONT CO.INC.       M9-0295-3       GOX 50.0       B26                                                                                                                                                                                                                                                                                                                                                                                                                                      | ITON A             |      | TWOANC .         | NC.                                     |                 | MG=0.20E=10        |            | 5,            |              |              |                | 5        | 666N       |                      |   |                  |
| Street       E:1:       DUPONY CO.: NC       N9-0295-5       GUX       500.0       525       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       826       <                                                                                                                                                                                                                                                                                                                                                                                                                                 | TON A              |      | . DUPDHIT        |                                         |                 | MG_0206-2          |            |               | •            |              |                | 658      | 870        |                      |   |                  |
| Street       E       DUPONT CO.INC.       M9-0295-4       GOX       500       593       593       593         E       DUPONT CO.INC.       M9-0295-4       GOX       100.0       520       590       590       590         E       DUPONT CO.INC.       M9-0295-4       GOX       100.0       520       590       590       590         E       DUPONT CO.INC.       M9-0295-6       GOX       1000.0       520       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       590       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500       500 <td>TON A</td> <td></td> <td>Pressor -</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>826</td> <td>826</td> <td></td> <td></td> <td></td>                                                                                                                                                                                                                                                  | TON A              |      | Pressor -        |                                         |                 |                    |            |               |              |              |                | 826      | 826        |                      |   |                  |
| SWEET       E:1:       DUPONT CO.: NC.       N9-0299-5       GOX       100.0       520       590       590       590         F:1:       DUPONT CO.: NC.       N9-0299-5       GOX       100.0       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       520       506       506       506       506       506       506       506       506       506       506       506       506       506                                                                                                                                                                                                                                                                                                                                                                                                                                      | TON A              |      | YHOMA -          |                                         |                 | 6-657-64           | ŝ          | 0.00          | ~            |              |                | 593      | 593        |                      |   |                  |
| A       520       520       520       520       520         A       E       000000       00000       506       506       506       506         A       E       000000       00000       506       506       506       506       506         A       E       000000       00000       485       485       485       485       485       485       485       485       485       485       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |      |                  |                                         |                 | H9-0295-4          | X OS       | 100.0         | -            |              |                | 590      | 590        |                      |   |                  |
| A       Ferror Durbont Construction       M9-0295-6       GOX       900.0       306.506       506         A       Ferror Durbont Construction       M9-0295-7       GOX       1000.0       485       485       485       485       485       485       485       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486       486                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |      |                  | -) -                                    |                 | F19-0295-5         | Š          | 500.0         | ~            |              |                | 320      | 520        |                      |   |                  |
| B SHEET       E-1:       DUPONT COINC.       M9-0295-7       GOX 1000.0       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485       485                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |      |                  |                                         |                 | <b>#9-0295-6</b>   | Š          | 900.0         | _            |              |                | 306      | 506        |                      |   |                  |
| B SHEET       E-1:       DUPONT CO.:INC.       H9-0295-9       GOX 1000.0       H82 482       B         B SHEET       E-1:       DUPONT CO.:INC.       H9-0295-9       GOX 1500.0       H82 482       B         B SHEET       E-1:       DUPONT CO.:INC.       H9-0268-1       JOI 22:0       562 H82       B         B SHEET       E-1:       DUPONT CO.:INC.       H9-0268-11       JOI 22:0       562 H55       B         B SHEET       E-1:       DUPONT CO.:INC.       0750 H9-0268-11       JOI 200.0       200 00/01       562 H55       B         B SHEET       E-1:       DUPONT CO.:INC.       0750 H9-0268-12       G/X 500.0       200 00/01       200 00/01       B       B         B SHEET       E-1:       DUPONT CO.:INC.       M9-0268-12       G/X 500.0       200 00/04       725 7.5       D         B SHEET       E-1:       DUPONT CO.:INC.       M9-0268-12       G/X 500.0       200 00/04       725 7.5       D         B SHEET       E-1:       DUPONT CO.:INC.       M9-0268-12       G/X 500.0       725 572       D         B SHEET       E-1:       DUPONT CO.:INC.       M9-0268-12       G/X 500.0       725 572       D                                                                                                                                                                                                                                                                                                                                                                                           |                    |      | 1100400 - 1+     | MC.                                     |                 | H9-0295-7          | ŝ          | 1000.0        | ~            |              |                | 4 2 5    | 583        |                      |   |                  |
| Exit         Exit         DUPCNT CO.INC.         M9-0295-9         GGX (500.0         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         480         48                                                                                                                                                                                                                                                                                                                                   |                    |      | THOMO .I.        | · ¥                                     |                 | #3-0295-B          | 60%        | 1000.0        | -            |              |                | 4.87     | 202        |                      |   |                  |
| Sincer         E-I         DUPCNT CO-INC         N9-0268-1         JD         Z5.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         52.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0         53.0 <td>•</td> <td></td> <td>-1. DUPOHT</td> <td></td> <td></td> <td>M9-0295-9</td> <td>ž</td> <td>1500.0</td> <td></td> <td></td> <td></td> <td>480</td> <td></td> <td></td> <td></td> <td></td>                                                                                                     | •                  |      | -1. DUPOHT       |                                         |                 | M9-0295-9          | ž          | 1500.0        |              |              |                | 480      |            |                      |   |                  |
| B SHEET         E-1:         DUPONT         COINC.         -0750         H9-0268-10         GUX         1500.0         200         00/01         722         723         N           B SHEET         E-1:         DUPONT         COINC.         -0750         H9-0268-11         GUX         1500.0         200         00/01         A           B SHEET         E-1:         DUPONT         COINC.         -0750         H9-0268-12         GVX         50.0         200         00/01         A           B SHEET         E-1:         DUPONT         COINC.         -0750         H9-0268-12         GVX         50.0         725         725         57         657         657         657         657         657         657         657         657         657         657         657         657         657         657         657         657         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         572         57                                                                                                                                                                                                                                                                                                                                        |                    |      | INGANG .         | ¥C.                                     |                 | M9-0268-1          | 10.        | 25.0          |              |              |                |          |            |                      |   |                  |
| B SMEET         E -1 = DUPONT COIMC.         -0750 M9-0268-11         GOX 2000.0         200 00/04         A           B SMEET         E -1 = DUPONT COIMC.         -0750 M9-0268-12         G/3 X         50.0         725 7.5         A           B SMEET         E -1 = DUPONT COIMC.         M9-0268-12         G/3 X         50.0         725 7.5         D           B SMEET         E -1 = DUPONT COIMC.         M9-0268-13         GOX 100.0         200         0/074         577 657         D           B SMEET         E -1 = DUPONT COIMC.         M9-0268-1/         G/3 X         500.0         725 7.5         D         D           B SMEET         E -1 = DUPONT COIMC.         M9-0268-1/         G/3 X         500.0         577 657         D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |      | I. DUPONT        |                                         | 0150            | -0268-1            | COX        | 1500.0        |              | 000          | 107.00         | 707      | 666        |                      |   | A CHDFXX         |
| B SWEET         E-1         DWPONT COINC.         N9-0268-12         G/X         S/X         S/X         G/X         S/X         G/X         G/X </td <td>•</td> <td></td> <td>I. PUPONT</td> <td></td> <td></td> <td>M9-0268-11</td> <td>XOS</td> <td>2000.0</td> <td></td> <td>200</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>L CHOFXX</td>                                                                                                                          | •                  |      | I. PUPONT        |                                         |                 | M9-0268-11         | XOS        | 2000.0        |              | 200          |                |          |            |                      |   | L CHOFXX         |
| B SMEET         E-i-         DUPONT         CO-INC.         M9-0268-13         GOX         100.0         657         657         0           B SMEET         E-i-         DUPONT         CO-INC.         M9-0268-13         GOX         100.0         657         657         D           B SMEET         E-i-         DUPONT         CO-INC.         M9-0268-17         GOX         500.0         572         572         D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | •                  |      | INDONO -I        |                                         |                 | M9-0268-12         | 25         | >             |              | 2            |                |          |            |                      |   |                  |
| B SMEET E-1. DUPONT COINC. NY-0268-12 GOX 200-0 577 557 D<br>B SMEET E-1. DUPONT COINC. NY-0268-17 GOX 500-0 572 572 D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | •                  |      | i - DUPONT       | ž.                                      |                 | M9-0268-13         | 20         |               |              |              |                | 2,1      |            |                      |   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | •                  |      | . DUPONT         | NC.                                     |                 | H4-024-1/          | ŝ          |               |              |              |                |          | 557        |                      |   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | •                  |      | 10000            |                                         |                 |                    | 5          | 2 · >> :      |              |              |                | 2        | 275        |                      |   |                  |

•

•

:\_

í

;

۰.

į.

:;;

. . . . . . .

N. M. Barrison .

51114

ŧ

ç

-

Ì

Þ

÷

}

キャット・ションスス アイ・オービー たいがんしょう しゅうきがんかい アンドンドス アインス ひまた たまま たたいがい 見たけ かんない あんせい かんない かんない かんない かんない かんしょう

;

Construction of the second second

ŝ

 $\mathbf{n} \in \mathbf{0}$ 

MATERIAL TEST DATA BY MANUFACTURER S DESIGNATION AS OF 31 JAN 72

| MFGR S DESIGNATION | MANUFACTURER               | SPEC.<br>THICK. | TEST RPT NO.      | TEST<br>ENVR | TEST<br>PRESS | TEMP<br>TEMP | 1 MP T<br>ENER | ND DF<br>REACT | FLASH<br>POINT | F 1 R E F | PR(1P WT<br>D1ST LOSS | α⊶<br> | MATL   | يو ر          |
|--------------------|----------------------------|-----------------|-------------------|--------------|---------------|--------------|----------------|----------------|----------------|-----------|-----------------------|--------|--------|---------------|
| VITON B SHEET      | E.I. DUPONT CCINC.         |                 | M9-U268-16        | 50 X         | 6.2           | 1000         |                |                | АВО            | 660 V     |                       |        |        | CHDFXX        |
|                    | E.I. DUPOHT COINC.         |                 | M9-0268-17        | 80X          | 16.5          |              |                |                | 885            | 00        |                       |        | J      | HUFXX         |
| •                  | E .I. DUPONT CO. INC.      |                 | M9-0268-18        | хо <u>о</u>  | 1500.0        |              |                |                | 400            | 640       |                       |        |        | CHDFXX        |
| •                  | E.I. DIJPONT CO., INC.     |                 | M9-0268-19        | 60X          | 2000.0        |              |                |                | 515            | 515       |                       |        | -      | CHDFXX        |
| •                  | E-I- DUPONT COINC.         |                 | M9-0268-2         | Š            | 50.0          |              |                |                | 400            | 190       |                       |        |        | CHDFXX        |
| VITON B SHEET      | •I. DUPONT                 |                 | M90268-3          | COX          | 0.006         |              |                |                | 472            | 472       |                       | 0      | 13 CHD | CHDFXX        |
| Ø                  | •I. DUPONT                 | •0750           | M9-0266-4         | Š            | 3500.0        |              |                | 10/00          |                |           |                       |        |        | CHDFXX        |
| ₫                  | •I. DUPONT                 | •0750           | M9-0268-5         | 20X          | 4000.0        |              |                | 10/00          |                |           |                       |        | -      | CHDFXX        |
| •                  | +1+ DUPONT                 | •0750           | M9-0268-6         | ŝ            | 4500.0        |              |                | 10/00          |                |           |                       |        |        | CHDFXX        |
| Э                  | <ul> <li>DUPONT</li> </ul> | .0750           | M9-0268-7         | хoу<br>90х   | 5000.0        |              |                | :0/00          |                |           |                       |        | _      | CHDFXX        |
| •                  | <ul> <li>DUPONT</li> </ul> | •0150           | M9-0268-8         | š            | 500.0         |              |                | 10/00          |                |           |                       |        |        | CHDFXX        |
|                    |                            | .0750           | <u> 49-0268-9</u> | X 09         | 1000.0        |              | 200            | 10/00          |                |           |                       |        | _      | CHDFXX        |
|                    | SEAL                       |                 | 70-2022           | I            | 615.0         | 477          |                |                |                |           |                       |        |        | CHDEXX        |
|                    | SEAL                       |                 | 70-2022-1         | III          | 801.0         | 477          |                |                |                |           |                       |        | -      | CHDEXX        |
| VITON RUSBER       | SEAL                       |                 | 70-2022-2         | N204         | 405.0         | 214          |                |                |                |           |                       |        |        | CHDEXX        |
| WITCH RUBBER       | CAL-STATE SEAL CO.         |                 | 70-202?-3         | N204         | 371.3         | 128          |                |                |                |           |                       |        | _      | CHDEXX        |
|                    | CAL-STATE SEAL CO.         |                 | 70-2022-4         | N204         | 358.5         | 73           |                |                |                |           |                       |        |        | CHDEXX        |
| C                  | ATE SEAL C                 |                 | 70-2022-5         | N204         | 360.5         | 15           |                |                |                |           |                       |        | _      | CHDEXX        |
| 6-LLE-A NOLIA      | S                          |                 | 10-43             | X09          | 50.0          |              |                |                | 540            | 540       |                       |        |        | DVDFXX        |
| 2                  | SEAL/LOS                   |                 | I -67-J           | C0X          | 100.0         |              |                |                | 530            | 530       |                       |        | -      | DVDFXX        |
| " VITOM V-672-75   |                            |                 | 10-53             | Š            | 50.0          |              |                |                | 660            | 660       |                       |        |        | DVDFXX        |
| PITON V-672-75     | SEAL/LOS                   |                 | 10-53-1           | X09          | 100.0         |              |                |                | 632            | 632       |                       |        | _      | <b>EVDFXX</b> |
|                    | SEAL/LOS                   |                 | 10-53-2           | Š            | 500.0         |              |                |                | 566            | 566       |                       |        |        | DVDFXX        |
| >                  | SEAL/LOS                   |                 | 10-53-3           | ×09          | 1000.0        |              |                |                | 529            | 529       |                       |        | _      | DVDF XX       |
| -                  | SEAL/LOS                   |                 | 10-53-4           | š            | 1500.0        |              |                |                | 495            | 495       |                       |        |        | DVUFXX        |
|                    | SEAL/LOS                   |                 | 10-53-5           | ×09          | 2000.0        |              |                |                | 4 P 2          | 482       |                       |        | _      | DVOFXX        |
|                    | SEAL/LOS                   |                 | 70-1708           | ŝ            | 5.0           | 1000         |                |                | 832            | 066N      |                       |        |        | DVDFXX        |
| _                  | SEAL/LOS                   |                 | 70-1708-1         | ×09          | 25.0          |              |                |                | 140            | R25       |                       |        | _      | DVDFXX        |
| ~                  | SEAL/LOS                   | •0250           | 70-1708-10        | ×09          | 5000.0        |              |                | 04/04          |                |           |                       |        | _      | DVDFXY        |
| 2                  | SEAL/LOS                   |                 | 70-1708-11        | X D O        | <b>6.</b> 2   | 1000         |                |                | 857            | 66úN      |                       |        |        | DVDFXX        |
| -                  | SEAL/LDS                   |                 | 70-1708-12        | õ            | 1:.5          |              |                |                | 853            | A 5 3     |                       |        |        | DVDFXX        |
| _                  | SEAL/LOS                   | ,               | 70-1708-2         | 20X          | 50.0          |              |                |                | 633            | 780       |                       |        |        | DVDFXX        |
| _                  | SEAL/LOS                   | •0750           | 70-1705-3         | Š            | 1500.0        |              |                | 10/00          |                |           |                       |        |        | F X X         |
| -                  | SEAL/LOS                   | •0750           | 70-1708-4         | ×Ö           | 2000.0        |              |                | 10/00          |                |           |                       |        | _      | DVDFXX        |
|                    | SEAL/LOS                   | •0750           | 70-1708-5         | ŝ            | 2500.0        |              |                | 10/00          |                |           |                       |        | _      | DVDFXX        |
| -                  | SEAL/LOS                   | .0750           | 70-1708-6         | 50X          | 3000.0        |              |                | 10/00          |                |           |                       |        | _      | DVDFXX        |
| _                  | SEAL/LOS                   | •0150           | 70-1708-7         | š            | 3500.0        |              |                | 10/00          |                |           |                       |        |        | DVDFXY        |
| V110N V-672-75     | SEAL/LOS                   | .0750           | 70-1708-R         | <b>X0</b> 9  | 4000.0        |              |                | 10/00          |                |           |                       |        | _      | DVDFXX        |
| Ξ                  |                            | +0750           | 70-1708-9         | ŝ            | 4500.0        |              |                | 40/00          |                |           |                       |        |        | DVDFXX        |
| -                  |                            |                 | 71-2370           | х<br>С<br>О  | 500.0         |              | 50             | 00/04          |                |           |                       |        | _      | CHOFXX        |
| _                  | SEAL/LOS                   |                 | 71-2370-1         | XQS          | 500.0         |              |                | 40/00          |                |           |                       |        | 10 CHC | CHDFXY        |
| F                  | ARKER SEAL/LOS             |                 | 71-2370-2         | 20X          | 100.0         |              |                |                | 650            | 650       |                       |        |        | CHDFXX        |
| _                  | SEAL/LOS                   |                 | 71-2370-3         | Š            | 2000.0        |              |                | 00/07          |                |           |                       |        |        | CHDFXX        |
| VI709 77-545       |                            |                 | 71-2370-4         | CO X         | 2500.0        |              | 50             | 90/00          |                |           |                       |        | -      | CHDFXX        |
|                    |                            |                 |                   |              |               |              |                |                |                |           |                       |        |        |               |

51

1

. .

「ないほうろももないろちろうとうと

4 5-

AL MONTAN IN

٩.

27

PAGE 59

۰.

į

;

: •

;

;

:

Ĩ

-----

•

そうきょうかん そうなまた たまえる やっかる とうしん とうまうしん たいしょう しゅうしん

. . . . .

••••••

، بر

NAYERIAL TEST DATA BY MANUFACIURER S DESIGNATION AS OF 31 JAN 72

| MFGR 5 DESIGNATION      | MANUFACTURER                                           | SPEC. | TEST RPT NO. | TEST<br>ENVR | TEST<br>PRESS | TEST | ENER | NO OF<br>REACT | FLASH<br>POINT | FIRF<br>PT | PPOP<br>DIS1 L | HT<br>L NSS | + +<br>4 - | MATL<br>CODE |                   |
|-------------------------|--------------------------------------------------------|-------|--------------|--------------|---------------|------|------|----------------|----------------|------------|----------------|-------------|------------|--------------|-------------------|
| VITON 77-545            | PARKER SEAL/LOS ANGLS                                  |       | 71-2370-5    | š            | 1500.0        |      |      |                | 454            | 494        |                |             | 0 13       | CHDF         | XX                |
| VITALFIED ALUMINA INSUL | IT ENG. CORP                                           |       |              | X09          | 1500.0        |      | 50   | 00/04          |                |            |                |             |            |              | XX                |
|                         | ENG.                                                   |       | 70-1983      | XOS          | 1500.0        |      | 2    | 00/04          |                |            |                |             |            |              | XX                |
|                         | ENG.                                                   |       | 70-1983-1    | COX<br>COX   | 1500.0        | 1000 |      |                | 666N           | 666N       |                |             | A 13       | XXXXII       | XX                |
| VULCALOCK               | GOODR1 CH                                              |       | 71-2371      | Š            | 500.0         |      | 50   | 00/04          |                |            |                |             |            |              | XXO               |
| WLCALOCK                | B.F. GODRICH                                           |       | 71-2371-1    | <b>X0</b> 9  | 500.0         |      |      | 00/04          |                |            |                |             |            |              | XXC               |
| VULCALOCK               | 0.F. GOODRICH                                          |       | 71-2371-2    | Š            | 100.0         |      |      | •              | 621            | 621        |                |             |            |              | XXO               |
| MESCO AL 500            | -                                                      | co.   | 70-2235      | 50 X         | 500.0         |      |      | 90/00          | 1              | 1          |                |             |            |              | XX                |
|                         | CABLE                                                  |       | 71-2714      | INN          | B 26.0        | 550  |      |                |                |            |                |             |            |              | ( )<br>( )        |
|                         | N 3RE                                                  |       | 71-2714-1    | HWW          | 828.0         |      |      |                |                |            |                |             |            |              |                   |
|                         | NTRF E                                                 |       | 71-2714-2    | INI          | 782.0         |      |      |                |                |            |                |             |            |              |                   |
|                         | NATIONAL STAN                                          |       | 70-1027      | SOX.         | 1500.0        |      | 50   | 40700          | . • .          |            |                |             |            |              |                   |
| WIRE-MELDING MIL-R-5031 |                                                        |       | 70-1927      | Ň            | 1500.0        |      |      | 40/00          |                |            |                |             |            |              | ( )H              |
|                         | S THROWS                                               |       | 71-2720      | 4-50         |               | 614  |      |                |                |            |                |             |            |              |                   |
| LET 331                 |                                                        |       | 71-2720-1    |              | 765.0         |      |      |                |                |            |                |             |            | Ju           |                   |
| XR-5038/MICA            | BN CO. ST. PAUL                                        |       | 71-2602      | A-50         |               | 489  |      |                |                |            |                |             |            |              |                   |
| XR-5038/MICA            | co. st.                                                |       | 71-2602-1    |              | 6.89.0        | 693  |      |                |                |            |                |             |            | A7 BGHF      | L I               |
| Ke-50%, in TCA          | Co. ST.                                                |       | 71-2602-2    |              | 761.0         | 214  |      |                |                |            |                |             |            |              |                   |
| TE-SORE/MICA            |                                                        |       | 71-2602-3    |              |               |      |      |                |                |            |                |             |            |              |                   |
| Dire U                  | NVNE CONTROLS                                          |       | 71-2567      |              | 0.000         |      |      | 10700          |                |            |                |             |            |              |                   |
| D-BING CORP. V          | F CONTROLS                                             |       | 71-2567-1    | 202          |               |      |      |                |                |            |                |             |            |              |                   |
|                         |                                                        |       | 71-2647-2    |              |               |      |      |                |                |            |                |             |            |              | $\langle \rangle$ |
|                         |                                                        |       |              |              |               |      |      | 10/00          |                |            |                |             |            | -            |                   |
|                         | CUM RULS                                               |       |              | ŝ            | 0.0004        |      |      | 40/00          |                |            |                |             |            |              |                   |
|                         |                                                        |       | 1-2001-4     | 300          |               |      |      | 01/03          |                |            |                |             |            |              |                   |
|                         |                                                        |       | 9967-11      |              | 0*0042        |      |      | 10/10          |                |            |                |             |            |              | X                 |
|                         | CONTROLS                                               |       |              |              | 2000.0        |      |      | 01/03          |                |            |                |             |            | -            | XXX               |
| O-KING CONP. V          | CONTROLS                                               |       | 71-2566-2    | ŝ            | 1500.0        |      |      | 40/00          |                |            |                |             |            |              | XXX               |
| CHARME COMP. V          | CONTROLS                                               |       | 71-2648      | 20X          | 550.0         |      | 50   | 03/03          |                |            |                |             |            | _            | XXX               |
| O-RING CONP. V          | CONTROLS                                               |       | 7:-2648-1    | õ            | 3050.0        |      |      | 01/01          |                |            |                |             |            |              | XXX               |
|                         | CONTROLS                                               |       | 71-2648-2    | x 00         | 2550.0        |      |      | 01/02          |                |            |                |             |            | AWXXXWA      | XXX               |
|                         | 311-9FLUDYRC CUNIKULS INC<br>371-66180586 CONTROLS INC |       | 71-2048-3    | ŝ            | 0.0602        |      |      | 40/00          |                |            |                |             |            |              |                   |
|                         |                                                        |       | 31-2440-1    |              |               |      | R    |                |                |            |                |             |            | -            |                   |
|                         | CONTROLS                                               |       | 71-2649-1    |              |               |      |      | 10/10          |                |            |                |             |            |              | K 7               |
| C-RING COMP. V          | CONTROLS                                               |       | 71-2649-3    | Š            | 1500.0        |      |      | 01/02          |                |            |                |             |            | -            |                   |
| D-RING CONP. V          |                                                        |       | 71-2649-4    | Š            | 3000.0        |      |      | 01/03          |                |            |                |             | 20         |              |                   |
| O-RING COMP. V          | CONTROLS                                               |       | 71-2649-5    | Ň            | 2500.0        |      |      | 00/04          |                |            |                |             |            | -            |                   |
| RED FIDER SHEET         |                                                        | .0750 | SP-6931      | XOS          | 25.0          |      |      |                | 005            | 600        |                |             |            |              | XX                |
|                         |                                                        | .1750 | SP-6931-1    | Š            | 50.0          |      |      |                | 59.7           | 547        |                |             |            | CRBGXX       | XX                |
| RED FIBER               |                                                        | •0750 | SP-6931-10   | 60 X         | 1500.0        |      | 200  | 04/04          |                |            |                |             |            |              | 96 X X            |
| RED FIBER               |                                                        | .0750 | SP-6931-11   | ×09          | 1500.0        |      |      | 00/04          |                |            |                |             |            | ő            | RGXX<br>BGXX      |
| RED FJBER               |                                                        | .0750 | SP-6931-12   | X O S        | 000           |      |      | 01/02          |                |            |                |             |            | ő            | BGXX              |
| R RED FIDER             |                                                        | •0750 | SP-6931-13   | Š            | •             |      |      | 01/02          |                |            |                |             | 01 0       | ΰ            | 3 X X             |
| LOR RED FIGER SHEET     |                                                        | •0750 | SP-6931-14   | COX          | 3000.0        |      |      | 04/04          |                |            |                |             | 01 0       | æ            | 96 X X            |
|                         |                                                        |       |              |              |               |      |      |                |                |            |                |             |            |              |                   |

:. !

۰.

:

\*\*\*

A ST. CANES

t i

:

. .

. . .

.

.

PAGE 60

.

×

上面が上世

-

•

,

,

a service and the s

MATERIAL TEST DATA RY MANUFACTURER S DESIGNATION AS OF 31 JAN 72

.1

| MFGR S DESIGNATION                 | MANUFACTURER         | SPEC.<br>THICK. | TEST RPT NO.           | TEST<br>ENVR | TEST<br>PRESS   | TEST<br>TEMP | T MP 1<br>ENFR | NU OF I<br>REACT | FLASH I<br>POINT | FIRF PR(1P<br>PT ()1ST | P WT | a          | ΞŬ<br>E      | MATL<br>CCDE     |
|------------------------------------|----------------------|-----------------|------------------------|--------------|-----------------|--------------|----------------|------------------|------------------|------------------------|------|------------|--------------|------------------|
| REC FIBER                          |                      | •0750           | -1603-0                | XOS          | 62°0            | 1000         |                |                  |                  | 666 N                  |      |            |              | 286 X X          |
| 100 RED FIRES CHEFY                |                      | • 0750          | 5P-6931-3<br>5D-2341-4 | ž            | 165.0           |              |                |                  | 586              | 592                    |      | c 4        |              | CRBGXX           |
| FIBER                              |                      | 0150            | SP -6931-5             | s ag         | 0.0004          |              | C S            | 10/00            | 1, 5             | 100                    |      |            |              | CK00XX<br>CBRCXX |
| RED FIBER                          |                      | .0750           | SP-6931-6              | Ň            | 4500.0          |              | 0.0            | 10/00            |                  |                        |      |            |              | CREGXX           |
| RED 51868                          |                      | •0750           | SP-6931-7              | X O O        | 5000.0          |              | 20             | 00/04            |                  |                        |      |            | -            | CRBGXX           |
| RED FIBER                          |                      | .0750           | SP-6931-H              | žoč          | 500.0           |              | 200            | 00/04            |                  |                        |      |            |              | CRBGXX           |
| <b>10R RED FIBER SHEET</b>         |                      | .0750           | SP-6931-9              | 603          | 1000.0          |              | 200            | 10/00            |                  |                        |      |            | _            | RBGXX            |
|                                    | GAC                  |                 | 71-2417                | A-50         | 735.0           | 463          |                |                  |                  |                        |      |            |              | NHOHMO           |
| IOIS MICKEL PLATE                  |                      |                 | 71-2417-1              | A-50         | 710.0           | 504          |                |                  |                  |                        |      |            |              | NMUMMO           |
| 134115-14-16-17-KYNAR              | WINTEC CORP          |                 | 71-2322-1              | COX          | 3000.0          |              |                | 10/10            |                  |                        |      |            |              | CHCTXX           |
| 134113-14-16-17-HEIAL<br>17-494 55 | WINTEC CORP          |                 | 71-2322                | COX<br>V V   | 3000.0          |              | 50             | 00/07            |                  |                        |      | <u>ج</u> ا | 11 01        | 0161xx           |
|                                    |                      |                 | 71-2511-1              |              |                 |              |                |                  |                  |                        |      |            |              |                  |
|                                    | GAC                  | .0750           | 70-2112                |              | 5000.0          | 114          | 50             | 00700            |                  |                        |      |            |              | T LEUXX          |
|                                    | GAC                  |                 | 70-2112-1              | 20X          | 2000-0          |              | 2              | 00/00            |                  |                        |      |            | _            | XXQMMQ           |
|                                    | GAC                  |                 | 70-2112-2              | XOS          | 4500.0          |              |                | 00/00            |                  |                        |      |            |              | XXQMMQ           |
|                                    | GAC                  |                 | 70-2112-3              | 60 X         | 5000.0          |              |                | 00/00            |                  |                        |      |            | _            | XXQMMQ           |
|                                    | GAC                  |                 | 70-2112-4              | Š            | 6800.0          |              |                | 40/00            |                  |                        |      |            |              | DMMDXX           |
|                                    | GAC                  |                 | 71-2320                | A-50         | 778.0           | 507          |                |                  |                  |                        |      |            | _            | DTMDMN           |
|                                    | 6AC                  |                 | 71-2320-1              | A-50         | 822.0           | 515          |                |                  |                  |                        |      | -          |              | DTMDMN           |
|                                    | GAC                  |                 | 71-2416                | A-50         | 725.0           | 488          |                |                  |                  |                        |      | F          | _            | DTHOMN           |
| 55                                 | GAC                  |                 | 71-2416-1              | A-50         | 768.0           | 506          |                |                  |                  |                        |      | F          |              | DTMDMN           |
| W/TFE                              | 6AC                  |                 | 71-2486                | A-50         | 740.0           | 487          |                |                  |                  |                        |      | F          | _            | DTMDHS           |
| WITFE                              | GAC                  |                 | 71-2485-1              | A-50         | 756.0           | 501          |                |                  |                  |                        |      | F          | _            | DTMDHS           |
|                                    | GAC                  |                 | 71-3+86-2              | A-50         | 830.0           | 513          |                |                  |                  |                        |      | -          |              | DTMDHS           |
|                                    |                      | •0150           | 70-2219                | Š            | 1500.0          |              |                | 00/04            |                  |                        |      |            | _            | DMMDXX           |
| -                                  |                      | • 0150          | 70-2219-1              | 60X          | 1500.0          |              | 50             | 00/04            |                  |                        |      | 4          |              | XXOHHO           |
|                                    | 6AC                  | •0750           | 70-2116                | õ.           | 2000.0          |              |                | 00/04            |                  |                        |      |            |              | DTHDXX           |
|                                    |                      | 0510+           | 70-2118-1              | N CO         | 2009.0          |              | 0              | 00/04            |                  |                        |      |            |              | DTMDXX           |
|                                    |                      | 0510.           | 70-2116-2              | ŝ            | 5000°0          |              | 20             | 00/04            |                  |                        |      |            |              | DTMDXX           |
|                                    |                      |                 | 70-2110-3              | 202          | 0.0000          |              |                | 10/00            |                  |                        |      |            |              | XXQM10           |
|                                    | SIMMONS              |                 | 71-2716                | ×20          | 0*0040<br>766.0 | 503          |                | +0.00            |                  |                        |      |            |              |                  |
|                                    | STRANDAS             |                 | 71-2714-1              |              | 764-0           | 404          |                |                  |                  |                        |      |            |              |                  |
| _                                  | SIMMONS              |                 | 71-2717                | A-50         | 1/1.0           | 514          |                |                  |                  |                        |      |            | 15 0<br>15 0 | BABGGS           |
|                                    |                      |                 | 71-2717-1              | A-50         | 774.0           | 514          |                |                  |                  |                        |      |            | 5 84         | BABGGS           |
|                                    | <b>T SON T</b>       | .0050           | SP-6930                | 60X          | 25.0            |              |                |                  | 494              | 696                    |      |            |              | XXXX             |
|                                    |                      | • 0050          |                        | xog          | 50.0            |              |                |                  | 680              | 680                    |      |            | . <          | BXXXX            |
| 2T ADHESIVE                        | INDST                | • 0050          | SP-6930-10             | GOX          | 4500.0          |              |                | 10/00            |                  |                        |      |            | •            | ABXXXX           |
|                                    | INDST                | °0050           | SP-6930-11             | Š            | 5000.0          |              |                | 00/04            |                  |                        |      |            |              | ABXXXX           |
| 21 ADHES VE                        | I NDST               | +0050           | SP-6930-12             | COX<br>COX   | 2000.0          |              | 20             | 00/07            |                  |                        |      |            | 11 AB        | ABXXXX           |
| ZI AUNESIYE                        | RESEARCH INDST       | • 0020          | SP-6930-13             | Š            | 3000.0          |              | 50             | 00/01            |                  |                        |      | 4          | I AB         | ABXXXX           |
| ZI ADRESIVE                        | AIRESEARCH INDST DIV | • 00 20         | SF - 69 30-14          | X O S        | 4000.0          |              | 50             | 10/00            |                  |                        |      | Ā          | L AB         | BXXXX            |

JAGE AI

-

:

ちょうとうがっ たっと、とう したいちょうとう まとう また、 ないないたちまたのである ひざまたなかが

2274

E

3 ٦

5,5

• • •

| HICK & DESIGNATION | MANUFAC TURER        | SPEC.<br>THICK. | TEST RPT NO. | TEST<br>ENVR | TEST<br>Press | TEST<br>TEMP | T MP T<br>ENER | NO OF FI<br>REACT P( | POINT P | FIRE PI<br>PT DI | PROP NT<br>DIST LOS | T R<br>SS I |   | MATL<br>CODE |
|--------------------|----------------------|-----------------|--------------|--------------|---------------|--------------|----------------|----------------------|---------|------------------|---------------------|-------------|---|--------------|
| 2T ADHESIVE        | -                    | • 0050          | SP-6930-15   | ž            | 4500.0        |              | 50             | <b>00/0</b>          |         |                  |                     | ۹           |   | NXXA         |
|                    | INDST DI             | • 0050          | P-6930-1     | 60 X         | -000          |              | 50             | 01/03                |         |                  |                     | C           |   | RXXX         |
|                    | -                    | • 0050          | SP-6930-17   | ŝ            | 100.0         |              | 200            | 10/10                |         |                  |                     | 0           |   | ABXXXX       |
| -                  | INDST DI             | • 0050          | SP-6930-18   | X Q S        | 250.0         |              | 200            | 02/02                |         |                  |                     | 0           |   | BXXX         |
| 27 ADHESIVE        | -                    | .0050           | SP-6930-19   | õ            | 500.0         |              | 200            | 01/01                |         |                  |                     | 0           |   | ABXXXX       |
| 2T ADHESIVE        | INDST DI             | .0050           | SP-6930-2    | X09          | 62.0          |              |                |                      | 654     | 689              |                     | C           |   | HXXX         |
| 2T ADHESIVE        | (and                 |                 | SP-6930-20   | ŝ            | 500.0         |              | 50             | 00/04                |         |                  |                     | 4           |   | ABXXXX       |
| 27 ADHESIVE        | IC TRUNE             |                 | SP-6930-21   | COX          | 500.0         |              |                | 00/00                |         |                  |                     | Ą           |   | RXXA         |
| _                  | INDST DI             |                 | SP-6930-22   | ŝ            | 1500.0        |              | 50             | 00/00                |         |                  |                     | <           |   | 8XXX         |
| _                  |                      |                 | P-6930-2     | XOS          | 50.0          |              |                |                      | 59      | 559              |                     | 0           |   | BXXX         |
|                    | INDST DI             |                 | SP-6930-24   | ŝ            | 200.0         |              |                |                      | 472     | 472              |                     | 0           |   | BXXX         |
| 27 ADHESIVE        | 0                    |                 | SP-6930-25   | COX<br>COX   | 1000.0        |              |                |                      | 919     | 316              |                     | C           |   | BXXX         |
|                    | INDST DI             |                 | SP-6930-26   | Š            | 50.0          |              |                | •                    | 520     | 520              |                     | ٥           |   | <b>BXXX</b>  |
| 2T ADHESIVE        | INDST DI             | .0050           | SP-6930-3    | X09          | 165.0         |              |                |                      | 560     | 660              |                     | ۵           |   | BXXX         |
|                    | INDST DI             | • 0050          | SP-6930-4    | ŝ            | 1500-0        |              |                | _                    |         |                  |                     | ۷           |   | BXXX         |
| ZT ADHESIVE        | IQ LSCNI             | • 0050          | SP-6930-5    | ×09          | 2000.0        |              |                | 10/00                |         |                  |                     | ∢           |   | BXXX         |
|                    | INDST DI             | .0050           | SP-6930-6    | Š            | 2500.0        |              |                | 00/01                |         |                  |                     | ۹           |   | <b>BXXX</b>  |
| ZT ADHESIVE        | 5                    | • 0050          | SP-6930-7    | X DO         | 3000.0        |              |                | 10/00                |         |                  |                     | 4           |   | BXXX         |
|                    | INDST 01             | •0020           | SP-6930-8    | Š            | 3500.0        |              |                | 10/00                |         |                  |                     | •           |   | BXXX         |
| T ADHESTVE         | ATRENEARCH INDST DIV | • 0050          | SP-6930-9    | XOS          | 4000.0        |              |                | 10/00                |         |                  |                     | ۹           |   | BYXX         |
| MALCOINE           |                      |                 | 71-2860      | Š            | 2000.0        |              |                | 00/04                |         |                  |                     | •           |   | XAMT         |
| DO ANG MAGNET WIRE |                      |                 | 71-2514      | A-50         | 814.0         | 514          |                |                      |         |                  |                     | <b>9</b>    |   | ERXXXX       |
|                    |                      |                 | 1-4167-11    |              | 820.0         | 105          |                |                      |         |                  |                     | -           |   | XXXX         |
| BOL CRES STEEL     | LOUTH STREL          | • 0750          | 70-2060      | X 00         | 1500.0        |              | 50             | 00/04                |         |                  |                     | 4           |   | XONL         |
|                    |                      | 0410.           | 10-2060-1    | X OS         | 1500.0        |              | 1              | 00/04                |         |                  |                     | •           |   | XOWL         |
|                    |                      | • 0 7 5 0       | 70-2118      | 20X          | 5000+0        |              | 20             | 00/04                |         |                  |                     | 4           |   | DTMDXX       |
|                    |                      |                 | 70-2118-1    | X Q          | 5000.0        |              |                | 00/04                |         |                  |                     | 4           |   | XONLO        |
|                    | 6AC<br>6 4 C         |                 | 2-8112-0/    | 202          |               |              |                | 00/04                |         |                  |                     | <b>A</b>    |   | XOHL         |
|                    | 6AC                  |                 | 71-2287      | A-50         |               | 514          |                |                      |         |                  |                     |             |   | XONH         |
| 22                 |                      |                 | 71-2287-1    | A-50         |               | 503          | 1              |                      |         |                  |                     | -           |   | DHMOXX       |
|                    | CAST FROM            | •0150           | 70-2059      | Š            | 1500.0        |              | 20             | 00/04                |         |                  |                     | 4           |   | LKOX         |
|                    | V. CEST IRON MFG.    | •               | 70-2059-1    | X OS         |               |              | 1              | 00/04                |         |                  |                     | 4           |   | THOX         |
|                    | 6.AC                 | •0150           | 70-2117      | Š            | 2000-0        |              | 05             | *0/00                |         |                  |                     | ◄           |   | DTMDXX       |
|                    | EAC .                | 06/0.           | 1-112-0/     | KO5          |               |              | 20             | 60/04                |         |                  |                     | •           |   | TNOX         |
|                    |                      |                 | 70-2117-2    | ŝ            | 5600.0        |              |                | 40/00                |         |                  |                     | 4           |   | YUDY         |
|                    | 6 M C                |                 | 70-2117-3    |              |               |              |                | 00/04                |         |                  |                     | 4           |   | XOWL         |
|                    |                      |                 | 11-2263      | A-50         |               | 496          |                |                      |         |                  |                     | •           |   | X)" OHNO     |
| 302 SS             | GAC                  |                 | 71-2283-1    | A-50         | 791.0         | 8            |                |                      |         |                  |                     | -           | 5 | XXQMMQ       |
|                    |                      |                 | 2-6872-11    |              |               | 500          |                |                      |         |                  |                     | - 1         |   | XONN         |
|                    |                      |                 | 11-6535-J    |              |               | - 54         |                |                      |         |                  |                     | <b>be</b> - |   | XONN         |
|                    | NR DUNKET            | 0520-           | 70-2058      | ŝ            |               |              | ł              | 40/00                |         |                  |                     | <           |   | XXGMMO       |
| BUP URES SIFEL     |                      | 0420            | 1-8002-01    |              | 1200.0        |              | 20             | 00/04                |         |                  |                     | < ۲         |   | XXQMNQ       |
|                    |                      |                 |              |              |               |              | 2              | 40/00                |         |                  |                     | æ           |   | XXOMED       |
|                    |                      |                 |              |              |               |              |                |                      |         |                  |                     | •           |   |              |

• • • •

•

ł,

روی دومیده دو (απητιβ «مهمی مهمی می ورد». دومیر هرم در دو در این از این در در این از این در در این این در در ای ا

A State of the second sec

, Į.

į

.

....

こうそう キャンドア しきしょう カー かんせい あん からし ひる ちょうかい かった かんかい きょうせい かまい かん ひんてん ディオ・アメリカ かいかんかいがい あり

١

)

MATERIAL TEST DATA BY MANUFACTURER & CESIGNATION AS DF 31 JAN 72

ار ن

ĥη.

----

......

PA(.E 62

.

\*

a de la compañía de **'**17

ž

1 1

ì ٦

ŗ

Č)

:

ţ

ć

and the second second

•

ŧ

MATERIAL TEST DATA BY MANUFACTURER S DESIGNATION AS DF 31 JAN 72

PAGF 63

|                       |                     | THICK. |           | X N N      | PRE SS | FEMP E | ENER | REACT F | Ld INID | DIST | ~~~ | -    | CODE    |
|-----------------------|---------------------|--------|-----------|------------|--------|--------|------|---------|---------|------|-----|------|---------|
| 303 55                | GAC                 |        | 70-2141-1 | COX        | 5000.0 |        | 2    | 00/04   |         |      |     |      |         |
| 303 55                | GAC                 |        | 70-2141-2 |            | 6800.0 |        | J    | 00/04   |         |      | -   |      | XXNHHQ  |
| 303 55                | GAC                 |        | 71-2286   | 0          | 719.0  | 489    |      |         |         |      |     |      |         |
| 303 55                | GAC                 |        | 71-2394   |            | 773.0  | 498    |      |         |         |      |     |      |         |
| 303 SS                | GAC                 |        | 71-2394-1 |            | 791.0  | SOR    |      |         |         |      | -   |      |         |
|                       | GAC                 |        | 71-2394-2 | A-50       | 762.0  | 520    |      |         |         |      | •   |      | _       |
| 304 CRES STEEL        | UNITED STATES STEEL | •0150  | 70-2034   | XOS        | 1500.0 | 1      | 50 0 | 00/04   |         |      | -   |      |         |
| CRES                  | STATES              | .0750  | 70-2034-1 | 60 X       | 1500-0 |        |      | 70/00   |         |      | 7   |      |         |
|                       | •                   |        | 71-2284   | A-50       | 741-0  | 508    | •    | •       |         |      | -   |      | XX OHHO |
|                       | CAC                 |        | 71-2284-1 | A-50       | 662.0  | 667    |      |         |         |      |     |      |         |
| . SS 90E              | CAC.                |        | 71-2419   | A-50       | 742.0  | 404    |      |         |         |      | -   |      |         |
|                       | 545                 |        | 71-2419-1 | 0-20       | ROB_0  | 505    |      |         |         |      |     |      | _       |
| 304 55                | GAC                 |        | 71-2427   | A-50       | 014-0  | 505    |      |         |         |      |     |      |         |
|                       | GAC                 |        | 71-2427-1 | A-50       | 553.0  | 456    |      |         |         |      |     |      | _       |
| 304 55                | GAC                 |        | 71-2427-2 | A-50       | 0.69   | 504    | -    |         |         |      |     |      |         |
|                       | GAC                 | •0750  | 70-2154   | COX        | 4500.0 |        | J    | 00/04   |         |      | -   |      | XXOWWO  |
|                       | GAC                 | 1      | 70-2154-1 | XCS        | 5000.0 |        | 50   | 00/04   |         |      |     |      |         |
|                       | GAC                 |        | 71-2282   | A-50       | 688.0  | 436    |      |         |         |      |     |      |         |
|                       | GAC                 |        | 71-2282-1 | A-50       | 803.0  | 514    |      |         |         |      | -   |      |         |
|                       | GAC                 |        | 70-21-0   | COX        | 2000-0 |        | 5    | 00/04   |         |      | -   |      |         |
| BOHL TIN PLATED       | Ĩ                   | .0750  | 70-2221   | Š          | 1500.0 |        |      | 00/07   |         |      | -   |      | DTMDXX  |
|                       | X                   |        | 70-2221-1 | 60 X       | 1500.0 |        | 50 0 | 40/00   |         |      | •   |      |         |
| ¥7                    | GAC                 | •0750  | 70-2124   | Š          | 4500.0 |        | -    | 00/04   |         |      | -   |      |         |
| 908 SS                | GAC .               |        | 71-2285   | A-50       | 641.0  | 477    |      |         |         |      | -   |      |         |
| 308 55                | GAC                 |        | 71-2225-1 | A-50       | 703.0  | 490    |      |         |         |      |     |      |         |
| CRES                  |                     |        | 71-2695   | COX<br>COX | 1500.0 |        | 50 C | 00/04   |         |      | -   | A 11 | _       |
| <b>316 CRES STEEL</b> |                     |        | 71-2695-1 | Š          | 1500.0 |        | -    | 00/04   |         |      | -   |      |         |
| 316 55                | GAC                 |        | 71-2392   | A50        | 759.0  | 500    |      |         |         |      |     |      | _       |
|                       | GAC                 |        | 71-2392-1 | A-50       | 783.0  | 505    |      |         |         |      |     |      |         |
| 316 55                | GAC .               |        | 71-2392-2 | X05        | 2000.0 |        | 5    | 00/04   |         |      | -   |      | DTMDXX  |
| 321                   | GAC                 | •0750  | 70-2104   | ž          | 4500.0 |        | -    | 00/04   |         |      | •   |      |         |
|                       |                     | -0750  | 70-2104-1 | 50X        | 5000.0 |        | 50   | 00/04   |         |      | -   |      | _       |
| -                     | STATES              | •0750  | 70-2036   | Š          | 1500.0 |        | -    | 00/07   |         |      | -   |      | _       |
| 321 CRES STERL        | UNITED STATES STEEL | .0750  | 70-2036-1 | 60X        | 1500.0 |        | -    | 40/00   |         |      | -   |      |         |
| 347 55                | GAC                 | •0750  | 70-2119   | XOS        |        |        |      | 40/00   |         |      |     |      | DTMDXX  |
|                       | GAC                 | .0750  | 70-2119-1 | XOS        | 5000.0 |        | 50   | 00/04   |         |      | -   |      |         |
|                       | GAC                 |        | 70-2119-2 | xg         | 5000.0 |        |      | 40/00   |         |      | 2   |      |         |
| 347 SS                | GAC                 |        | 70-2119-3 | X09        | Ð      |        | ~    | 00/00   |         |      |     |      |         |
| 541 SS                | GAC                 |        | 71-2389   | A-50       |        | 531    |      |         |         |      |     |      |         |
| 347 SS                | GAC                 |        | 71-2389-1 | A-50       |        | 464    |      |         |         |      |     |      | XXQMMQ  |
| 410 CRES STEEL        | ALLEN FRY STEEL CO. |        | 70-2197   | 80X        |        |        | 50   | 00/04   |         |      |     |      |         |
| 55                    | CAC                 | •0150  | 70-2113   | COX        | 2000.0 |        |      | 00/00   |         |      |     |      |         |
| ALG CRES STEEL        | PACIFIC METALS      | .0750  | 70-2204   | Š          | 1500.0 |        | -    | 40/00   |         |      |     |      |         |
|                       |                     |        |           |            |        |        |      |         |         |      |     |      |         |

: 

24

¢.

t

• • • ÷

NAMES OF STREET

:

MATERIAL TEST DATA BY MANUFACTURER S DESIGNATION AS OF 31 JAN 72

.

PAGE 64

| MECA & DECICAATION                     |                      | SPEC.       | TEST RPT NO. | TEST       | TEST   | TEST | TAMI | NO OF | FLASH FIRE | PROP NT | æ | MATL      |   |
|----------------------------------------|----------------------|-------------|--------------|------------|--------|------|------|-------|------------|---------|---|-----------|---|
|                                        |                      | THICK.      |              | ENVR       | PRESS  | TEMP | ENER | REACT | POINT      |         | - | CODE      |   |
| 420 55.00-5-763                        | GAC                  | •0750       | 10-2108      | Š          | 4500.0 |      |      | 00/04 |            |         | 4 | XXCHMO 0  |   |
|                                        | CAC                  |             | 71-2422      | A-50       | 723.0  | 197  |      |       |            |         | - | 5 DMHDXX  |   |
|                                        | CAC                  |             | 71-2422-1    | A-50       | 775.0  | -    |      |       |            |         | - | 5 DWNDXX  |   |
| ANE CAPS STER                          | A-M. CASTLE CO.      | •0750       | 70-2190      | XOS        | 1500.0 |      |      | 00/04 |            |         | < | O DMMDXX  |   |
| 430F CRES STEEL                        | A.M. CASTLE CO.      | • C750      | 70-2190-1    | ŝ          | 1500.0 |      | 50   | 00/04 |            |         | • | I DHINDXX | _ |
| ++0 SS                                 | GAC                  |             | 71-2317      | A-50       | 807.0  | 511  |      |       |            |         |   | 5 DHHUXX  |   |
| SS 844                                 | GAC                  |             | 71-2317-1    | A-50       | 818.0  |      |      |       |            |         | - |           |   |
|                                        | C.M.C                | .0750       | 70-2107      | COX<br>COX | 2000.0 |      |      | 00/07 |            |         | < | OMMOXX    |   |
|                                        | EAC                  | •0750       | 70-2107-1    | ŝ          | 2000.0 |      | 50   | 00/07 |            |         | ◄ | I DHMDXX  | J |
|                                        |                      |             | 70-2107-2    | X05        | 5000.0 |      | 20   | 00/00 |            |         | < | 2 DMMDXX  |   |
|                                        | EAC.                 |             | 70-2107-3    | XQS        | 4500.0 |      |      | 40/00 |            |         | 4 | NUNXX     | ~ |
| AND DO-C-TAS                           |                      | .0750       | 70-2111      | ×09        | 5000.0 |      | 50   | 00/04 |            |         | 4 | I DHMDXX  | ~ |
|                                        | CAC                  | 1<br>-<br>- | 71-2418      | A-50       | 717.0  | -    |      |       |            |         | - | S DEMOXX  | ~ |
|                                        |                      |             | 71-2418-1    | A-50       | 729.0  | 488  |      |       |            |         | - | 5 DHMOXX  | _ |
|                                        | THE ELECTROLIZING CO |             | 71-2425      | A-50       | 802.0  |      |      |       |            |         | - | 5 DMMDXX  | ~ |
|                                        | THE FLECTROLIZING CO |             | 71-2425-1    | A-50       | 805.0  | -    |      |       |            |         |   | 5 DMMDXX  | ~ |
|                                        |                      |             | 71-2594      | A-50       | 777.0  |      |      |       |            |         | - | 5 DTXXXX  | ~ |
|                                        |                      |             | 71-2594-1    | A-50       | 765.0  | -    |      |       |            |         | - | 5 01XXXX  | _ |
| COLOR STRFL                            | ALLEN FRY STEEL CO.  |             | 70-2207      | Š          | 1500+0 |      |      | 00/04 |            |         | < | XXONNO O  | * |
|                                        | ALLEN FRY STEEL CO.  |             | 70-2207-1    | ×09        | 1500.0 |      | ŝ    | 40/00 |            |         | 4 | XXONNO T  | ~ |
| 22100 31554<br>49497011 -4-8475 TVDF 7 |                      |             | 71-2746      | ž          | 2000.0 |      |      | 00/00 |            |         | < | O FIMAXX  | × |
|                                        | E.M.                 |             | 70-223       | XOS        | 4500.0 |      |      | 40/00 |            |         | 4 | DIMAHS    | 6 |
|                                        | ZMDEPENDENT TAK CO   |             | 71-2687      | Š          | 1500.0 |      | 50   | 00/04 |            |         | < | L APGTXX  | × |
|                                        | SUD-PERCENT THE CO   |             | 71-2687-1    | COX<br>COX | 1500.0 |      |      | 01/01 |            |         | - | O APGTXX  | × |
| VIA UNITATION TO VIA                   | K247F ALLOY          |             | 71-2339      | A-50       | 805.0  |      |      |       |            |         | - | IS DTHUMP | ī |
|                                        | BRAZE ALLOY          |             | 71-2339-1    | A-50       | 010.0  | 502  |      |       |            |         | - | IS DIMUNN | 2 |
|                                        |                      |             |              |            |        |      |      |       |            |         |   |           |   |

.

5

**ب** ب

ì.

2

:

ł

# APPENDIX III - SELECTED SUMMARIES, CONCLUSIONS, AND RECOMMENDATIONS EXCERPTED FROM THE INDICATED REFERENCES.

Ş

# Attwood and Allen (1971)

#### "CONCLUSIONS AND RECOMMENDATIONS

(1) The dependence of the spontaneous ignition temperature, SIT, of a material on test techniques such as heating rate and gas flow rate, and on sample conditions such as powder or block, new and clean or used and 'aged', has been demonstrated; but no consistent trends were apparent.

(2) Previously reported large decreases in SIT with increase in pressure above atmospheric are likely to have been partly caused by the change in test technique. With few exceptions the 'Pot' test gives higher SI'I's than the 'Bomb' test, hence the use of the 'Pot' test alone, to assess the suitability of materials for use in oxygen, cannot be recommended.

(3) Nylon is not recommended for use in high pressure oxygen. Even when new or unused its SIT can be below 300°C, and wear and 'ageing' during use can apparently lower the SIT to 155°C. These could have been contributory factors to the six fires from which this investigation stemmed.

(4) ZX32 a material suspected in one fire, did not ignite in any test.

(5, The SITs of several relatively new silicone materials have been measured and generally increase with an increase in oxygen pressure. As this is the reverse of the behaviour of many non-silicone materials tested in 1950, silicone materials might well be used more widely in high pressure oxygen systems. However, only limited tests have been made so far: further investigation would be necessary before any definite conclusions could be drawn.

(6) The need for a test or set of tests by which to define the compatibility of a material with oxygen has been discussed and a programme of work aimed at establishing such a test has been outlined. An interim standard test has been proposed and a method of interpreting any spread of results suggested."

# Baum, Goobich, and Trainer (1962)

# "Conclusions

1. Teflon and Kel-F are both compatible with high-pressure oxygen systems with regard to chemical reactivity, and they manifest a high degree of stability. Viton, however, shows questionable compatibility although an insufficient number of samples were tested in this program to draw firm conclusions. AiResearch also reports some failures with Viton O-rings but nevertheless they are using them as seals in the Mercury control equipment. In any case, neoprene seals were found to be incompatible with high-pressure oxygen.

Pure Teflon suffers from certain physical weaknesses. It tends to cold flow very easily, and because of its high ductility and lubricity, it is easily extruded out of shape when unconfined. Neither does a thin, unsupported Teflon disk have sufficient strength to prevent collapse when high-pressure forces are applied.

Kel-F has sufficient strength and rigidity to partially overcome the cold-flow problem for short periods and it can withstand instantaneous impacts from flow that would cause Teflon to collapse or extrude. However, Kel-F does not appear to be sufficiently ductile for seal use, nor does it provide the lubricity of Teflon. A possible solution, aside from the conventional compounding of Teflon with ceramic, glass fiber, and asbestos cloth, is use of a new compound of Teflon and Kel-F. This compound consists of 80 parts Kel-F and 20 parts Teflon. According to the developer, Minnesota Mining and Manufacturing Corporation, it is sufficiently strong to resist cold flow, is more ductile than pure Kel-F, and retains the lubricity of Teflon. However, both Kel-F and Teflon should be employed as seals only when closely confined (like O-rings) to prevent possible collapse or cold flow.

2. Apparently the hydrocarbon-oxygen mixture is a rather complex one in that merely mixing the two constituents does not appear to be the only thing necessary to initiate a chemical reaction. Case histories of storage vessels at 2000 psi or less suddenly exploding for no apparent reason seem to substantiate the suggestion that a third factor or sequence of events must be present. However, the triggering agent may not be the same in all cases. The only method whereby the explosive nature of hydrocarbon-oxygen mixtures may be properly and more fully understood is through an extensive series of carefully controlled deliberate explosions. Studies of this type have been conducted, but never at pressures of 500 atmospheres.

On the basis of the data available from the present experiments, the following can be concluded:

(1) Below 400 F concentrations of 50 ppm or less are not highly reactive and do not constitute a major danger.

(2) If a reaction did occur, it was either too rapid, too slow, or too slight to be detected by visual readings of the pressure gage or by temperature fluctuations recorded by the thermocouple. Baum, et al. (Continued)

(3) If a reaction did occur, it did no<sup>+</sup> ge to completion. This conclusion is supported by the fact that traces of hydrocarbon were indicated in most gas analyses. The reaction may not have been sustained for two possible reasons: (1) because of the low concentration, the gas was too finely diffused and could not sustain a flame front and (2) the total heat of reaction was small and was too quickly dissipated to "set off" the remaining unburned gases.

3. On the basis of the five evaluations just discussed, the four metals considered can be rated in the following order in terms of their possible application in high-pressure oxygen systems:

| Stainless steel (Type 316) | Good+        | Shows sufficient strength and<br>ductility for pressure-vessel<br>use; has low oxidation rate<br>and good erosion resistance                                                                                                                                                                |
|----------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Monel                      | Good-        | Is less strong but sufficient<br>where weight is not a restrict-<br>ing factor; has lowest oxidation<br>rate                                                                                                                                                                                |
| Brass                      | Poor to fair | Has insufficient strength for<br>lightweight pressure-vessel<br>application, but demonstrates<br>good retention of original<br>physical properties; good oxi-<br>dation resistance in dry atmos-<br>pheres but poor resistance in<br>moist atmospheres; has only<br>fair erosion resistance |
| Pure copper                | Very poor    | Too weak to be used for pressure<br>vessels; poor retention of physi-<br>cal properties; has high auto-<br>ignition temperature but also<br>has high oxidation rate when<br>exposed for long periods                                                                                        |

The above rating is based on the investigation and analysis of only a small sampling of each metal. More extensive and detailed investigations are required to determine quantitative results. Qualitatively, on the basis of the experiments performed, only stainless steel and Monel are acceptable alloys. Brass and pure copper, although possessing some desirable characteristics, should not be used because of other factors which cannot be sufficiently compensated.

ارد از از ا

and a second of the second s

Baum, et al. (Continued)

4. It is evident on the basis of the data gathered that electrostatic charges due to high-pressure oxygen flow are not significant in themselves. However, some factors which arise because of the flow of gas must be seriously considered. One possible problem is ozone formation caused by the cooling of the gas and the presence of electrostatic charges. The ozone molecule is much more active, chemically, than ordinary oxygen and therefore likely to lower the ignition temperature. A more important factor is the presence of dust or liquid moisture in the gas stream. It has been shown that gases passed through a pin-hole orifice under a pressure head of 1800 psi invariably show a strong electrostatic charge only when either dust or liquid moisture is present in the gas stream. These charges may be sufficiently large to cause ignition.

In the experiments performed at Battelle, some dust particles were present in the gas stream but probably they were not in sufficient quantity to increase the electrostatic charge greatly. Of course, the longest flow period was only 8 seconds and the pressure was not constant during the entire period.

Because the danger of detonation or chemical reaction being initiated by an electrostatic charge is potentially large, further investigations shoul be performed but with larger volumes which will permit longer flow periods. Also, attempts should be made to control and measure the amount of dust of moisture in the stream to compare the effect on the charges generated. In general, however, regardless of the negligible charge generated, equipment should be grounded wherever possible.

5. Rapid heating due to gas surging into confined spaces can produce a major hazard. During the experiments at Battelle, a pressure regulator failed and burned under surge conditions. Also Aikesearch discovered that many materials including neoprene and Viton reacted chemically when impacted by a surging gas at 8000 psi.

However, there is also evidence that at lower pressures, or when the receiver volume is comparatively large, the effect of surge compression is minor. This conclusion is supported by the results of the surge experiments' at Battelle and similar experiments performed at AiResearch.

On the basis of the experimental results and data available, it can be concluded that the rise in temperature due to adiabatic compression to 8000 psi is probably not sufficient to cause large masses of metal to ignite. However, the possibility of thin sectioned metal wire and of polymers such as neoprene igniting is great. Also the danger of organic or hydrocarbon contaminants chemically reacting is serious since many of these have ignition temperatures below 500 F, especially in high-pressure gaseous oxygen.

Same Con

Baum, et al. (Continued)

- ^ Ĺ

٩.

6. Since the basic aims of the research were to evaluate the relative safety of 7500-psi gaseous oxygen systems and to identify the hazards which can be expected in their operation, the conclusions listed below concern these subjects specifically.

Although some of the research results indicate that r lative safety can be maintained apart from absolutely ideal conditions, it cannot be assumed that high standards of cleanliness and handling technique are not desirable. Whenever ideal conditions and procedures are possible, they must be insisted upon. However, although danger increases with less ideal conditions, certain compromises can sometimes be tolerated. Only through continued research and through accumulated engineering experience can a more confident assessment of the extent of these allowable compromises be made. Until the time that further research and engineering provides additional information for formulation of recommendations, the conclusions given below can be used as general guides:

(1) Contaminated oxygen gas at 7500 psi, as investigated in this program and under the environmental conditions imposed when considered independently of the equipment or system employed, is relatively safe from spontaneous combustion or deconation.

(2) Hazardous chemical reactions of 7500-psi oxygen gas with foreign elements seem to be dependent upon conditions other than simple mixing, proximity, or high-velocity flow. Temperature is believed to be the most critical variable and the minimum temperature at which a reaction will occur is in turn dependent upon the existing pressure.

(3) Hazards and difficulties encountered in the operation of high-pressure gaseous oxygen systems seem to be attributable primarily to poor system design and to the use of poorly designed equipment.

In addition to the general conclusions above the following more technical and specific conclusions have been drawn:

(1) Absolutel clean, dust-free atmospheres are not essential to safe operation.

(2) Concentrations of hydrocarbons in the order of 50 ppm or less are not dangerously reactive.

(3) Electrostatic charges caused by short flow periods through a small orifice appear to be negligible.

(4) Stainless steel and Monel are acceptable materials of construction.

(5) Uncoated or unplated copper appears to oxidize too readily to be used extensively.

(6) Although cases of combustion involving Teflon and Kel-F have been reported, the experiments conducted show that these are acceptable nonmetallic scaling materials.

# RECOMMENDATIONS

Two primary recommendations have been formulated on the basis of the conclusions presented above.

ו •

(1) A broader, more detailed study of materials compatibility with 7500-psi oxygen gas should be pursued. This study should be an attempt to derive a more exact understanding of the conditions that initiate combustion. Extensive experimentation with stainless steel, Monel, anodized aluminum, Teflon compounds, Kel-F compounds, and various thread lubricants and sealants should be conducted to permit a proper statistical analysis. These experiments should have two objectives:

(a) Determination of the spontaneous ignition temperature under static conditions and after various periods of exposure.

(b) Determination of the spontaneous ignition temperature during surge conditions and evaluation of the influence of the volume to surface-area ratio.

(2) Because of the inadequacy of available equipment to provide reliable, long-time performance for absolutely leakproof operation, a development program should be initiated. This program should be planned to investigate critical design criteria. The components that require further study, in estimated order of priority, are:

- Fittings
- Valves, manual and remote
- Lightweight pressure vessels
- Regulators."

Guter (1967)

#### "SUMMARY AND DISCUSSION

Ignition temperatures in high pressure gas were determined using a stainless steel bomb in which samples could be raised to the ignition temperature in a few minutes. The effect on ignition temperature of changes in total pressure, rate of heating, "ageing", i.e. prolonged storage of material in oxygen under pressure, oxygen concentration, and the physical state of the sample were determined in the high pressure apparatus. A simpler apparatus called the 'pot' ignition apparatus was developed for the rapid determination of ignition temperatures in oxygen at atmospheric pressure.

1

The many materials examined have been classified in the following five groups:

- 1. Lubricants, including thread sealing compounds.
- 2. Natural and Synthetic Rubber Hose Materials.
- 3. Polymers.
- 4. Valve Seat materials.
- 5. Metals and Alloys.

The ignition temperatures of the materials in Class I were relatively unaffected by changes in oxygen pressure. The Aroclors (chlorinated diphenyls) were particularly resistant, and had ignition temperatures above 400°C. If their other properties are satisfactory they should prove suitable for use as lubricants and hydraulic fluids in oxygen systems. Acheson Grease 4.30 and the Ministry's anti-seize and sealing compound also had high ignition temperatures which were unaffected by pressure. For this reason they would be preferred to the silicone greases for use in oxygen.

The ignition temperatures of the rubber hose materials in Class II were all considerably reduced by increasing the oxygen pressure, except in the case of silicone rubber which ignited above 300°C. The natural and synthetic rubbers, other than silicone, were found to ignite at temperatures below 200°C in oxygen at pressures of 100 atmospheres or higher. The ignition temperatures were con-iderably reduced if traces of the fabric used as reinforcement in the completed hose were included with the sample. Increases in heating rate led to significant reductions in the ignition temperatures of hycar, neoprene and BTR Hose (Specification 1180). Provided certain precautions are strictly observed it is suggested that rubber hoses may be used with high pressure oxygen.

Included in Class III were Teflon, Kel-F and phosphorylated polyvinyl alcohol which were the most resistant non-metallic materials examined. They failed to ignite in oxygen at 250 atmospheres when heated to 350°C.

1

'. ÷

Guter (Continued)

1

In the 'pot' test they sometimes ignited at temperatures above 500°C. Increasing the oxygen pressure to 175 atmospheres reduced the ignition temperature of most of the other materials included in Class III, but with polythene, nylon and perspex a further increase in pressure to 250 ' atmospheres caused only an insignificant increase in the ignition temperature. Polythene, red vulcanised fibre and rosin bonded fabric were also examined in air; the ignition temperatures in air were found to be rather higher than in oxygen but no definite relationship between the partial pressure of the oxygen and the ignition temperature of these materials was obtained. Special ageing experiments provided interesting results, but unfortunately did not yield general conclusions.

The materials in Class IV with the exception of GACO seating materials had relatively low ignition temperatures. The much higher ignition temperatures obtained with some of the materials in Class III suggest that they may be preferred for making valve seats, provided their mechanical properties are satisfactory.

None of the metals and alloys in Class V ignited in oxygen at 250 atmospheres when heated alone to 350°C. Copper, magnesium alloy and mild steel turnings ignited in the presence of a drop of oil if heated to about 200°C in oxygen at 250 atmospheres.

Changes in gas flowrate, oxygen concentration, heating rate and physical state had no marked effect on ignition temperature for most of the materials examined. Exceptions were some Class II materials which were affected by heating rate and Buna which in the form of shavings ignited at temperatures more than 100° below the corresponding ignition temperatures for samples in block form.

Materials in Classes II, III and IV word examined by the 'pot' test. In general, it was found that the higher the 'pot' ignition temperature the higher was the ignition temperature in high pressure oxygen. Unfortunately the 'pot' ignition temperature gave no indication of the effect of pressure in the range 50 - 250 atmospheres on ignition temperature.

No attempt was made to examine the behaviour of the materials under actual working conditions at high pressure. It is not possible therefore to relate the ignition temperatures observed under controlled conditions to the hazards associated with the everyday use of combustible materials in high pressure oxygen. However as no materials ignited at a temperature below 100°C and vary few below 150°C in oxygen at pressures up to 250 atmospheres it seems highly probable that with careful selection a number of materials which are not entirely non-inflammable can be safely used in oxygen at high pressures. When using such materials it is important to avoid any sudden changes in pressure or temperature, and to ensure the absence of any inflammable dust or other material more susceptible to ignition, which might initiate combustion.

#### Guter (Continued)

The possibility of fires in high pressure oxygen systems would be largely avoided by measures that would prevent conversion of the free energy of the compressed gas into heat. If this could be achieved in the design of equipment then the ignition characteristics of the materials that come into contact with the oxygen would be of secondary importance. Until this ideal is reached, safety in the use of high pressure oxygen will depend not only on the selection of materials with a high ignition temperature, but on careful attention to the design of the apparatus, and upon the observance of a number of elementary but essential precautions. As the starting-point of combustion will clearly be determined by the material of lowest ignition temperature which happens to be present, it is important to exclude carefully all traces or organic dust and oil. Particles of dust and fibre introduce a special hazard in connection with the temperature rise which occurs on adiabatic compression in a closed tube. In this case the rise in temperature of the gas may be considerable, but its heat capacity is small. The gas is therefore unable to raise appreciably the temperature of any massive body with which it is in contact, and its heat is rapidly dissipated. A small particle of fibre in the gas stream, however, can be raised to a temperature approaching that of the gas, and can therefore readily be ignited. When this occurs it will cause the ignition of any other inflammable material in its vicinity.

The work described in this report does not provide a basis for choice of materials for use in high pressure oxygen without regard to the circumstances of use, but it is hoped that it will serve as a useful guide for the selection of the best materials for a particular duty, and the range of conditions under which they can be safely used."

(Parts of the summary and discussion are omitted.)

Johnston (1970)

15

1

"CONCLUSIONS:

1. No great technology differences exist among the fields reviewed.

2. Breathing oxygen systems utilized today have been quite successful in meeting their intent. The majority of the relatively few failures which have occurred have been traced to poor handling practices.

- t

3. The success of today's designs has been the result of designing by experience, largely without thorough scientific understanding.

4. Improvement in and standardization of specifications and guidelines are needed in the following areas:

a. System design requirements as a function of pressure, and use.

b. Materials requirements and a suitable list of materials for specific applications.

c. Materials test methods which will verify suitability of materials for the given applications.

d. Accurate testing methods for determination of a given systems contamination level.

e. Allowable contamination levels and materials including particle sizes for the various system pressure levels." Kimzey (1970)

1

12

# "CONCLUDING REMARKS

The literature available prior to the Apollo 13 incident indicates that little work has been performed on electrically induced ignition of metals. Much work has been done on impact ignition, particularily in LOX environments; however, much of the data are not directly usable due to the wide variety of eleptrimental techniques employed. Sufficient work has been performed to permit the following observations:

1. The ignition temperature of a metal in LOX is independent of pressure, convection, and oxygen percentage.

2. The effect of halogen impurities on the ignition temperature of metals cannot be determined from existing data.

3. Ignition temperatures, like boiling points, or melting points, appear to be depressed by the addition of impurities."

# Marzani (1968)

4

「あんしという」

# "CONCLUSION

The following conclusions are made with regard to material evaluation:

From a fire-resistance standpoint, TFE is superior to the other materials tested.

• CTFE is nearly as high in fire resistance. Polyvinylidene fluoride and the polyimides are intermediate. Polyurethanes, ethylene-propylene rubbers and polyethylene are lowest.

• The inclusion of fire-resistant materials in composites with less fire-resistant materials does not insure that the composite will have improved fire resistance.

• Of the parameters affecting combustion, pressure has the greatest effect on material ignition temperature. Sample size is important in determining the flammability limits. Sample geometry can be an important factor in ignition temperature and reaction kinetics.

• Materials ignite more readily at lower pressures in oxygen than in air. Above 2400 psig the difference disappears.

The following conclusions are made with regard to the method of study:

• The modified high-pressure bomb satisfactorily provided reproducible spontaneous-ignition data on small samples of solid materials in an oxygen atmosphere. Data indicate a favorable degree of correlation with published data.

• This test method should be considered in any effort to establish a standardized test procedure for determining the spontaneous-ignition temperatures of solid materials at elevated pressures.

• A standardized test will not necessarily yield a result which will be applicable under every condition of material usage."

# Nihart and Smith (1964)

# "CONCLUSIONS

The following conclusions are based upon the results of the present experimental test program and other data referenced in this report.

1. The spontaneous ignition temperatures of the materials tested are essentially the same in 7500 psi oxygen as in 2000 psi oxygen.

.....

(t

2. The relative resistance of metals and alloys to ignition and combustion in 7500 psi oxygen agrees in general with results obtained in earlier Linde test work at 2000 psi and with the results of Dean and Thompson (1961) except for aluminum.

3. Only three thread lubricants might have possible safe application in 7500 psi oxygen. These lubricants are Dixon's Flake Graphite No. 1, Burnil Brand Microplates, and Almasol Powder. Further information on their lubricating properties and thermal stability would need to be known before a complete recommendation could be made. One drawback to this type of lubricant is that there is always a possibility of particulate matter inadvertently getting into the high pressure system.

4. The only thread sealant tested in this program which might be recommended for 7500 psi oxygen service would be 50-50 soft solder (which could be used in tinning threads). TFE tape is not recommended because of the possibility of pieces getting into the gas stream.

5. Recognizing that some type of packing is needed for static and dynami' seals, glass-filled TFE would be the only material presently recommended for use. Even its use presents a hazard and it should only be used when tightly confined.

6. Inconel alloy 600, brass, Monel alloy 400, and nickel are recommended for use in 7500 psi oxygen. Other metals might be acceptable if plated with nickel, silver, or gold. Monel alloy K-500 might also be acceptable but it was not given the promoted ignition test in 7500 psi oxygen.

7. Of the materials tested, stainless steel and aluminum are the least satisfactory for use at oxygen pressures of 7500 psi.

8. Copper is not recommended because of the results of Baum, Goobich, and Trainer (1962). Other copper alloys might be acceptable material but would need to be tested.

9. Electrostatic charges developed during the charging of a small high pressure receiver were found to be negligible.

10. The simulated system was pressurized with oxygen to instantaneous pressures ranging from 665 to 7100 psi without incident. Pressurization time varied from 0.5 to 0.21 seconds.

Nihart et al. (Continued)

The hazards considered to be most responsible for ignitions in oxygen systems are:

a. Adiabatic Compression - High temperatures may be produced when low pressure oxygen is suddenly brought to a high pressure, such as when a valve is suddenly opened between a high pressure and a low pressure portion of the system. These temperatures can be high enough to ignite organic materials or small particles of metal.

b. Particulate Matter - Particles may be accelerated in a high velocity stream and impacted against organic materials or metallic burrs, projections, etc. Their energy is converted to high local temperatures by this impact with subsequent ignition of associated materials. Even the particles themselves might be ignited if they were either organic or metallic in nature.

These hazards may be substantially reduced by proper cleaning of the equipment initially, use of filters (especially ahead of regulators) minimum use of organic material, and judicious operation of valves and regulators to prevent rapid increases in pressure.

There are other mechanisms by which ignition may occur but these have been well covered by Reynales (1959).

### RECOMMENDATIONS

5. L

いたかたのことで

11

1. Further study should be made on the copper alloys to define more clearly their compatibility and applicability in 7500 psi systems.

2. More tests should be conducted on metals and alloys to determine the effect of geometric configuration on the relative ignition temperatures.

3. There is need for further investigation into thread lubricants and thread sealants. This study would need to cover their physical properties such as lubrication and sealing qualities as well as their compatibility with oxygen. Development of special lubricants and sealants might be required.

4. A program is needed to develop and build better hardware constructed of materials more compatible with high pressure oxygen. The program should cover any and all equipment which would be used in a 7500 psi oxygen system."

#### Ordin (1971)

Ś

#### "SAFETY RECOMMENDATIONS

Although the solution to many of the problems which caused the oxygen mishaps cannot be specifically prescribed withou. further research and development efforts, several practical safety regulations are recommended to increase the operational safety. These recommendations based on specific mishaps include the following: いたたいい

مالله في المالية المراجع المراجع المراجع

1

A 1

(a) Prevent the cross connecting of fuel, oxygen and purge lines by means of designs and permit no subsequent uncontrolled revisions by maintenance personnel.

(b) Suitably restrain all flexible lines at specific intervals.

(c) Prevent the venting and disposal of oxygen near electrical systems or other ignition sources capable of initiating and promoting fires.

(d) Provide controlled value operation of oxygen values to limit generation of heat due to gas compression.

(e) Label pressure lines with values of operational, proof, and design burst pressure.

(f) Conduct pre-operational hazard analyses on liquid and gaseous pressure systems before checkout, operation or maintenance.

(g) Insure verification of pressure relief before liquid and gas lines are disconnected.

(h) Emphasize hazards of operations in oxygen systems through training. Many operating personnel are not fully aware of the hazards associated with oxygen systems.

(i) Maintain records of any rework on tanks, lines and related equipment. The operations performed should be available to evaluate continued use of equipment.

(j) Fluids used should be identified and environmental chamber operations include a verification of the composition of the gas mixtures employed.

(k) Liquid oxygen loading rates should be established commensurate with duct and equipment fatigue capacities. Material failures have been induced by low stress, high frequency vibrations caused by excessive fill rates. Instrumentation should be installed to measure and monitor induced vibrations. Orain (Continued)

---

100

5 F

1

1

1.9

(1) Standards should be established interfacing the electrical systems to the oxygen systems. Problems of electrical arcing of interior lights and fixtures should be resolved.

(m) Insure availability of recent information on results of testing and of field experiences on the compatibility of materials with oxygen."

# Schwinghamer (1971)

# "CONCLUSIONS

Without a satisfactory solution to the problem of materials reaction sensitivity in LOX and GOX, highly reliable expendable launch vehicles and non-reusable spacecraft would not have been possible. The basic test method which accomplished this end was the ABMA and MSFC-SPEC-106B. As a result of the Apollo 13 incident, increased emphasis is being placed on materials compatibility in a high pressure GOX environment.

Besides impact sensitivity of materials, approximately adiabatic compression conditions can contrive to induce materials reactivity. Tests run at high pressure using the new MSFC tester have so far shown that:

1) The materials used in the tests cited in Table II showed an inverse relationship between thickness and impact sensitivity.

2) Of the materials tested to date, several tend to indicate that impact sorritivity in GOX is more pressure dependent than in LOX.

3) The impact sensitivity of the materials tested to date in GOX at the pressures tested showed enhanced impact sensitivity with higher pressure.

4) The rank ordering of the materials tested so far in LOX up to 1000 psia  $(6.8 \times 10^6 \text{ Newtons/m}^2)$  is the same as the rank ordering resulting from tests in LOX at 14.7 psia (9.5 x  $10^4 \text{ Newtons/m}^2$ ).

While there is agreement on the syntactical basis of probability theory as it applies to LOX/GOX compatibility testing, there is indeed the danger of a disparity between the syntactics and the explanation and interpretation of these signs in terms of the real-world. Statistics can be a useful indicator if cautiously and correctly applied. There is the distinct danger of a retreat to, or a preoccupation with, "cure all" test methods and techniques, r canwhile disregarding the necessity for hard data acquired from statistically meaningful numbers of tests.

Future plans at MSFC include investigation and research on a variety of LOX/GOX sensitivity testing methods and techniques. It is expected that configuration testing will continue to be necessary in special situations.

In the final analysis, the many questions of materials compatibility in LOX and GOX will undoubtedly continue to be crucial considerations to the aerospace designer concerned with our future space vehicles and spacecraft."

# White and Ward (1966)

# "SUMMARY AND CONCLUSIONS

The ignition of metals in oxygen and oxygen atmospheres was reviewed from the viewpoints of (a) methods that have been used to study behavior, (b) experimental values that have been obtained, and (c) the status of theories that permit the calculation of ignition temperatures.

While no clearcut definition of ignition temperature has been developed, it appears probable that a definite or an absolute ignition temperature does exist for a particular metal-oxygen system. In general terms, if the energy input as converted to heat is greater than the heat dissipation, a temperature will be reached at which ignition of the metal will occur. Practically. this temperature appears dependent on many factors some of which are relatively static (e.g., atmosphere, composition, purity, metal surface area and condition, etc.) and others that may be dynamic (e.g., pressure, impact, impact velocity, vibration, etc.). No standard test procedures or methods have been developed to evaluate the ignition temperatures of metals. The net result is that varying values have been reported for the same or similar metal-oxygen systems.

Despite these differences, the following generalizations can be offered on the basis of the experimental evaluations performed to date:

(1) All metals, with the possible exception of gold and platinum, can be expected to ignite in oxygen at some elevated temperature.

(2) Alloys of several systems have been shown to ignite in oxygen systems at relatively low temperatures and some at LOX temperatures if some external cource of energy input is present. Generally, the presence of a fresh metal surface is also necessary to cause ignition at these low temperatures. These ignition-sensitive alloy systems include the alloys of titanium, zirconium, thorium, uranium, lead, tin, and magnesium.

(3) A number of secondary energy input sources have been shown to cause ignition of these sensitive alloys in oxygen systems. There sources also probably produce a fresh metal surface and are identified as follows:

#### In Gaseous Oxygen

Electric spark Puncture

In Liquid Oxygen

Mechanical impact Explosive shock. Stress rupture Explosive shock.

Puncture

White et al. (Continued)

(4) A number of other methods of secondary energy input and methods of exposing fresh metal do not produce ignition. These are as follows: South and the second second

いたのないないないで、「ないないない」

In Gascous Oxygen

High-velocity flow

Low-cycle fatigue cracking

Impact on the cutside of a container without puncture

High-velocity flow through a small orifice

Rapid pressurization

In Liquid Oxygen

Impact on the outside of a container without puncture

Rapid pressurization

Machining

12

Friction and galling

Tensile rupture

Mechanical vibration

Sonic vibration

Ultrason: Vibration

High-version ow through an orifice.

(5) An increase in pressure of a gaseous oxygen system tends to promote ignition at lower temperatures or with lower secondary energy inputs. The dilution of oxygen with an inert material, gaseous or liquid, terds to reduce sensitivity of metals in oxygen systems. However, propagation is not affected much until the dilution is very great, on the order of 90 percent inert gas or liquid.

(6) A number of alloy systems have been shown to be relatively insensitive to ignition in an oxygen environment either at high temperatures or at low temperatures with high accondary energy inputs. These alloy systems include: austenitic stainless stoels, nickel alloys, cobalt alloys, copper alloys, and silver alloys. Alloys of these systems show the best service record and also show the least sensitivity in laboratory tests.

# White et al. (Continued)

۰Ş

(7) Another group of alloys appears to be somewhat intermediate between the sensitive and insensitive groups cited in Items 2 and 6. This group includes aluminum alloys, the 400 series stainless steels, and carbon and low-alloy high-strength steels. These materials would be expected to find limited use in relatively nonsensitive applications."

L'ICOMPE - EAL

Ł

(Remaining discussion has been omitted).