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Coefficients for Calculating Thermodynamic and Transport Properties of Individual Species

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Although the changes and corrections involve table II, none involve the first 14 coefficients, which are used in equations (1) to (3) to obtain values of C_p^o/R, H^o/RT, and S^o/R. The following errors were noted:

1. For the following species the last floating-point value on record 4, which contains a value for $H^o(298.15)/R$, was changed as follows:

Name	$H^o(298.15)/R$
CF+	1.38242181E+05
CP	6.25607522E+04
C2	9.98804500E+04
C6H13,n-hexyl	3.01881891E+03
C7H15,n-heptyl	5.27992630E+02
C7H16,n-heptane	-2.25870196E+04
C8H17,n-octyl	-1.96283365E+03
C8H18,n-octane	-2.51067110E+04
C10H8,naphthale	1.81105080E+04
C12H9,o-bipheny	5.14438397E+04
C12H10,bipheny	2.19050792E+04
CaS	1.48655784E+04
SiC4H12	-3.44703416E+04
Zn	1.56834257E+04
Zn+	1.24694351E+05
Zn-	1.32142483E+04
Zr	7.33657185E+04
ZrN	8.57984415E+04
ZrO	1.00926504E+04
BN(s)	-3.01779034E+04
B3O3H3(cr)	-1.51820492E+05
BeO(a)	-7.31677513E+04
CaCO3(caL)	-1.45158404E+05
CaF2(a)	-1.47442433E+05
CsOH(a)	-5.01203318E+04
FeCL3(s)	-4.80371062E+04
K2O(s)	-4.36791825E+04
K2O2(s)	-5.96311749E+04
Li2SO4(a)	-1.72754257E+05
Na2SO4(V)	-1.66914947E+05
NbO2(I)	-9.56111665E+04
PbF2(a)	-8.14204325E+04
SiO2(Lqz)	-1.09550292E+05

2. The following names were changed:

From	To	From	To
Na2CO3(1)	Na2CO3(I)	SrCL2(1)	SrCL2(a)
Na2CO3(2)	Na2CO3(II)	SrCL2(2)	SrCL2(b)
NaSO4(IV)	Na2SO4(IV)	Ti2O3(1)	Ti2O3(a)
NaSO4(I)	Na2SO4(I)	Ti2O3(2)	Ti2O3(b)
NaSO4(L)	Na2SO4(L)	V2O4(1)	V2O4(I)
Ni3S2(1)	Ni3S2(I)	V2O4(2)	V2O4(II)
Ni3S2(2)	Ni3S2(II)		

Contents

Summary

Libraries of thermodynamic data and transport properties are given for individual species in the form of least-squares coefficients. Values of heat capacity $C_p^o(T)$, enthalpy $H^o(T)$, and entropy $S^o(T)$ are available for 1130 solid, liquid, and gaseous species. Viscosity and thermal conductivity data are given for 155 gases. The original $C_p^o(T)$ values were fit to a fourth-order polynomial with integration constants for $H^o(T)$ and $S^o(T)$. For each species the integration constant for $H^o(T)$ includes the heat of formation. Transport properties have a different functional form. The temperature range for most of the data is 300 to 5000 K, although some of the newer thermodynamic data have a range of 200 to 6000 K. Because the species are mainly possible products of reaction, the data are useful for chemical equilibrium and kinetics computer codes. Much of the data has been distributed for several years with the NASA Lewis equilibrium program CET89. The thermodynamic properties of the reference elements have been updated along with about 175 species that involve the elements carbon, hydrogen, oxygen, and nitrogen. These sets of data will be distributed with the NASA Lewis personal computer program for calculating chemical equilibria, CETPC.

Introduction

This report documents the thermodynamic and transport property data used in several versions of the NASA Lewis equilibrium computer programs CET89 (Gordon et al., 1971, 1976, 1984, and 1988) and CETPC (to be published). Many other computer codes, such as the one given in Radhakrishnan and Bittker (1993), use the same data. The libraries of data are presented in the form of least-squares coefficients. Thermodynamic data coefficients are given for 1130 species (gaseous, liquid, or solid). Transport property coefficients are given for 155 gaseous species. These coefficients generate the thermodynamic functions heat capacity $C_p^o(T)$, enthalpy $H^o(T)$, and entropy $S^o(T)$ and the transport properties viscosity η and thermal conductivity λ.

CETPC is essentially CET89 adapted for use on an IBM-compatible personal computer. This code, the accompanying thermodynamic and transport property coefficients, and sample problems will be distributed on a 3½-in. diskette. Only the executable code will be included and the coefficient data will be unformatted and not legible. This report lists these thermodynamic and transport coefficients in a legible formatted form and gives data references. These data bases will also be available on diskettes in the formatted form and will be included with future distributions of the CET89 source code.

The functional form for $C_p^o(T)$ is a fourth-order polynomial with integration constants for $H^o(T)$ and $S^o(T)$. Much of the coefficient data are the same as the data that have been distributed for several years with the NASA Lewis equilibrium program CET89 except that they have been adjusted for newer physical constants (Cohen and Taylor, 1987), for newer atomic weights (De Laeter and Heumann, 1991), and for the reference pressure for the ideal gases as 1 bar rather than 1 atmosphere. Some data have been updated. These include the reference elements (McBride et al., 1993) and about 175 species that involve the elements carbon, hydrogen, oxygen, and nitrogen. Generally, these newer data were calculated by using PAC91 (McBride and Gordon, 1992), and the older data were calculated by using earlier versions of that code. The coefficients for the older data are for the temperature intervals 300 to 1000 K and 1000 to 5000 K. The fits were constrained so that the coefficient functional form gives results that match the original data at 1000 K. The coefficients for the newer data are for the intervals 200 to 1000 K and 1000 to 6000 K. The fits were constrained so that the functional form values match the original data at 298.15 K and also so that the higher interval functional values match the lower interval functional values at 1000 K.

The original data for gases are generally the result of ideal-gas calculations, whereas the data for the condensed species are generally the result of a fit to experimental measurements. For most species either the thermodynamic functions or the molecular constant data are taken from other compilations such as JANAF (Chase et al., 1985) and the Russian volumes (Gurvich et al., 1978, 1979, 1982, 1989, and 1991), although many other references were used.

The transport property data from which the least-squares coefficients were generated are described in Gordon et al. (1984). Coefficients are given for viscosity, thermal conductivity, and three binary viscosity interactions. The functional form to which the data are fitted is described in a later section. The temperature range was divided into two intervals, 300 to 1000 K and 1000 to 5000 K. This corresponds to the

temperature intervals used for the thermodynamic data at the time of the Gordon et al. (1984) report.

The data are presented in the form required by CET89 and CETPC and are annotated with the references.

Symbols

a_i	polynomial coefficients used in eqs. (1) to (3)
b_1	integration constant defined by eq. (2)
b_2	integration constant defined by eq. (3)
$C_p^o(T)$	heat capacity at constant pressure for standard state
c	speed of light
c_2	second radiation constant, hc/k
$G^o(T)$	either $\{G^o(T) - H^o(0)\}+H^o(0)$ or $\{G^o(T) - H^o(298.15)\}+H^o(298.15)$
$G^o(T) - H^o(0)$	Gibbs energy at temperature T relative to enthalpy at 0 K for standard state
$G^o(T) - H^o(298.15)$	Gibbs energy at temperature T relative to enthalpy at 298.15 K for standard state
$\Delta_f G^o(T)$	Gibbs energy of formation of a substance at temperature T from its reference elements in their standard state
$H^o(0)$	chemical energy at 0 K for standard state
$H^o(298.15)$	assigned enthalpy at 298.15 K for standard state (assigned to be equal to $\Delta_f H^o(298.15)$)
$H^o(T)$	either $\{H^o(T) - H^o(0)\}+H^o(0)$ or $\{H^o(T) - H^o(298.15)\}+H^o(298.15)$
$H^o(T)$–$H^o(298.15)$	sensible enthalpy at temperature T relative to 298.15 K for standard state
$\Delta_f H^o(T)$	enthalpy of formation (heat of formation) of a substance at temperature T from its reference elements in the standard state
h	Planck's constant
K	equilibrium constant
k	Boltzmann constant
m_e	electron mass
N	principal quantum number for atomic species
p_0	standard-state pressure
q_i	temperature exponents in eq. (1)
R	universal gas constant
r	number of coefficients a_i in eq. (1)
S_o/R	Sackur-Tetrode constant
$S^o(T)$	entropy at temperature T for standard state
T	temperature, K
η	viscosity, eq. (10)
λ	thermal conductivity, eq. (10)

Standard States, Reference States, and Fundamental Constants

The symbols and definitions follow the recommendations of Cox (1982). All data in this report are for species in their standard states. For gases this is ideal gas at the standard pressure of 10^5 Pa (1 bar). For condensed species the standard state is the pure crystalline or liquid substance at the same standard pressure. All thermodynamic properties are standard molar quantities.

The reference states of the elements as well as the data used for these elements are given in McBride et al. (1993). Generally they are taken to be the thermodynamically stable state at 298.15 K. For those species that are gases at 298.15 K and 1 bar, the entire temperature range is taken to be gaseous. For species that are condensed at 298.15 K the entire range is taken to be condensed with transitions between various phases, such as between solid and liquid phases.

Most of the properties are given in the International System of Units (SI); that is, the temperatures are in kelvin (K), the energies in joules (J), and the pressures in bars. Sometimes the values are made dimensionless by dividing them either by the gas constant R or RT. The fundamental constants were taken from Cohen (1987) and are as follows:

Quantity	Symbol	Value	Units
Molar gas constant	R	8.314510(70)	J/(mol-K)
Sackur-Tetrode constant:			
For p_0=100 000 Pa =1 bar	S_o/R	−1.151693(21)	
For p_0=101 325 Pa =1 atm	S_o/R	−1.64856(21)	
Second radiation constant, hc/k	c_2	0.01438769(12)	mK
Electron mass	m_e	0.000548579903(13)	[a]u

[a]Atomic mass unit used for calculating molar masses, 1/12 mass ^{12}C.

These constants were used in McBride and Gordon (1992) in calculating the thermodynamic functions for many gases. The atomic weights were taken from De Laeter and Heumann (1991). These weights are given in atomic mass units (u) based on ^{12}C = 12u. Some of the older data were calculated with values of R, Sackur-Tetrode constants, and atomic weights

different from those selected for this report. The coefficients were corrected to adjust for the differences in these values.

Empirical Equations for Fitting Thermodynamic Functions

The thermodynamic data for many individual species can be conveniently stored for use with computer programs in the form of coefficients associated with equations that fit the data. The following dimensionless form was chosen for this report:

$$\frac{C_p^o(T)}{R} = \sum_{i=1}^{r} a_i T^{q_i} \tag{1}$$

For CET89 and CETPC, $r = 5$ and the q_i values are 0, 1, 2, 3, and 4. A second set is planned for future NASA Lewis chemical equilibrium codes. The new set has two additional terms ($r = 7$), one with $q_i = -1$ and one with $q_i = -2$. (See the section Least-Squares Fit for an additional discussion of these equations.)

Enthalpy and entropy are related thermodynamically to $C_p^o(R)$ as follows:

$$\frac{H^o(T)}{RT} = \frac{b_1}{T} + \frac{\int C_p^o(T)dT}{RT} \tag{2}$$

$$\frac{S^o(T)}{R} = b_2 + \int\left(\frac{C_p^o(T)}{RT}\right)dT \tag{3}$$

where b_1 and b_2 are integration constants. These are two additional constants (or coefficients) to the five or seven coefficients in equation (1).

These equations are given again in table I along with the format of the data listed in table II.

Assigned Enthalpy Values

For some applications, such as those discussed in Gordon and McBride (1976), it is convenient to combine sensible enthalpies and energies of chemical and physical changes into one numerical value. An arbitrary base may be adopted for assigning absolute values to the enthalpy of various substances inasmuch as only differences in enthalpies are measurable. For CET89 and CETPC the arbitrary base selected was a value of zero at 298.15 K for the reference elements. Thus, for the assigned reference elements

$$\Delta_f H^o(298.15) = H^o(298.15) = 0 \tag{4}$$

And, in general, for all species

$$H^o(298.15) = \Delta_f H^o(298.15) \tag{5}$$

$$H^o(T) = H^o(298.15) + \left\{H^o(T) - H^o(298.15)\right\} \tag{6}$$

Heats of Formation and Equilibrium Constants

Heats of formation and $\log_{10}K$ for a species are calculated as a function of temperature for the formation of the species from the elements in their assigned reference states. The following is an example of how these properties can be calculated for CO(g) at 1000 K

$$\Delta_f H^o(1000) = H^o(1000)\mathrm{CO(g)} - H^o(1000)\mathrm{C(gr)} - \frac{1}{2}H^o(1000)\,\mathrm{O_2(g)} \tag{7}$$

$$\Delta_f G^o(1000) = G^o(1000)\mathrm{CO(g)} - G^o(1000)\mathrm{C(gr)} - \frac{1}{2}G^o(1000)\,\mathrm{O_2(g)} \tag{8}$$

By definition,

$$\log_{10} K = \frac{-\Delta_f G^o(T)}{2.3025851\,RT} \tag{9}$$

Least-Squares Fit

For most of the species in this report the coefficients in equations (1) to (3) were obtained by means of a least-squares fit. The code PAC91 (McBride and Gordon, 1992) and earlier versions of the code (e.g., McBride and Gordon, 1967) were used to obtain the coefficients. For all calculations (1) a fourth-order polynomial was used for $C_p^o(T)$; (2) the temperature range was split into two intervals with a breakpoint at 1000 K; (3) a fitting constraint required coefficients in both intervals to yield the same values of the functions at the 1000 K common point; and (4) generally the functions $C_p^o(T)/R$, $H^o(T)/R$, and $S^o(T)/R$ were fit simultaneously (Zeleznik and Gordon, 1961).

There are two major differences between the data produced by PAC91 and the data produced by earlier PAC versions: the overall temperature range and the point where the coefficients reproduce the original functions exactly. Generally, the PAC91 data are for the range 200 (or 298.15 for ions) to 6000 K, whereas the older data are for the range 300 to 5000 K. The exact-fit points are 1000 K for the older data and 298.15 K for the newer data. Thus, the newer data reproduce the heats of formation exactly at 298.15 K.

Thermodynamic functions for some gases were not recalculated but rather taken directly from tables. When these data do not cover the entire temperature range used here, they must be extrapolated before they are fit. Data for the entire range is a requirement of equilibrium programs such as CETPC and CEA (Gordon and McBride, 1993). Although many of these species are not expected to exist at these high temperatures, the program includes the species at the higher temperature and then uses the coefficient data to decide whether the species should be included. If the data are fit to some temperature much lower than the 5000 or 6000 K limit, the coefficients could represent the data so poorly that an incorrect exclusion or inclusion of the species could result. Functions for these species were extrapolated by using the procedure described in Wilhoit (1975). A more complete discussion of this method, as well as the dangers of using coefficients to extrapolate outside of their temperature ranges, is given in McBride and Gordon (1992).

For the condensed species, each phase has its own set of coefficients. When phase transitions occur, the fit was constrained so that the difference in Gibbs energy is zero between the phases.

For some species and some temperature intervals, however, coefficients were not obtained by means of the PAC programs. The exceptions were when the original reference had equations in acceptable form or when $C_p^o(T)$ for an entire temperature interval was constant.

Thermodynamic Data Coefficients

The format of the thermodynamic data coefficients is detailed in table I and the data are listed in table II. In table II the data references are given in a column to the right of the data records. Some further comments are given in the following sections.

Names

Species names are the first 15 characters in the first record for each set. Many of the species names listed here are different from the names used in the data distributed with previous CET89 computer programs. This difference is important when using CET89 and CETPC because the names used in some of the input must be exactly the same as the names used in the thermodynamic data. Older species names were all upper case. The newer names have some lower case characters and the names are case sensitive. The letter "L" is always upper case in the formula part of the name so that it will not be confused with the number "1." Thus, for example, chlorine is given as CL rather than Cl. Various letters are used to represent the solid phases depending on what they were called in the original reference and what FORTRAN characters are available. The following chart shows the meaning of some of the abbreviations:

Abbreviation	Phase
an	andalusite
caL	calcite
cr	crystal
gr	graphite
hqz	high quartz
L	liquid
Lqz	low quartz
rd	red
ru	rutile
yw	yellow
a	alpha
b	beta
c	gamma
d	delta

Heats of Formation

The last floating-point number in each species set is the heat of formation at 298.15 K divided by R. These values are the result of using the coefficients in equation (2). The newer data, generally with temperature ranges from 200 to 298.15 to 6000 K, were forced to fit the original data at 298.15 K. Thus, these heats of formation should match the original values exactly. The older data, however, were forced to fit at 1000 K. Thus, these heats of formation at 298.15 K will be slightly different than the original values.

Six-Character Reference Codes

The second field of the first record contains a six-character reference code to indicate the major source and date of the data. The letters indicate the reference, and the numbers that follow indicate a date. The following chart gives the references associated with the various letter codes.

Letters	References
J	[JANAF] Chase et al. (1985) with date from individual sheet
CODA	[CODATA] Cox et al. (1989)
L	[Lewis] A combination of references or a NASA Lewis reference with date of least-squares fit
TPIS	[Thermodynamic Properties of Individual Substances] Gurvich et al. (1979, 1982, 1989, or 1991)
X	[TeXas] TRC data with date from individual sheet
SRD	[Standard Reference Data] Alcock et al. (1993)
BUR	[Burcat] Burcat et al. (1979, 1982, 1984, 1992)
BAR	[Barin] Barin and Knacke (1973) or Barin et al. (1989)

Atomic Symbols in Formula Used by CETPC and CET89

The atomic symbols used in the chemical formula following the six-character code are the same as those used within the computer programs. The letters are all upper case. The letter "E" represents electrons for the ionized species.

Phase and Species Order

The phase column for the first record of each species indicates whether the species is condensed (C) or gaseous (G). For CET89 and CETPC the order of the sets of data for the gaseous species is immaterial. For the condensed species the data for the various phases must be adjacent and in the order of increasing temperature range. In table II all the gases precede the condensed species. This same order is used within CETPC and CET89.

Temperature Ranges

The temperature ranges listed give the range where the data were fitted. Most of the gases were fitted for the whole range (i.e., 200, 298.15, or 300 K to 5000 or 6000 K). As discussed previously the fits are for two intervals with a common break at 1000 K. The ranges for the condensed species vary according to the original data. For liquids with a constant C_p^o the range is extended to 5000 or 6000 K. Generally, using the coefficients to extrapolate more than a short range outside these limits can result in very large errors. CET89 and CETPC allow the data to be extrapolated 20 percent outside the fitted range.

Coefficients

Records 2, 3, and 4 list the coefficients as indicated in table I. Note that the first seven coefficients are for the higher temperature range and the second seven coefficients are for the lower temperature range.

Transport Property Coefficients

The generation of the transport property coefficients used in this report was discussed in Gordon et al. (1984). Coefficients are given for 155 species. The data used to generate the coefficients were taken from Gordon et al. (1984) for 17 species; the remainder of the data were taken from Svehla (1962).

Transport property coefficients are given for viscosity, thermal conductivity, and for a few pairs of species, a viscosity interaction parameter η_{ij}. The coefficients were generated by a least-squares fit to the following form:

$$\left.\begin{matrix}\ln\eta\\ \ln\lambda\\ \ln\eta_{ij}\end{matrix}\right\} = A\ln T + \frac{B}{T} + \frac{C}{T^2} + D \qquad (10)$$

These coefficients were generated to give viscosity in units of micropoise (μP) and thermal conductivity in units of microwatts per centimeter kelvin (μW/cm-K). Coefficients were generated for two temperature intervals, 300 to 1000 K and 1000 to 5000 K, to be consistent with the thermodynamic data intervals. Each pure species, therefore, has four sets of coefficients: two sets for viscosity (low- and high-temperature intervals) and two sets for thermal conductivity (low- and high-temperature intervals). Only two sets of coefficients are given for the viscosity interactions. The format used for the transport property data is given in table III and the coefficients are given in table IV.

Concluding Remarks

The thermodynamic data for the next NASA Lewis chemical equilibrium program (Gordon and McBride, 1993) will have a different format with the possibility of two additional coefficients in equation (1) and more temperature intervals. For gases there may be as many as three intervals, namely 200 to 1000 K, 1000 to 6000 K, and 6000 to 20 000 K. For condensed species there may be any number of intervals and the breakpoints may be variable (see McBride and Gordon, 1992; and McBride et al., 1993).

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TABLE I. – FORMAT FOR THERMODYNAMIC DATA COEFFICIENTS IN TABLE II

Record	Contents	Format	Columns
1	Species name	A15	1–15
	Reference/date code	A6	19–24
	Chemical formula: symbols and numbers	4 (A2, F3.0)	25–44
	"G" for gaseous species, "C" for condensed	A1	45
	Temperature range	2F10.3	46–65
	Molecular weight	F13.5	66–78
	Integer 1	I1	80
2	Coefficients $a_i (i = 1,5)$ in eq. (1) for $T \geq 1000$ K	5E15.8	1–75
	Integer 2	I1	80
3	Coefficients b_1 and b_2 in eqs. (2) and (3) for $T \geq 1000$ K	2E15.8	1–30
	Coefficients a_i $(i = 1,3)$ in eq. (1) for $T \leq 1000$ K	3E15.8	31–75
	Integer 3	I1	80
4	Coefficients a_i $(i = 4,5)$ in eq. (1) for $T \leq 1000$ K	2E15.8	1–30
	Coefficients b_1 and b_2 in eqs. (2) and (3) for $T \leq 1000$ K	2E15.8	31–60
	H^o (298.15)/R, K	E15.8	61–75
	Integer 4	I1	80

Example:

```
BeOH             J12/75BE 1.0  1.H  1.   0.G   300.000  5000.000     26.01952 1
 4.61167200E+00 2.39720130E-03-8.54891620E-07 1.43090620E-10-9.11123990E-15    2
-1.53618380E+04-1.98829219E+00 1.91391480E+00 1.35071590E-02-1.85316870E-05    3
 1.29424710E-08-3.54389610E-12-1.48196830E+04 1.09928304E+01-1.37885210E+04    4
```

Empirical equations for this example:

$$\text{Heat capacity}: \quad \frac{C_p^o(T)}{R} = a_1 + a_2 T + a_3 T^2 + a_4 T^3 + a_5 T^4 \tag{1}$$

$$\text{Enthalpy}: \quad \frac{H^o(T)}{RT} = a_1 + a_2 \frac{T}{2} + a_3 \frac{T^2}{3} + a_4 \frac{T^3}{4} + a_5 \frac{T^4}{5} + \frac{b_1}{T} \tag{2}$$

$$\text{Entropy}: \quad \frac{S^o(T)}{R} = a_1 \ln T + a_2 T + a_3 \frac{T^2}{2} + a_4 \frac{T^3}{3} + a_5 \frac{T^4}{4} + b_2 \tag{3}$$

TABLE II. - THERMODYNAMIC DATA COEFFICIENTS

CETPC thermodynamic data file	References for data
Electron gas L10/92E 1. Ø. Ø. Ø.G 200.000 6000.000.000548579903 1	McBride (1993)
2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 2	
-7.45375000E+02-1.17208122E+01 2.50000000E+00 0.00000000E+00 0.00000000E+00 3	
0.00000000E+00 0.00000000E+00-7.45375000E+02-1.17208122E+01 0.00000000E+00 4	
AL J 6/83AL 1. Ø. Ø. Ø.G 200.000 6000.000 26.98154 1	Chase (1985)
2.53385701E+00-4.65859492E-05 2.82798048E-08-8.54362013E-12 1.02207983E-15 2	
3.89045662E+04 5.37984179E+00 3.11112433E+00-3.59382310E-03 8.14749313E-06 3	
-8.08808966E-09 2.93132463E-12 3.88283390E+04 2.84045730E+00 3.96535695E+04 4	
AL+ J 6/83AL 1.E -1. Ø. Ø.G 298.150 6000.000 26.98099 1	Chase (1985)
2.51215337E+00-2.61011300E-05 1.90360463E-08-5.68881493E-12 6.00529995E-16 2	
1.09023995E+05 3.72538259E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00 3	
0.00000000E+00 0.00000000E+00 1.09028141E+05 3.79100584E+00 1.09773516E+05 4	
AL- J 6/83AL 1.E 1. Ø. Ø.G 298.150 6000.000 26.98209 1	Chase (1985)
2.18963489E+00 8.03446211E-04-3.79389535E-07 6.90059853E-11-4.39884116E-15 2	
3.30960260E+04 7.55557200E+00 2.64731898E+00-7.20371592E-04 1.02539612E-06 3	
-3.51118197E-11-2.38932974E-13 3.30049252E+04 5.30876678E+00 3.37710821E+04 4	
ALBO2 J 6/66AL 1.B 1.O 2. Ø.G 300.000 5000.000 69.79134 1	Chase (1985)
7.17229950E+00 2.97807410E-03-1.24311070E-06 2.31887790E-10-1.60412080E-14 2	
-6.76836820E+04-9.98173974E+00 2.30872340E+00 1.88905390E-02-2.06333480E-05 3	
1.02513240E-08-1.69412830E-12-6.64821670E+04 1.44770185E+01-6.51170313E+04 4	
ALBr J 9/79AL 1.BR 1. Ø. Ø.G 300.000 5000.000 106.88554 1	Chase (1985)
4.38224240E+00 2.12007070E-04-7.07644470E-08 1.06590180E-11 1.48302660E-16 2	
5.76168490E+02 3.73910858E+00 3.49006110E+00 4.54767970E-03-8.19355780E-06 3	
6.86661520E-09-2.17650580E-12 7.29453060E+02 7.88664758E+00 1.91229750E+03 4	
ALBr3 J 9/79AL 1.BR 3. Ø. Ø.G 300.000 5000.000 266.69354 1	Chase (1985)
9.61505900E+00 4.44685460E-04-1.99029830E-07 3.92518180E-11-2.84279750E-15 2	
-5.23495440E+04-1.31191090E+01 6.25372060E+00 1.60802170E-02-2.86597580E-05 3	
2.36160760E-08-7.39313140E-12-5.17352110E+04 2.68365808E+00-4.93659766E+04 4	
ALC J 6/63AL 1.C 1. Ø. Ø.G 300.000 5000.000 38.99254 1	Chase (1985)
4.15644780E+00 4.46924900E-04-1.74670400E-07 3.43043360E-11-2.47727060E-15 2	
8.16066050E+04 2.90472525E+00 2.64224830E+00 6.44651610E-03-9.58923760E-06 3	
6.90408050E-09-1.94307790E-12 8.19298740E+04 1.02673620E+01 8.29321939E+04 4	
ALCL J 9/79AL 1.CL 1. Ø. Ø.G 300.000 5000.000 62.43424 1	Chase (1985)
4.33952710E+00 2.48388740E-04-8.29218520E-08 1.23423190E-11-2.37558180E-17 2	
-7.52810810E+03 2.53729426E+00 3.12222860E+00 5.92804740E-03-1.04158320E-05 3	
8.55510650E-09-2.67223800E-12-7.30758390E+03 8.25335616E+00-6.18958661E+03 4	
ALCL+ J 6/76AL 1.CL 1.E -1. Ø.G 300.000 5000.000 62.43369 1	Chase (1985)
4.62849650E+00-3.47505350E-04 2.29973510E-07-2.42797980E-11-2.64405440E-16 2	
1.02204470E+05 1.43039988E+00 2.86983520E+00 6.65345860E-03-1.13277070E-05 3	
9.07029740E-09-2.77946400E-12 1.02597410E+05 1.00199526E+01 1.03665310E+05 4	
ALCLF J 6/76AL 1.CL 1.F 1. Ø.G 300.000 5000.000 81.43264 1	Chase (1985)
6.42626220E+00 6.78611680E-04-3.11863920E-07 6.21423790E-11-4.25195730E-15 2	
-6.09387690E+04-3.06227080E+00 3.21759680E+00 1.45245490E-02-2.39224880E-05 3	
1.86216090E-08-5.59036670E-12-6.03055080E+04 1.22718185E+01-5.88778039E+04 4	
ALCLF+ J 6/76AL 1.CL 1.F 1.E -1.G 300.000 5000.000 81.43209 1	Chase (1985)
6.88359050E+00 7.05093660E-04-3.13660880E-07 6.16073100E-11-4.44905370E-15 2	
3.10059900E+04-8.48211360E+00 3.73412920E+00 1.38890430E-02-2.22225390E-05 3	
1.69376830E-08-5.00613420E-12 3.16477550E+04 6.66914740E+00 3.32131840E+04 4	
ALCLF2 J 6/76AL 1.CL 1.F 2. Ø.G 300.000 5000.000 100.43105 1	Chase (1985)
8.86745440E+00 1.29333190E-03-5.74687960E-07 1.12784190E-10-8.13981540E-15 2	
-1.23092500E+05-1.56007845E+01 3.49052450E+00 2.34106220E-02-3.67308020E-05 3	
2.75774850E-08-8.05708740E-12-1.21978570E+05 1.03598345E+01-1.20171161E+05 4	
ALCL2 J 6/76AL 1.CL 2. Ø. Ø.G 300.000 5000.000 97.88694 1	Chase (1985)
6.64141330E+00 4.33919070E-04-2.03424560E-07 4.09001350E-11-2.72093750E-15 2	
-3.57946890E+04-3.34843902E+00 3.93367410E+00 1.29289180E-02-2.27679920E-05 3	
1.86055150E-08-5.79002790E-12-3.52966190E+04 9.40186678E+00-3.37162634E+04 4	
ALCL2+ J 6/76AL 1.CL 2.E -1. Ø.G 300.000 5000.000 97.88639 1	Chase (1985)
7.09545770E+00 4.65254700E-04-2.07664790E-07 4.08799060E-11-2.95689140E-15 2	
5.56437750E+04-8.51809863E+00 4.35611280E+00 1.26406120E-02-2.15540600E-05 3	
1.72227530E-08-5.27444730E-12 5.61697360E+04 4.49304737E+00 5.78714632E+04 4	
ALCL2- J 6/76AL 1.CL 2.E 1. Ø.G 300.000 5000.000 97.88749 1	Chase (1985)
6.71256180E+00 3.46568360E-04-1.58843540E-07 2.99500630E-11-1.65448150E-15 2	
-5.99542570E+04-4.13632911E+00 4.25109460E+00 1.19685620E-02-2.15382290E-05 3	
1.78692300E-08-5.62207530E-12-5.95130610E+04 7.39326189E+00-5.78712622E+04 4	
ALCL2F J 6/76AL 1.CL 2.F 1. Ø.G 300.000 5000.000 116.88534 1	Chase (1985)
9.14760670E+00 9.76691590E-04-4.34886760E-07 8.54640750E-11-6.17394740E-15 2	
-9.80602870E+04-1.53791197E+01 4.25516640E+00 2.20167890E-02-3.62769860E-05 3	
2.82748420E-08-8.50110950E-12-9.70888870E+04 8.02488762E+00-9.51102737E+04 4	

TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

```
ALCL3             J 9/79AL 1.CL 3.   Ø.   Ø.G   300.000  5000.000    133.33964 1   Chase (1985)
 9.40410830E+00 6.86418720E-04-3.06638500E-07 6.03915090E-11-4.36935740E-15    2
-7.32858130E+04-1.62963831E+01 4.91326650E+00 2.10318640E-02-3.65469310E-05    3
 2.95868120E-08-9.14510050E-12-7.24410560E+04 4.94299605E+00-7.03101033E+04    4
ALF               J 9/79AL 1.F  1.   Ø.   Ø.G   300.000  5000.000     45.97994 1   Chase (1985)
 4.12613950E+00 4.62680540E-04-1.74777330E-07 3.00154840E-11-1.53288410E-15    2
-3.32759380E+04 2.06640736E+00 2.64729250E+00 6.08226860E-03-8.59634290E-06    3
 5.89798370E-09-1.58867650E-12-3.29492600E+04 9.31391236E+00-3.19546746E+04    4
ALF+              J 6/76AL 1.F  1.E -1.   Ø.G   300.000  5000.000     45.97939 1   Chase (1985)
 3.35221860E+00 1.31038670E-03-1.43183830E-07-4.54423300E-11 7.34207490E-15    2
 8.22325000E+04 7.08370827E+00 2.72530530E+00 4.81203130E-03-5.44117190E-06    3
 2.74390840E-09-3.58751920E-13 8.22504680E+04 9.72336097E+00 8.32340781E+04    4
ALF2              J 6/76AL 1.F  2.   Ø.   Ø.G   300.000  5000.000     64.97835 1   Chase (1985)
 6.15793000E+00 9.81322870E-04-4.45350280E-07 8.82059600E-11-6.12622550E-15    2
-8.55664790E+04-3.95119222E+00 2.74084650E+00 1.44667450E-02-2.15206190E-05    3
 1.54119890E-08-4.32297970E-12-8.48345940E+04 1.26766819E+01-8.35361263E+04    4
ALF2+             J 6/76AL 1.F  2.E -1.   Ø.G   300.000  5000.000     64.97780 1   Chase (1985)
 6.59253940E+00 1.03194890E-03-4.57394400E-07 8.96205990E-11-6.46098250E-15    2
 8.89919430E+03-9.45969758E+00 3.12391760E+00 1.45230560E-02-2.13154430E-05    3
 1.51561330E-08-4.23740960E-12 9.65450720E+03 7.47417652E+00 1.10710379E+04    4
ALF2-             J 6/76AL 1.F  2.E  1.   Ø.G   300.000  5000.000     64.97889 1   Chase (1985)
 6.26667450E+00 8.37111720E-04-3.68400210E-07 7.01504770E-11-4.68762980E-15    2
-1.11252900E+05-5.02117975E+00 2.67153500E+00 1.56019440E-02-2.44193220E-05    3
 1.82531690E-08-5.30647750E-12-1.10508600E+05 1.23382336E+01-1.09200801E+05    4
ALF2O             J 6/76AL 1.F  2.O  1.   Ø.G   300.000  5000.000     80.97775 1   Chase (1985)
 8.82056220E+00 1.25486940E-03-5.45244650E-07 1.20368600E-10-9.64835990E-15    2
-1.36306680E+05-1.60428721E+01 3.08740900E+00 2.38332390E-02-3.60629830E-05    3
 2.62689190E-08-7.48567600E-12-1.35065400E+05 1.18936719E+01-1.33355812E+05    4
ALF2O-            J 6/76AL 1.F  2.O  1.E  1.G   300.000  5000.000     80.97829 1   Chase (1985)
 8.61427860E+00 1.57845960E-03-7.00291150E-07 1.37292120E-10-9.90139850E-15    2
-1.60403360E+05-1.58792509E+01 2.91975970E+00 2.40940130E-02-3.60809440E-05    3
 2.60678480E-08-7.38083790E-12-1.59181520E+05 1.18310821E+01-1.57510833E+05    4
ALF3              J 9/79AL 1.F  3.   Ø.   Ø.G   200.000  6000.000     83.97675 1   Chase (1985)
 8.72897229E+00 1.31428559E-03-5.17599581E-07 8.86782789E-11-5.52837363E-15    2
-1.48390330E+05-1.75036661E+01 3.10285412E+00 2.23455765E-02-3.14588690E-05    3
 2.11582073E-08-5.53896073E-12-1.47126797E+05 1.01597069E+01-1.45447229E+05    4
ALF4-             J 6/76AL 1.F  4.E  1.   Ø.G   300.000  5000.000    102.97570 1   Chase (1985)
 1.14714510E+01 1.75257860E-03-7.80642270E-07 1.53444740E-10-1.10863740E-14    2
-2.43360360E+05-3.11980750E+01 2.58785930E+00 3.99304410E-02-6.57369140E-05    3
 5.11630550E-08-1.53586950E-11-2.41596490E+05 1.13015770E+01-2.39537061E+05    4
ALH               J 6/63AL 1.H  1.   Ø.   Ø.G   300.000  5000.000     27.98948 1   Chase (1985)
 3.33668980E+00 1.28778640E-03-4.98699410E-07 9.22946330E-11-6.34516940E-15    2
 3.00917610E+04 3.09548828E+00 3.65768570E+00-1.97446980E-03 6.86633980E-06    3
-6.20414040E-09 1.86631030E-12 3.01464580E+04 2.08851108E+00 3.11985222E+04    4
ALI               J 9/79AL 1.I  1.   Ø.   Ø.G   200.000  6000.000    153.88601 1   Chase (1985)
 4.30067835E+00 3.94526798E-04-1.94717877E-07 4.31766594E-11-2.50995942E-15    2
 6.87733839E+03 5.19554991E+00 3.37619386E+00 6.20358000E-03-1.33437988E-05    3
 1.28978040E-08-4.59262508E-12 6.98468944E+03 9.20980278E+00 8.17245995E+03    4
ALI3              J 9/79AL 1.I  3.   Ø.   Ø.G   300.000  5000.000    407.69495 1   Chase (1985)
 9.70924960E+00 3.36646920E-04-1.50948540E-07 2.98131580E-11-2.16179940E-15    2
-2.62339960E+04-1.06639943E+01 6.97612980E+00 1.32127780E-02-2.38290730E-05    3
 1.97963930E-08-6.23362760E-12-2.57415850E+04 2.14766716E+00-2.32487352E+04    4
ALN               J12/79AL 1.N  1.   Ø.   Ø.G   300.000  5000.000     40.98828 1   Chase (1985)
 4.14504680E+00 4.85609620E-04-2.01264090E-07 4.12594880E-11-2.88543080E-15    2
 6.15832400E+04 3.58234302E+00 2.64486500E+00 6.54168760E-03-9.86253390E-06    3
 7.18823230E-09-2.04448450E-12 6.18973820E+04 1.08478644E+01 6.29028113E+04    4
ALO               J12/79AL 1.O  1.   Ø.   Ø.G   300.000  5000.000     42.98094 1   Chase (1985)
 3.31390640E+00 1.04524210E-03 2.74855330E-07-1.79286060E-10 1.99878130E-14    2
 7.09433360E+03 7.20963426E+00 2.81161030E+00 3.95842610E-03-3.36953040E-06    3
 6.73304970E-10 4.00894550E-13 7.06550370E+03 9.20895756E+00 8.05147516E+03    4
ALO+              J12/79AL 1.O  1.E -1.   Ø.G   300.000  5000.000     42.98039 1   Chase (1985)
 4.19084670E+00 6.93581980E-04-3.44599990E-07 7.61723270E-11-5.90324000E-15    2
 1.18074390E+05 3.52951981E+00 2.94144340E+00 5.25921680E-03-7.34390730E-06    3
 5.33167930E-09-1.57833360E-12 1.18374690E+05 9.73538251E+00 1.19430345E+05    4
ALO-              J12/79AL 1.O  1.E  1.   Ø.G   300.000  5000.000     42.98149 1   Chase (1985)
 4.03805550E+00 5.58371100E-04-2.18886650E-07 3.85330240E-11-2.10955500E-15    2
-3.37100890E+04 2.24480660E+00 2.72267540E+00 4.94755180E-03-5.75717540E-06    3
 3.14244000E-09-6.41528320E-13-3.33912960E+04 8.83631380E+00-3.24045842E+04    4
ALOCL             J 9/64AL 1.O  1.CL 1.   Ø.G   300.000  5000.000     78.43364 1   Chase (1985)
 6.78052000E+00 7.96628220E-04-3.42333550E-07 6.50226480E-11-4.55191970E-15    2
-4.40808320E+04-9.30014037E+00 3.24444090E+00 1.41170050E-02-1.93220380E-05    3
 1.19627980E-08-2.70691800E-12-4.33123430E+04 8.00537213E+00-4.18659024E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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ALOF              J12/75AL 1.0  1.F  1.   0.G   300.000  5000.000     61.97934 1   Chase (1985)
 6.45216220E+00 1.19265950E-03-5.28931370E-07 1.03678110E-10-7.47653670E-15    2
-7.21163630E+04-9.01812786E+00 2.03914610E+00 1.89487620E-02-2.89787700E-05    3
 2.13609410E-08-6.15798730E-12-7.11823330E+04 1.23865981E+01-6.99488680E+04    4
ALOH              J12/67AL 1.0  1.H  1.   0.G   300.000  5000.000     43.98888 1   Chase (1985)
 3.68606740E+00 3.36368220E-03-1.24662440E-06 2.13822050E-10-1.38983190E-14    2
-2.30461050E+04 3.69015562E+00 2.61322110E+00 2.77168940E-03 7.41578300E-06    3
-1.13546020E-08 4.55695590E-12-2.25867970E+04 1.00753303E+01-2.16392416E+04    4
ALOH+             J12/67AL 1.0  1.H  1.E -1.G   300.000  5000.000     43.98833 1   Chase (1985)
 4.15019870E+00 2.89252120E-03-1.05654140E-06 1.79451670E-10-1.15870140E-14    2
 6.38928880E+04 2.64013811E+00 1.96034390E+00 7.91911400E-03-2.28579590E-06    3
-4.01037890E-09 2.57075960E-12 6.45101850E+04 1.41061776E+01 6.54197350E+04    4
ALOH-             J12/67AL 1.0  1.H  1.E  1.G   300.000  5000.000     43.98943 1   Chase (1985)
 4.30107180E+00 2.16685030E-03-7.39886450E-07 1.18210550E-10-7.22088410E-15    2
-2.91340950E+04 3.52700763E+00 2.91302040E+00 5.95307150E-03-3.05580540E-06    3
-1.25987090E-09 1.28860940E-12-2.87818270E+04 1.06224670E+01-2.76775938E+04    4
AL02              J12/79AL 1.0  2.   0.   0.G   300.000  5000.000     58.98034 1   Chase (1985)
 6.60646410E+00 1.08022520E-03-5.22293440E-07 1.13242200E-10-8.52909680E-15    2
-1.25324320E+04-8.01717584E+00 3.25451480E+00 1.42758440E-02-2.11032480E-05    3
 1.50562590E-08-4.21426140E-12-1.18125820E+04 8.30255496E+00-1.03664132E+04    4
AL02-             J12/79AL 1.0  2.E  1.   0.G   300.000  5000.000     58.98089 1   Chase (1985)
 6.36874820E+00 1.27920300E-03-5.65039910E-07 1.10463790E-10-7.95124420E-15    2
-6.09720090E+04-8.79879498E+00 3.08120380E+00 1.30396540E-02-1.71199220E-05    3
 1.09787000E-08-2.79421200E-12-6.02062030E+04 7.50156692E+00-5.88388468E+04    4
AL02H             J12/68AL 1.0  2.H  1.   0.G   300.000  5000.000     59.98828 1   Chase (1985)
 6.42643460E+00 3.22303620E-03-1.21393480E-06 2.10745000E-10-1.38280000E-14    2
-5.76261540E+04-7.45759253E+00 2.48004560E+00 1.61492640E-02-1.60335240E-05    3
 6.44661660E-09-4.09947690E-13-5.66827590E+04 1.23070710E+01-5.53546581E+04    4
ALS               J12/79AL 1.S  1.   0.   0.G   200.000  6000.000     59.04754 1   Chase (1985)
 1.98171118E+00 3.97526437E-03-1.49428858E-06 2.26365870E-10-1.21036384E-14    2
 2.82405754E+04 1.59882273E+01 2.71455183E+00 7.31180725E-03-1.26528925E-05    3
 1.01796165E-08-2.87613387E-12 2.76434914E+04 1.05669599E+01 2.86847932E+04    4
AL2               J 6/79AL 2.   0.   0.   0.G   300.000  5000.000     53.96308 1   Chase (1985)
 5.81580620E+00-1.32505370E-03 6.07518860E-07-1.06924190E-10 7.06114090E-15    2
 5.67890470E+04-4.95471057E+00 1.80944810E+00 1.59365020E-02-2.72502580E-05    3
 1.98711200E-08-5.36840460E-12 5.75311340E+04 1.40720809E+01 5.85749290E+04    4
AL2Br6            J 9/79AL 2.BR 6.   0.   0.G   300.000  5000.000    533.38708 1   Chase (1985)
 2.12743310E+01 8.39396350E-04-3.75947780E-07 7.41701100E-11-5.37285510E-15    2
-1.19293250E+05-5.61068200E+01 1.41859790E+01 3.44525060E-02-6.25224370E-05    3
 5.21732380E-08-1.64827090E-11-1.18025250E+05-2.29291060E+01-1.12721454E+05    4
AL2CL6            J 9/79AL 2.CL 6.   0.   0.G   300.000  5000.000    266.67928 1   Chase (1985)
 2.07940030E+01 1.39142470E-03-6.22136710E-07 1.22593770E-10-8.87275850E-15    2
-1.62404720E+05-6.24731881E+01 1.05091980E+01 4.90774360E-02-8.72087260E-05    3
 7.17234320E-08-2.24243280E-11-1.60517840E+05-1.40840671E+01-1.55842516E+05    4
AL2F6             J 9/79AL 2.F  6.   0.   0.G   300.000  5000.000    167.95350 1   Chase (1985)
 1.88298460E+01 3.62022300E-03-1.60855520E-06 3.15662520E-10-2.27802870E-14    2
-3.23151100E+05-6.32400790E+01 3.16181180E+00 6.88988900E-02-1.09658600E-04    3
 8.32933420E-08-2.45610490E-11-3.19942480E+05 1.22125640E+01-3.16753265E+05    4
AL2I6             J 9/79AL 2.I  6.   0.   0.G   300.000  5000.000    815.38990 1   Chase (1985)
 2.15031910E+01 5.75941930E-04-2.58390280E-07 5.10459770E-11-3.70177380E-15    2
-6.54491310E+04-5.11660663E+01 1.62254980E+01 2.59384390E-02-4.76423520E-05    3
 4.00836850E-08-1.27371840E-11-6.45194970E+04-2.65404143E+01-5.88767000E+04    4
AL20              J12/79AL 2.0  1.   0.   0.G   300.000  5000.000     69.96248 1   Chase (1985)
 6.77206270E+00 8.25500920E-04-3.62910010E-07 6.95313000E-11-4.73452110E-15    2
-1.96431970E+04-8.77233125E+00 4.07326560E+00 1.13076130E-02-1.65651620E-05    3
 1.17842840E-08-3.30055030E-12-1.90542300E+04 4.40834835E+00-1.74618202E+04    4
AL20+             J12/79AL 2.0  1.E -1.   0.G   300.000  5000.000     69.96193 1   Chase (1985)
 6.87978550E+00 7.07498770E-04-3.14192440E-07 6.16409830E-11-4.44786980E-15    2
 7.62707560E+04-8.33181441E+00 4.10457360E+00 1.19783510E-02-1.85225890E-05    3
 1.37566910E-08-3.98674230E-12 7.68527030E+04 5.10257249E+00 7.84705396E+04    4
AL202             J12/79AL 2.0  2.   0.   0.G   300.000  5000.000     85.96188 1   Chase (1985)
 9.15909760E+00 9.68539270E-04-4.32585130E-07 8.51788400E-11-6.16153700E-15    2
-5.04280590E+04-1.91564680E+01 2.75964110E+00 2.99975990E-02-5.21904970E-05    3
 4.22826860E-08-1.30753600E-11-4.92260320E+04 1.11007720E+01-4.74536598E+04    4
AL202+            J12/79AL 2.0  2.E -1.   0.G   300.000  5000.000     85.96133 1   Chase (1985)
 9.27516930E+00 8.35872230E-04-3.73616080E-07 7.36051680E-11-5.32627940E-15    2
 6.52640680E+04-1.86772586E+01 3.34219040E+00 2.81112490E-02-4.95471780E-05    3
 4.05097520E-08-1.26103100E-11 6.63625060E+04 9.29024168E+00 6.82447923E+04    4
Ar                L 6/88AR 1.   0.   0.   0.G   200.000  6000.000     39.94800 1   McBride (1993)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-7.45375000E+02 4.37967491E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-7.45375000E+02 4.37967491E+00 0.00000000E+00    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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Ar+               L10/92AR 1.E -1.   0.   0.G   298.150  6000.000     39.94745 1   Moore, C.E. (1971)
 2.86999547E+00-1.42547242E-04 9.36688776E-09 2.92580859E-12-3.58247941E-16    2
 1.82702617E+05 3.53229975E+00 2.59316097E+00-1.32892944E-03 5.26503944E-06    3
-5.97956691E-09 2.18967862E-12 1.82878368E+05 5.44980570E+00 1.83628186E+05    4
B                 J 6/83B  1.   0.   0.   0.G   200.000  6000.000     10.81100 1   Chase (1985)
 2.49860273E+00 1.40267322E-06 1.09458278E-09-1.20006414E-12 2.43121994E-16    2
 6.66075914E+04 4.21887979E+00 2.51054099E+00-6.23801328E-05 1.42178099E-07    3
-1.41697796E-10 5.15018749E-14 6.66053894E+04 4.16367209E+00 6.73521350E+04    4
B+                J 6/83B  1.E -1.   0.   0.G   298.150  6000.000     10.81045 1   Chase (1985)
 2.51207118E+00-2.60008491E-05 1.90411755E-08-5.71840071E-12 6.06893037E-16    2
 1.63627851E+05 2.35392699E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 1.63631960E+05 2.41907708E+00 1.64377336E+05    4
B-                J 6/83B  1.E  1.   0.   0.G   298.150  6000.000     10.81155 1   Chase (1985)
 2.50007592E+00-8.17294256E-08 3.29965783E-11-5.74649652E-15 3.62366056E-19    2
 6.26417693E+04 4.61598613E+00 2.50120271E+00-5.73427208E-06 1.09670435E-08    3
-9.50303533E-12 3.08935774E-15 6.26415806E+04 4.61078158E+00 6.33871389E+04    4
BCL               J12/64B  1.CL 1.   0.   0.G   300.000  5000.000     46.26370 1   Chase (1985)
 4.10205710E+00 4.86591930E-04-1.88643260E-07 3.58333420E-11-2.50990690E-15    2
 1.56879580E+04 1.95525119E+00 2.83644630E+00 4.43688120E-03-4.38875220E-06    3
 1.51610780E-09 3.26461950E-14 1.60013610E+04 8.34533209E+00 1.70084902E+04    4
BCL+              J 6/68B  1.CL 1.E -1.   0.G   300.000  5000.000     46.26315 1   Chase (1985)
 4.10608880E+00 4.72741700E-04-1.79285840E-07 3.24161370E-11-2.05457580E-15    2
 1.47130970E+05 2.64272940E+00 2.81241970E+00 4.60063920E-03-4.81199620E-06    3
 1.96722160E-09-1.38378020E-13 1.47448490E+05 9.15668240E+00 1.48452806E+05    4
BCLF              J12/64B  1.CL 1.F  1.   0.G   300.000  5000.000     65.26210 1   Chase (1985)
 5.70767570E+00 1.41002030E-03-6.01141370E-07 1.13670440E-10-7.93680630E-15    2
-3.96933270E+04-1.53503845E+00 3.31202340E+00 7.41987630E-03-4.34859490E-06    3
-1.13740570E-09 1.37638900E-12-3.90175480E+04 1.09483562E+01-3.77402953E+04    4
BCL2              J 6/72B  1.CL 2.   0.   0.G   300.000  5000.000     81.71640 1   Chase (1985)
 6.44598380E+00 5.79279480E-04-2.60497050E-07 6.35963580E-11-5.39822150E-15    2
-1.16613040E+04-4.46086977E+00 3.29747860E+00 1.20825760E-02-1.61237550E-05    3
 9.62658560E-09-2.05991990E-12-1.09565370E+04 1.10425333E+01-9.56076191E+03    4
BCL2+             J12/70B  1.CL 2.E -1.   0.G   300.000  5000.000     81.71585 1   Chase (1985)
 6.92666270E+00 6.77776330E-04-3.21014960E-07 6.83444220E-11-5.00735920E-15    2
 7.88578220E+04-8.93462664E+00 4.27049310E+00 1.06037910E-02-1.42298380E-05    3
 8.53728310E-09-1.83496710E-12 7.94360160E+04 4.07645066E+00 8.10708542E+04    4
BCL2-             J 6/72B  1.CL 2.E  1.   0.G   300.000  5000.000     81.71695 1   Chase (1985)
 6.35182180E+00 7.70288480E-04-4.46998630E-07 1.38311780E-10-1.32219950E-14    2
-1.97054320E+04-4.77472070E+00 3.23587910E+00 1.16902190E-02-1.47782590E-05    3
 8.21815460E-09-1.56579130E-12-1.89818150E+04 1.06900104E+01-1.76125075E+04    4
BCL3              J12/64B  1.CL 3.   0.   0.G   300.000  5000.000    117.16910 1   Chase (1985)
 8.59853800E+00 1.55319230E-03-6.70006020E-07 1.27891120E-10-9.00000590E-15    2
-5.13570710E+04-1.51584297E+01 3.73952650E+00 1.81058130E-02-2.13404610E-05    3
 1.08283350E-08-1.73259670E-12-5.02146090E+04 9.05312747E+00-4.84628831E+04    4
BF                J12/64B  1.F  1.   0.   0.G   300.000  5000.000     29.80940 1   Chase (1985)
 3.57718880E+00 1.01929080E-03-4.12515640E-07 7.71964380E-11-5.34987410E-15    2
-1.51272640E+04 3.26612227E+00 3.46136090E+00-9.56854680E-04 6.01357440E-06    3
-6.49780570E-09 2.23553490E-12-1.49698200E+04 4.46077947E+00-1.39390003E+04    4
BF2               J 6/72B  1.F  2.   0.   0.G   300.000  5000.000     48.80781 1   Chase (1985)
 5.44474570E+00 1.75332110E-03-7.84444740E-07 1.57198590E-10-1.13110710E-14    2
-7.28603670E+04-2.27331909E+00 3.03093030E+00 7.24110210E-03-2.82509190E-06    3
-2.89204130E-09 2.00461020E-12-7.21511020E+04 1.04457036E+01-7.09553140E+04    4
BF2+              J12/70B  1.F  2.E -1.   0.G   300.000  5000.000     48.80726 1   Chase (1985)
 5.81276380E+00 1.81934240E-03-7.71034570E-07 1.44897820E-10-9.98091560E-15    2
 3.67948010E+04-7.00431185E+00 3.31464740E+00 8.64436540E-03-6.75253960E-06    3
 1.33836650E-09 4.51149100E-13 3.74836490E+04 5.90468985E+00 3.87993258E+04    4
BF2-              J 6/72B  1.F  2.E  1.   0.G   300.000  5000.000     48.80835 1   Chase (1985)
 5.31003480E+00 2.00204390E-03-9.72355100E-07 2.16414430E-10-1.66408810E-14    2
-9.83369280E+04-2.32776093E+00 3.14245810E+00 6.41045790E-03-1.23864610E-06    3
-4.12201000E-09 2.34723670E-12-9.76729640E+04 9.22523217E+00-9.64690963E+04    4
BF3               J 6/69B  1.F  3.0  0.   0.G   300.000  5000.000     67.80621 1   Chase (1985)
 7.02419850E+00 3.22215590E-03-1.37051540E-06 2.59196710E-10-1.81223100E-14    2
-1.39180720E+05-1.11843009E+01 2.44682440E+00 1.52763120E-02-1.07846170E-05    3
 6.89075020E-10 1.48931870E-12-1.37901350E+05 1.25678211E+01-1.36586061E+05    4
BH                J12/64B  1.H  1.   0.   0.G   300.000  5000.000     11.81894 1   Chase (1985)
 2.89190790E+00 1.58329460E-03-5.82617290E-07 1.02420680E-10-6.76695690E-15    2
 5.23287140E+04 3.79624329E+00 3.68622060E+00-1.30554350E-03 2.67421050E-06    3
-9.10737380E-10-1.55911360E-13 5.21763300E+04-5.52454012E-02 5.32391023E+04    4
BHF2              J12/65B  1.H  1.F  2.   0.G   300.000  5000.000     49.81575 1   Chase (1985)
 5.31845270E+00 4.74444660E-03-1.93378580E-06 3.55083820E-10-2.42936670E-14    2
-9.03750120E+04-3.04314020E+00 2.40536020E+00 9.27558440E-03 1.33864610E-06    3
-8.68078950E-09 4.12110150E-12-8.93884090E+04 1.28880442E+01-8.82623625E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

```
BH2               J12/64B  1.H  2.   0.   0.G   300.000  5000.000     12.82688 1   Chase (1985)
 3.36252850E+00 3.90128540E-03-1.50975510E-06 2.66728050E-10-1.77130530E-14    2
 2.29190280E+04 1.25928259E+00 2.39582820E+00 7.47762600E-03-7.20195140E-06    3
 4.58263980E-09-1.25106800E-12 2.31626500E+04 6.07647039E+00 2.41541598E+04    4
BH3               J12/64B  1.H  3.   0.   0.G   300.000  5000.000     13.83482 1   Chase (1985)
 2.06217260E+00 7.26558950E-03-2.75103370E-06 4.78037090E-10-3.13342850E-14    2
 1.19237530E+04 8.84945083E+00 3.94870330E+00-5.21705430E-04 7.64811640E-06    3
-4.61486940E-09 5.63186160E-13 1.16188090E+04-4.55174579E-02 1.28316429E+04    4
BN                J 6/66B  1.N  1.   0.   0.G   300.000  5000.000     24.81774 1   Chase (1985)
 3.59818320E+00 8.71768050E-04-2.99726440E-07 5.60369440E-11-4.07504210E-15    2
 5.61712410E+04 4.60022525E+00 3.53750650E+00-1.35565860E-03 6.22141890E-06    3
-6.16832690E-09 1.98724610E-12 5.63297430E+04 5.56317675E+00 5.73679101E+04    4
BO                J 6/68B  1.O  1.   0.   0.G   300.000  5000.000     26.81040 1   Chase (1985)
 3.15649560E+00 1.38165890E-03-5.50496300E-07 9.91166780E-11-6.41645460E-15    2
-1.03034220E+03 6.03748954E+00 3.72972500E+00-2.08783240E-03 5.73628490E-06    3
-4.38948280E-09 1.09166320E-12-1.06188590E+03 3.62554104E+00-1.45402311E-01    4
BOCL              J12/65B  1.O  1.CL 1.   0.G   300.000  5000.000     62.26310 1   Chase (1985)
 5.71355660E+00 1.86646890E-03-7.74878980E-07 1.43985720E-10-9.93177450E-15    2
-3.99773530E+04-4.88040355E+00 3.27053210E+00 1.02277500E-02-1.20701630E-05    3
 7.20255620E-09-1.69147380E-12-3.93782080E+04 7.34930225E+00-3.80417115E+04    4
BOF               J12/65B  1.O  1.F  1.   0.G   200.000  6000.000     45.80880 1   Chase (1985)
 5.39296603E+00 2.07444500E-03-7.93600586E-07 1.33476571E-10-8.21779331E-15    2
-7.43113852E+04-4.76500545E+00 2.23703738E+00 1.33495496E-02-1.81530614E-05    3
 1.36093676E-08-4.24382397E-12-7.35283735E+04 1.10069410E+01-7.24035451E+04    4
BOF2              J12/66B  1.O  1.F  2.   0.G   300.000  5000.000     64.80721 1   Chase (1985)
 7.30772330E+00 2.99036200E-03-1.30596170E-06 2.53082420E-10-1.76873330E-14    2
-1.03345760E+05-1.11924159E+01 1.74459770E+00 1.86932770E-02-1.52461640E-05    3
 2.65594700E-09 1.37986060E-12-1.01867580E+05 1.73531391E+01-1.00645369E+05    4
BO2               J 6/68B  1.O  2.   0.   0.G   300.000  5000.000     42.80980 1   Chase (1985)
 5.81984340E+00 1.86265740E-03-8.13027970E-07 1.57358210E-10-1.09442380E-14    2
-3.62551170E+04-6.56090797E+00 3.12120480E+00 8.46808830E-03-4.59722780E-06    3
-1.64200210E-09 1.66582330E-12-3.54833070E+04 7.54789163E+00-3.42194143E+04    4
BO2-              J12/68B  1.O  2.E  1.   0.G   300.000  5000.000     42.81035 1   Chase (1985)
 4.88051690E+00 2.67436510E-03-1.09321940E-06 2.00808730E-10-1.37177690E-14    2
-8.52843240E+04-3.00927635E+00 2.49163370E+00 9.74706440E-03-8.76408640E-06    3
 3.58025440E-09-4.06112210E-13-8.46412180E+04 9.22689575E+00-8.35356575E+04    4
BS                J 6/72B  1.S  1.   0.   0.G   300.000  5000.000     42.87700 1   Chase (1985)
 3.70685420E+00 9.86828950E-04-4.74952660E-07 1.06546010E-10-8.05196430E-15    2
 2.80128160E+04 4.42462090E+00 3.17420460E+00 9.85449720E-04 2.77113190E-06    3
-4.37518010E-09 1.76161790E-12 2.82306240E+04 7.53386240E+00 2.92374816E+04    4
B2                J 3/79B  2.   0.   0.   0.G   200.000  6000.000     21.62200 1   Chase (1985)
 5.23869155E+00-5.23607507E-04 1.69704978E-07-2.06549042E-11 9.41435925E-16    2
 9.79873828E+04-6.00742217E+00 3.79099744E+00-5.87536359E-03 3.00514162E-05    3
-3.91439173E-08 1.60419428E-11 9.87229998E+04 3.43463203E+00 9.97878648E+04    4
B2O               J 6/66B  2.O  1.   0.   0.G   300.000  5000.000     37.62140 1   Chase (1985)
 4.73005380E+00 2.39414860E-03-1.00083240E-06 1.86975100E-10-1.29536720E-14    2
 9.88533540E+03-6.35851289E-01 3.52947300E+00 3.19938260E-03 3.03292570E-06    3
-5.74912550E-09 2.28473490E-12 1.03632010E+04 6.23963143E+00 1.15742290E+04    4
B2O2              J12/64B  2.O  2.   0.   0.G   300.000  5000.000     53.62080 1   Chase (1985)
 6.99385740E+00 3.59403930E-03-1.47536110E-06 2.72251240E-10-1.86959960E-14    2
-5.72961780E+04-1.21677771E+01 3.68070780E+00 1.53611320E-02-1.86060970E-05    3
 1.21714510E-08-3.24110180E-12-5.64866470E+04 4.35612734E+00-5.48483506E+04    4
B2O3              J 6/71B  2.O  3.   0.   0.G   300.000  5000.000     69.62020 1   Chase (1985)
 8.39941060E+00 4.74363380E-03-1.95523040E-06 3.61877490E-10-2.49072320E-14    2
-1.03571580E+05-1.58100009E+01 3.66088370E+00 2.02620760E-02-2.19473380E-05    3
 1.22530040E-08-2.70384020E-12-1.02365240E+05 8.10622068E+00-1.00544127E+05    4
B3O3CL3           J 3/65B  3.O  3.CL 3.   0.G   300.000  5000.000    186.78930 1   Chase (1985)
 1.92825640E+01 6.31725810E-03-2.72429260E-06 5.20479100E-10-3.66777900E-14    2
-2.03208830E+05-6.78851521E+01 4.04449830E+00 5.42605970E-02-5.57507610E-05    3
 2.22231280E-08-1.41812950E-12-1.99416320E+05 9.05672255E+00-1.96248045E+05    4
B3O3F3            J 3/65B  3.O  3.F  3.   0.G   300.000  5000.000    137.42641 1   Chase (1985)
 1.68586160E+01 8.86857540E-03-3.78810580E-06 7.18704010E-10-5.03769170E-14    2
-2.90931040E+05-5.98587523E+01 3.07988610E+00 4.56365920E-02-3.30988260E-05    3
 2.55388390E-09 4.43587610E-12-2.87122130E+05 1.14753917E+01-2.84460743E+05    4
B3O3H3            J 3/65B  3.O  3.H  3.   0.G   200.000  6000.000     83.45502 1   Chase (1985)
 1.21201212E+01 1.22811209E-02-4.60922487E-06 7.65824542E-10-4.67623793E-14    2
-1.51648629E+05-3.98918007E+01 2.76989078E+00 2.53425900E-02 1.22486701E-05    3
-3.73057611E-08 1.74556897E-11-1.48431026E+05 1.15218019E+01-1.46436050E+05    4
Ba                J12/70BA 1.   0.   0.   0.G   300.000  5000.000    137.32700 1   Chase (1985)
 7.97305450E+00-1.11612150E-02 7.11721470E-06-1.53366730E-09 1.08767000E-13    2
 1.88899660E+04-2.34876848E+01 2.50387770E+00-3.78039140E-05 1.29149660E-07    3
-1.84004090E-10 9.29348290E-14 2.07925440E+04 6.21674222E+00 2.15382161E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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BaBr              J12/74BA 1.BR 1.   0.   0.G   300.000  5000.000    217.23100 1   Chase (1985)
 4.36897740E+00 3.90758870E-04-2.99017490E-07 1.06413010E-10-9.84160490E-15    2
-1.46176850E+04 7.52526087E+00 4.17145530E+00 1.59608130E-03-2.88865420E-06    3
 2.47671470E-09-7.98307000E-13-1.45944950E+04 8.38620677E+00-1.33008383E+04    4
BaBr2             J12/74BA 1.BR 2.   0.   0.G   300.000  5000.000    297.13500 1   Chase (1985)
 6.95023380E+00 5.80660230E-05-2.61954280E-08 5.19928280E-12-3.78527700E-16    2
-5.31668420E+04 1.49002755E+00 6.34052750E+00 3.05619520E-03-5.72858640E-06    3
 4.88759680E-09-1.56880810E-12-5.30623160E+04 4.31943715E+00-5.10777430E+04    4
BaCL              J12/72BA 1.CL 1.   0.   0.G   300.000  5000.000    172.77970 1   Chase (1985)
 4.66752380E+00-2.21872510E-04 8.12706800E-08 3.02169620E-11-5.31833010E-15    2
-1.85421420E+04 4.46444204E+00 3.97811480E+00 2.18032180E-03-3.43425650E-06    3
 2.51822120E-09-6.90580270E-13-1.83669370E+04 7.92426104E+00-1.71096446E+04    4
BaCL2             J12/72BA 1.CL 2.   0.   0.G   300.000  5000.000    208.23240 1   Chase (1985)
 6.91386370E+00 9.82139630E-05-4.32683480E-08 8.39690060E-12-5.98920850E-16    2
-6.20760510E+04-3.05863075E-01 6.05712380E+00 3.84261490E-03-6.26832050E-06    3
 4.61966650E-09-1.27447680E-12-6.19145360E+04 3.76179166E+00-5.99846649E+04    4
BaF               J12/72BA 1.F  1.   0.   0.G   300.000  5000.000    156.32540 1   Chase (1985)
 4.35871250E+00 3.01107380E-04-2.28633150E-07 8.98655540E-11-8.76575950E-15    2
-4.01013760E+04 4.60148543E+00 3.35375060E+00 4.38195800E-03-6.64059290E-06    3
 4.61432290E-09-1.19715180E-12-3.98929560E+04 9.45758923E+00-3.87483866E+04    4
BaF+              J12/72BA 1.F  1.E -1.   0.G   300.000  5000.000    156.32485 1   Chase (1985)
 6.49455650E+00-4.11300560E-03 2.58828080E-06-5.04586980E-10 3.07195600E-14    2
 1.59606510E+04-7.88498453E+00 3.16174640E+00 4.88760790E-03-7.12198820E-06    3
 4.71449710E-09-1.14589830E-12 1.69604640E+04 9.54623287E+00 1.80662310E+04    4
BaF2              J12/72BA 1.F  2.   0.   0.G   300.000  5000.000    175.32381 1   Chase (1985)
 6.79771590E+00 2.29321960E-04-1.00535210E-07 1.94285660E-11-1.38075070E-15    2
-9.87631140E+04-2.69528321E+00 5.09682390E+00 7.42262500E-03-1.16828330E-05    3
 8.32962180E-09-2.22168560E-12-9.84315950E+04 5.43692089E+00-9.66698696E+04    4
BaOH              J12/75BA 1.O  1.H  1.   0.G   300.000  5000.000    154.33434 1   Chase (1985)
 5.51784680E+00 1.47809030E-03-5.78233070E-07 1.40402220E-10-1.20357650E-14    2
-2.89590740E+04-1.49787288E+00 2.66818310E+00 1.68839760E-02-3.10317770E-05    3
 2.64210480E-08-8.39535880E-12-2.85546680E+04 1.13434092E+01-2.72346238E+04    4
BaOH+             J 6/76BA 1.O  1.H  1.E -1.G   300.000  5000.000    154.33379 1   Chase (1985)
 5.51260190E+00 1.40138400E-03-4.23502160E-07 6.05783630E-11-3.35196530E-15    2
 3.08713490E+04-2.10767301E+00 2.70904900E+00 1.67265250E-02-3.07679270E-05    3
 2.62104480E-08-8.33038390E-12 3.12550790E+04 1.04707909E+01 3.25822547E+04    4
BaO2H2            J12/75BA 1.O  2.H  2.   0.G   300.000  5000.000    171.34168 1   Chase (1985)
 9.08247350E+00 2.73683110E-03-8.17536780E-07 1.15348840E-10-6.28337560E-15    2
-7.81865860E+04-1.46886716E+01 3.79093560E+00 3.20754490E-02-5.93508060E-05    3
 5.07763850E-08-1.61811310E-11-7.74835580E+04 8.94869323E+00-7.53592938E+04    4
BaS               J 9/77BA 1.S  1.   0.   0.G   300.000  5000.000    169.39300 1   Chase (1985)
 4.44025870E+00 7.42693980E-04-1.17956810E-06 5.76186380E-10-6.75463240E-14    2
 3.11598200E+03 4.28598436E+00 3.48161710E+00 4.56581350E-03-8.27264100E-06    3
 6.93725940E-09-2.20002430E-12 3.36364880E+03 9.04422506E+00 4.54421146E+03    4
Be                J 9/83BE 1.   0.   0.   0.G   200.000  6000.000      9.01218 1   Chase (1985)
 2.29438566E+00 4.11669841E-04-2.64730832E-07 6.25681388E-11-3.89281007E-15    2
 3.82958055E+04 3.26731909E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 3.82226460E+04 2.14617283E+00 3.89680210E+04    4
Be+               J 9/83BE 1.E -1.   0.   0.G   298.150  6000.000      9.01163 1   Chase (1985)
 2.50168976E+00-5.10373647E-06 5.27481090E-09-2.16155049E-12 3.00713026E-16    2
 1.45893277E+05 2.83066790E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 1.45893693E+05 2.83922870E+00 1.46639068E+05    4
BeBO2             J 6/66BE 1.B  1.O  2.   0.G   300.000  5000.000     51.82198 1   Chase (1985)
 6.91083760E+00 3.26686840E-03-1.36781200E-06 2.55762110E-10-1.77277410E-14    2
-6.05057150E+04-9.16165811E+00 2.00691200E+00 1.80448240E-02-1.69175810E-05    3
 6.08653730E-09-1.72762850E-13-5.92341970E+04 1.58055570E+01-5.79713193E+04    4
BeBr              J 6/75BE 1.BR 1.   0.   0.G   300.000  5000.000     88.91618 1   Chase (1985)
 4.19438870E+00 3.99390230E-04-1.48388730E-07 2.67622720E-11-1.56261270E-15    2
 1.31154640E+04 3.32294842E+00 2.65914570E+00 6.70272780E-03-1.04037110E-05    3
 7.76551940E-09-2.25309180E-12 1.34330960E+04 1.07356520E+01 1.44462019E+04    4
BeBr2             J 6/75BE 1.BR 2.   0.   0.G   300.000  5000.000    168.82018 1   Chase (1985)
 6.83448720E+00 7.54292870E-04-3.33682060E-07 6.53023490E-11-4.70410960E-15    2
-2.97571170E+04-6.47179189E+00 4.64222830E+00 9.00844510E-03-1.26985560E-05    3
 8.75589850E-09-2.39231940E-12-2.92654350E+04 4.30011931E+00-2.75769745E+04    4
BeCL              J 9/66BE 1.CL 1.   0.   0.G   300.000  5000.000     44.46488 1   Chase (1985)
 4.10528780E+00 4.74617010E-04-1.79965280E-07 3.25639030E-11-2.06528400E-15    2
 5.97530600E+03 2.46451734E+00 2.83219870E+00 4.45667640E-03-4.44821610E-06    3
 1.58525870E-09 4.52068940E-15 6.29062480E+03 8.89156044E+00 7.29696540E+03    4
BeCL+             J 6/68BE 1.CL 1.E -1.   0.G   300.000  5000.000     44.46433 1   Chase (1985)
 5.38275000E+00-1.84711980E-03 1.11236830E-06-1.69529940E-10 6.10070910E-15    2
 1.15997170E+05-5.06224147E+00 2.89659840E+00 5.12674920E-03-6.44279110E-06    3
 3.56326400E-09-6.59250880E-13 1.16714660E+05 7.83727033E+00 1.17755958E+05    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

```
BeCLF             J 6/65BE 1.CL 1.F  1.   0.G   300.000  5000.000     63.46329 1   Chase (1985)
 6.44027910E+00 1.14636930E-03-4.85453600E-07 9.12878650E-11-6.34435490E-15    2
-7.10597710E+04-7.72869958E+00 4.10243810E+00 8.50174900E-03-8.90939630E-06    3
 4.00762320E-09-5.16275390E-13-7.04687360E+04 4.09916292E+00-6.89387557E+04    4
BeCL2             J 6/65BE 1.CL 2.   0.   0.G   300.000  5000.000     79.91758 1   Chase (1985)
 6.70431910E+00 8.71664680E-04-3.72550530E-07 7.05670060E-11-4.93353600E-15    2
-4.54945580E+04-8.42201233E+00 4.49271250E+00 8.05355450E-03-8.83192390E-06    3
 4.08970490E-09-5.34980920E-13-4.49528810E+04 2.69582137E+00-4.33256234E+04    4
BeF               J12/71BE 1.F  1.   0.   0.G   300.000  5000.000     28.01059 1   Chase (1985)
 3.70952950E+00 8.93836000E-04-3.61130680E-07 6.76010920E-11-4.64208330E-15    2
-2.16600520E+04 3.16419267E+00 3.27618620E+00 2.52337590E-04 4.09399440E-06    3
-5.31281500E-09 1.99549000E-12-2.14459240E+04 5.86499677E+00-2.04313003E+04    4
BeF2              J 6/70BE 1.F  2.   0.   0.G   300.000  5000.000     47.00899 1   Chase (1985)
 6.04576310E+00 1.56293740E-03-6.61081970E-07 1.24475510E-10-8.67160630E-15    2
-9.77791270E+04-7.91788256E+00 3.52342740E+00 9.38902840E-03-9.56362080E-06    3
 4.29209890E-09-5.77511130E-13-9.71304610E+04 4.88397544E+00-9.57389228E+04    4
BeH               J 3/63BE 1.H  1.   0.   0.G   300.000  5000.000     10.02012 1   Chase (1985)
 3.05702180E+00 1.49772230E-03-5.68729630E-07 1.02608170E-10-6.91569790E-15    2
 3.76395130E+04 3.40027448E+00 3.73123050E+00-1.91435480E-03 4.89103250E-06    3
-3.29258830E-09 6.66385620E-13 3.75655600E+04 3.88608224E-01 3.86299590E+04    4
BeH+              J 9/66BE 1.H  1.E -1.   0.G   300.000  5000.000     10.01957 1   Chase (1985)
 2.90159920E+00 1.67517610E-03-6.68055030E-07 1.25109510E-10-8.17414660E-15    2
 1.38168120E+05 3.55562865E+00 3.70957120E+00-1.58520310E-03 3.62287690E-06    3
-1.89332210E-09 1.71732640E-13 1.38028660E+05-2.82896920E-01 1.39092559E+05    4
BeI               J12/75BE 1.I  1.   0.   0.G   300.000  5000.000    135.91665 1   Chase (1985)
 4.26004930E+00 3.43208190E-04-1.27594770E-07 2.41897090E-11-1.45701420E-15    2
 1.91103520E+04 4.04766768E+00 2.78261220E+00 6.84103480E-03-1.13898960E-05    3
 8.99241280E-09-2.72776860E-12 1.93961830E+04 1.10789367E+01 2.04457353E+04    4
BeI2              J12/75BE 1.I  2.   0.   0.G   300.000  5000.000    262.82112 1   Chase (1985)
 7.00112620E+00 5.68788720E-04-2.52537550E-07 4.95410540E-11-3.57472040E-15    2
-9.90388590E+03-5.21025524E+00 4.93737860E+00 8.74047370E-03-1.31147240E-05    3
 9.49284940E-09-2.69263360E-12-9.46160050E+03 4.82951136E+00-7.69941366E+03    4
BeN               J 6/63BE 1.N  1.   0.   0.G   300.000  5000.000     23.01892 1   Chase (1985)
 3.78559370E+00 8.23865750E-04-3.27116020E-07 6.15518880E-11-4.28090410E-15    2
 5.00661800E+04 3.10558513E+00 3.16842860E+00 1.02824830E-03 2.73760170E-06    3
-4.34810990E-09 1.75344530E-12 5.03104510E+04 6.66252483E+00 5.13172421E+04    4
BeO               J12/74BE 1.O  1.   0.   0.G   200.000  6000.000     25.01158 1   Chase (1985)
 5.66778473E+00-4.07847614E-03 3.41112608E-06-8.21052371E-10 6.13773279E-14    2
 1.45899580E+04-8.08580712E+00 3.78974248E+00-3.24896226E-03 1.12988533E-05    3
-1.18056315E-08 4.20675761E-12 1.53410696E+04 2.73905294E+00 1.64050557E+04    4
BeOH              J12/75BE 1.O  1.H  1.   0.G   300.000  5000.000     26.01952 1   Chase (1985)
 4.61167200E+00 2.39720130E-03-8.54891620E-07 1.43090620E-10-9.11123990E-15    2
-1.53618380E+04-1.98829219E+00 1.91391480E+00 1.35071590E-02-1.85316870E-05    3
 1.29424710E-08-3.54389610E-12-1.48196830E+04 1.09928304E+01-1.37885210E+04    4
BeOH+             J12/75BE 1.O  1.H  1.E -1.G   300.000  5000.000     26.01897 1   Chase (1985)
 4.62235270E+00 2.39025710E-03-8.55494730E-07 1.44416710E-10-9.35602940E-15    2
 8.98294360E+04-2.72614681E+00 1.92809820E+00 1.35342400E-02-1.86540260E-05    3
 1.30739210E-08-3.59005760E-12 9.03683050E+04 1.02257268E+01 9.14040565E+04    4
BeO2H2            J12/75BE 1.O  2.H  2.   0.G   300.000  5000.000     43.02686 1   Chase (1985)
 7.85504780E+00 4.64775800E-03-1.65028340E-06 2.76706230E-10-1.78262980E-14    2
-8.41062590E+04-1.84294661E+01 2.41843930E-01 3.99135680E-02-6.45882810E-05    3
 5.10234760E-08-1.54792050E-11-8.27410450E+04 1.73136259E+01-8.13720155E+04    4
BeS               J 9/77BE 1.S  1.   0.   0.G   300.000  5000.000     41.07818 1   Chase (1985)
 5.20407340E+00-3.87420220E-03 4.25788910E-06-1.25605990E-09 1.13434030E-13    2
 3.02260840E+04-3.57801203E+00 2.90225380E+00 3.18974130E-03-1.36518250E-06    3
-1.50927100E-09 1.22759290E-12 3.07107600E+04 7.87585057E+00 3.17033766E+04    4
Be2O              J 9/63BE 2.O  1.   0.   0.G   300.000  5000.000     34.02376 1   Chase (1985)
 5.45497340E+00 2.19703850E-03-9.29195780E-07 1.74964100E-10-1.21899820E-14    2
-9.49589850E+03-5.67042283E+00 2.75278970E+00 8.96486990E-03-5.58592470E-06    3
-3.47691880E-10 1.10154720E-12-8.71747090E+03 8.45191877E+00-7.54778448E+03    4
Be2OF2            J 6/66BE 2.O  1.F  2.   0.G   300.000  5000.000     72.02057 1   Chase (1985)
 1.03113430E+01 2.92581510E-03-1.24819870E-06 2.36521690E-10-1.65591600E-14    2
-1.48446230E+05-2.44876830E+01 4.86000260E+00 1.94389820E-02-1.88187600E-05    3
 7.10095030E-09-3.72252580E-13-1.47039590E+05 3.24173340E+00-1.44878984E+05    4
Be2O2             J 9/63BE 2.O  2.   0.   0.G   300.000  5000.000     50.02316 1   Chase (1985)
 7.17836520E+00 3.07969260E-03-1.31622730E-06 2.49706140E-10-1.74963390E-14    2
-5.19848760E+04-1.29255949E+01 1.71027390E+00 1.82449390E-02-1.43772530E-05    3
 2.12688160E-09 1.46919930E-12-5.05123660E+04 1.52145101E+01-4.93136425E+04    4
Be3O3             J 9/63BE 3.O  3.   0.   0.G   300.000  5000.000     75.03475 1   Chase (1985)
 9.19073220E+00 7.36237010E-03-3.12927290E-06 5.91625890E-10-4.13601940E-14    2
-1.30618490E+05-2.33168799E+01 2.00026920E+00 2.00051720E-02 5.75178470E-07    3
-1.70928050E-08 8.48627850E-12-1.28268670E+05 1.56209531E+01-1.26807812E+05    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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Be4O4             J 9/63BE 4.0  4.   0.   0.G   300.000  5000.000    100.04633 1   Chase (1985)
 1.45470300E+01 8.19037300E-03-3.51627890E-06 6.69234570E-10-4.70059630E-14    2
-1.97048450E+05-5.14967659E+01-1.38184380E+00 5.23848280E-02-4.08930180E-05    3
 4.73797070E-09 4.99541640E-12-1.92783560E+05 3.04130661E+01-1.91216780E+05    4
Br                J 6/82BR 1.   0.   0.   0.G   200.000  6000.000     79.90400 1   Chase (1985)
 2.08851053E+00 7.12118611E-04-2.70003073E-07 4.14986299E-11-2.31188294E-15    2
 1.28568767E+04 9.07351144E+00 2.48571711E+00 1.50647525E-04-5.37267333E-07    3
 7.20921065E-10-2.50205558E-13 1.27092168E+04 6.86030804E+00 1.34535890E+04    4
Br2               TPIS89BR 2.   0.   0.   0.G   200.000  6000.000    159.80800 1   Gurvich (1989)
 5.18728187E+00-1.38651104E-03 9.34745153E-07-2.07065391E-10 1.41808517E-14    2
 2.10705678E+03 7.76223394E-02 3.34331004E+00 6.35230769E-03-1.36418815E-05    3
 1.31726300E-08-4.68373476E-12 2.53515408E+03 9.07940353E+00 3.71759731E+03    4
C                 L11/88C  1.   0.   0.   0.G   200.000  6000.000     12.01100 1   Moore, C.E. (1970)
 2.60558298E+00-1.95934335E-04 1.06737219E-07-1.64239390E-11 8.18705752E-16    2   Douglas (1955)
 8.54129443E+04 4.19238681E+00 2.55423955E+00-3.21537724E-04 7.33792245E-07    3
-7.32234889E-10 2.66521446E-13 8.54438832E+04 4.53130848E+00 8.61963002E+04    4
C+                L 7/88C  1.E -1.   0.   0.G   298.150  6000.000     12.01045 1   Moore, C.E. (1970)
 2.50853519E+00-1.08599270E-05 5.37069210E-09-1.18270596E-12 9.71267564E-17    2
 2.16879493E+05 4.31739637E+00 2.61523966E+00-5.53783873E-04 1.06348636E-06    3
-9.23756345E-10 3.00774568E-13 2.16862053E+05 3.82652926E+00 2.17624885E+05    4
C-                TPIS91C  1.E  1.   0.   0.G   298.150  6000.000     12.01155 1   Gurvich (1991)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 6.99315654E+04 3.96340421E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 6.99315654E+04 3.96340421E+00 7.06769404E+04    4
CCL               J12/69C  1.CL 1.   0.   0.G   300.000  5000.000     47.46370 1   Chase (1985)
 4.09847270E+00 5.00778450E-04-2.00128330E-07 3.86809920E-11-2.54411130E-15    2
 5.90765990E+04 3.35017361E+00 3.19535570E+00 2.80763180E-03-1.60438450E-06    3
-5.77440650E-10 6.14097320E-13 5.93250770E+04 8.03517321E+00 6.03875369E+04    4
CCLF3             L12/77C  1.CL 1.F  3.   0.G   298.150  5000.000    104.45891 1   Chen (1976)
 1.01650960E+01 2.84600420E-03-1.09260240E-06 1.83143740E-10-1.11940590E-14    2
-8.88487500E+04-2.57041070E+01 2.90119360E+00 2.05636580E-02-8.55086360E-06    3
-1.03956450E-08 7.57218250E-12-8.68295630E+04 1.21150710E+01-8.51452700E+04    4
CCL2              J12/68C  1.CL 2.   0.   0.G   300.000  5000.000     82.91640 1   Chase (1985)
 3.71849990E+00 5.34497450E-03-2.34312840E-06 4.18061770E-10-2.67652950E-14    2
 2.75547930E+04 9.64597954E+00 2.85885050E+00 1.39579380E-02-2.00388980E-05    3
 1.35007260E-08-3.16697150E-12 2.73639260E+04 1.22433131E+01 2.86848211E+04    4
CCL2F2            L12/77C  1.CL 2.F  2.   0.G   298.150  5000.000    120.91321 1   Chen (1976)
 1.07082480E+01 2.32321860E-03-9.00732230E-07 1.52617020E-10-9.44349580E-15    2
-6.31026020E+04-2.66228690E+01 3.81349660E+00 2.00368350E-02-9.89866930E-06    3
-8.79953530E-09 7.12185520E-12-6.12535510E+04 8.99097859E+00-5.93299490E+04    4
CCL3              J 6/70C  1.CL 3.   0.   0.G   300.000  5000.000    118.36910 1   Chase (1985)
 8.78154730E+00 1.35161300E-03-5.82494530E-07 1.10986970E-10-7.79372640E-15    2
 6.63441510E+03-1.53161324E+01 3.71533570E+00 1.94437960E-02-2.46278410E-05    3
 1.37864640E-08-2.66389340E-12 7.78200200E+03 9.71604259E+00 9.56234693E+03    4
CCL3F             L12/77C  1.CL 3.F  1.   0.G   298.150  5000.000    137.36750 1   Chen (1976)
 1.12465300E+01 1.78376980E-03-6.92604430E-07 1.17407240E-10-7.26402920E-15    2
-3.81083090E+04-2.82759760E+01 4.82876870E+00 1.89817400E-02-1.03606620E-05    3
-7.84721270E-09 6.84527520E-12-3.64461840E+04 4.63414709E+00-3.42694620E+04    4
CCL4              L12/81C  1.CL 4.   0.   0.G   298.150  5000.000    153.82180 1   Rodgers (1974)
 1.17390960E+01 1.28375530E-03-4.96502590E-07 8.35250200E-11-5.11072240E-15    2
-1.54190900E+04-3.07778070E+01 5.79662990E+00 1.79774390E-02-1.09565460E-05    3
-6.66818070E-09 6.45548980E-12-1.39409650E+04-5.56947933E-01-1.15237980E+04    4
CF                J 6/70C  1.F  1.   0.   0.G   300.000  5000.000     31.00940 1   Chase (1985)
 3.68696790E+00 9.11434910E-04-3.64638550E-07 6.74828540E-11-4.52695960E-15    2
 2.94781250E+04 4.17450994E+00 3.46551430E+00-6.87798050E-04 5.67847660E-06    3
-6.45829820E-09 2.29882480E-12 2.96555980E+04 5.88135474E+00 3.06967621E+04    4
CF+               J12/70C  1.F  1.E -1.   0.G   298.150  6000.000     31.00885 1   Chase (1985)
 3.67596084E+00 8.52823073E-04-3.06755661E-07 4.97430057E-11-2.83969038E-15    2
 1.37018878E+05 2.84608813E+00 3.58285095E+00-1.86390930E-03 8.53435341E-06    3
-9.32378062E-09 3.33941713E-12 1.37198248E+05 4.07439000E+00 8.69748600E+03    4
CF2               J 6/70C  1.F  2.   0.   0.G   300.000  5000.000     50.00781 1   Chase (1985)
 5.22671420E+00 2.08376800E-03-9.90372780E-07 2.12648480E-10-1.58311140E-14    2
-2.37558470E+04-1.91090412E+00 2.76888210E+00 7.23729620E-03-1.60281520E-06    3
-4.55123790E-09 2.66480110E-12-2.30157860E+04 1.11376959E+01-2.18904653E+04    4
CF2+              J12/70C  1.F  2.E -1.   0.G   300.000  5000.000     50.00726 1   Chase (1985)
 5.15542300E+00 2.05283100E-03-9.11739110E-07 1.82727610E-10-1.32136400E-14    2
 1.11431220E+05-7.78766776E-01 2.97835220E+00 6.03366020E-03 6.58587850E-10    3
-5.21294490E-09 2.66630210E-12 1.12126750E+05 1.09515564E+01 1.13273886E+05    4
CF3               J 6/69C  1.F  3.   0.   0.G   300.000  5000.000     69.00621 1   Chase (1985)
 7.20126220E+00 3.06639350E-03-1.31441810E-06 2.49969250E-10-1.75509280E-14    2
-5.92386310E+04-1.09457100E+01 2.06501680E+00 1.64241580E-02-1.08381460E-05    3
-8.53179970E-10 2.38780700E-12-5.78119760E+04 1.57046930E+01-5.65626016E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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CF3+                J12/71C  1.F  3.E -1.   0.G   300.000  5000.000     69.00566 1   Chase (1985)
 7.02254060E+00 3.24412710E-03-1.38648750E-06 2.63236370E-10-1.84644020E-14    2
 4.80223180E+04-1.12065339E+01 2.26055760E+00 1.54223230E-02-9.89566740E-06    3
-7.83450460E-10 2.12118920E-12 4.93653380E+04 1.35784551E+01 5.06368231E+04    4
CF4                 L 6/83C  1.F  4.   0.   0.G   200.000  6000.000     88.00461 1   Rodgers (1974)
 9.47215359E+00 3.59525216E-03-1.40378502E-06 2.39188188E-10-1.48558906E-14    2
-1.15816337E+05-2.49709091E+01 1.05143992E+00 2.78246468E-02-2.46525260E-05    3
 6.74548304E-09 9.18909316E-13-1.13574067E+05 1.81900899E+01-1.12227900E+05    4
CH                  TPIS79C  1.H  1.   0.   0.G   200.000  6000.000     13.01894 1   Gurvich (1979)
 2.52090627E+00 1.76537235E-03-4.61475705E-07 5.92885472E-11-3.34731962E-15    2
 7.11314363E+04 7.40532163E+00 3.48981665E+00 3.23835541E-04-1.68899065E-06    3
 3.16217327E-09-1.40609067E-12 7.07972934E+04 2.08401108E+00 7.18428386E+04    4
CH+                 TPIS91C  1.H  1.E -1.   0.G   298.150  6000.000     13.01839 1   Gurvich (1991)
 4.53726693E+00-2.05165403E-03 1.69587170E-06-3.51097709E-10 2.22129197E-14    2
 1.94661079E+05-5.02782240E+00 3.53796552E+00-7.59260194E-05-6.09566708E-07    3
 2.00819522E-09-1.00806821E-12 1.95057229E+05 5.23237674E-01 1.96106806E+05    4
CHCL                TPIS79C  1.H  1.CL 1.   0.G   298.150  5000.000     48.47164 1   Gurvich (1979)
 5.15660360E+00 4.58883250E-04 4.47490230E-07-1.36067870E-10 1.02424450E-14    2
 3.53105770E+04-1.75115341E+00 2.96136110E+00 6.11519160E-03-4.52031800E-06    3
 1.30933890E-09 7.15780860E-14 3.59599830E+04 9.74350389E+00 3.70773980E+04    4
CHCLF2              L12/77C  1.H  1.CL 1.F  2.G   298.150  5000.000     86.46845 1   Chen (1976)
 7.90298270E+00 4.62519000E-03-1.64898670E-06 2.59104290E-10-1.48362120E-14    2
-6.12342660E+04-1.37342930E+01 2.46811200E+00 1.58839450E-02-2.82090150E-06    3
-1.04781320E-08 6.07048960E-12-5.95708790E+04 1.51934280E+01-5.81725370E+04    4
CHCL2F              L12/77C  1.H  1.CL 2.F  1.G   298.150  5000.000    102.92274 1   Chen (1976)
 8.50839230E+00 4.03457130E-03-1.42682260E-06 2.22473030E-10-1.26301730E-14    2
-3.74279100E+04-1.54116540E+01 3.11071590E+00 1.62958910E-02-4.73311870E-06    3
-9.47981600E-09 6.13237500E-12-3.58622110E+04 1.29638580E+01-3.42694620E+04    4
CHCL3               X 6/81C  1.H  1.CL 3.   0.G   298.150  5000.000    119.37704 1   TRC(6/81)tuvw-7180
 8.99380300E+00 3.56521920E-03-1.25376480E-06 1.94791310E-10-1.10320210E-14    2
-1.56090000E+04-1.76316890E+01 3.68198010E+00 1.66110210E-02-6.61808010E-06    3
-8.12915600E-09 5.94331350E-12-1.41418440E+04 9.98351039E+00-1.23792770E+04    4
CHF3                L 6/81C  1.H  1.F  3.   0.G   298.150  5000.000     70.01415 1   Rodgers (1974)
 7.38702490E+00 5.12669240E-03-1.83717750E-06 2.90046430E-10-1.66920890E-14    2
-8.63674380E+04-1.36102620E+01 1.78570940E+00 1.59611290E-02-1.55750150E-06    3
-1.13669110E-08 6.12752900E-12-8.45911250E+04 1.64575900E+01-8.33823960E+04    4
CH2                 L11/89C  1.H  2.   0.   0.G   200.000  6000.000     14.02688 1   Bunker (1983)
 2.77723166E+00 3.83663476E-03-1.34853220E-06 2.11641255E-10-1.23445662E-14    2   Jacox (1988)
 4.58590304E+04 6.67286429E+00 3.74484879E+00 1.17960823E-03 1.94502264E-06    3   TRC(4/89)w-1928
-2.52932506E-09 1.12447631E-12 4.55799523E+04 1.62850125E+00 4.67616252E+04    4
CH2CLF              L12/77C  1.H  2.CL 1.F  1.G   298.150  5000.000     68.47798 1   Chen (1976)
 5.95727830E+00 6.08797000E-03-2.08137590E-06 3.13462150E-10-1.70848780E-14    2
-3.42807810E+04-4.87988151E+00 2.09755330E+00 1.25518960E-02 2.71470360E-07    3
-9.13198410E-09 4.47135730E-12-3.29736170E+04 1.61681770E+01-3.18036710E+04    4
CH2CL2              L12/81C  1.H  2.CL 2.   0.G   298.150  5000.000     84.93228 1   Rodgers (1974)
 6.49912830E+00 5.56723400E-03-1.88874490E-06 2.82333930E-10-1.52568690E-14    2
-1.40488130E+04-7.01155241E+00 2.36261270E+00 1.38855320E-02-2.08721670E-06    3
-8.66561580E-09 4.94943150E-12-1.27612300E+04 1.50849150E+01-1.14734760E+04    4
CH2F2               L 6/81C  1.H  2.F  2.   0.G   298.150  5000.000     52.02369 1   Rodgers (1974)
 5.29831120E+00 6.75680120E-03-2.34015530E-06 3.57223810E-10-1.97899860E-14    2
-5.67992150E+04-3.52851351E+00 1.92640780E+00 1.05290970E-02 3.46599150E-06    3
-9.68559990E-09 3.81653220E-12-5.55053950E+04 1.54769370E+01-5.44486890E+04    4
CH3                 L11/89C  1.H  3.   0.   0.G   200.000  6000.000     15.03482 1   Jacox (1988)
 2.96866033E+00 5.80717546E-03-1.97778534E-06 3.07278752E-10-1.78853897E-14    2   TRC(4/89)w-1928
 1.65388869E+04 4.77944503E+00 3.67359040E+00 2.01095175E-03 5.73021856E-06    3
-6.87117425E-09 2.54385734E-12 1.64449988E+04 1.60456433E+00 1.76679083E+04    4
CH3CL               L12/81C  1.H  3.CL 1.   0.G   298.150  5000.000     50.48752 1   Rodgers (1974)
 4.29529860E+00 7.28468220E-03-2.41611910E-06 3.52058380E-10-1.84061850E-14    2
-1.17934650E+04 8.59301877E-01 2.06724450E+00 9.20915230E-03 3.04260540E-06    3
-8.03420620E-09 3.21274430E-12-1.08968830E+04 1.35839570E+01-9.85813150E+03    4
CH3F                L 6/81C  1.H  3.F  1.   0.G   298.150  5000.000     34.03322 1   Rodgers (1974)
 3.62565230E+00 7.96836990E-03-2.68453190E-06 3.98411080E-10-2.13486390E-14    2
-3.03724800E+04 3.06989799E+00 2.26510240E+00 6.07338550E-03 6.98254100E-06    3
-8.13809110E-09 2.10363410E-12-2.95776640E+04 1.18439540E+01-2.85841050E+04    4
CH2OH               L12/92C  1.H  3.0  1.   0.G   200.000  6000.000     31.03422 1   Burcat (1979)
 4.67625639E+00 6.56406014E-03-2.26525471E-06 3.55602481E-10-2.08626190E-14    2   Jacox (1988)
-2.89248574E+03 4.87737005E-01 3.86388918E+00 5.59672304E-03 5.93271791E-06    3   Seetula (1992)
-1.04532012E-08 4.36967278E-12-2.50501367E+03 5.47302243E+00-1.07041786E+03    4
CH3O                L10/92C  1.H  3.0  1.   0.G   200.000  6000.000     31.03422 1   Jacox (1988)
 4.26676538E+00 7.85380110E-03-2.83739943E-06 4.59039659E-10-2.74426084E-14    2   Gurvich (1991)
-3.40073227E+02 3.85637447E-01 3.26524894E+00 3.30300117E-03 1.70493964E-05    3
-2.27104476E-08 8.80756520E-12 3.33281488E+02 7.42568040E+00 1.56353171E+03    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

```
CH4               L 8/88C  1.H  4.   Ø.   Ø.G   200.000  6000.000      16.04276 1   Gurvich (1991)
 1.63552643E+00 1.00842795E-02-3.36916254E-06 5.34958667E-10-3.15518833E-14    2
-1.00056455E+04 9.99313326E+00 5.14987613E+00-1.36709788E-02 4.91800599E-05    3
-4.84743026E-08 1.66693956E-11-1.02466476E+04-4.64130376E+00-8.97226656E+03    4
CH3OH             L 8/88C  1.H  4.O  1.   Ø.G   200.000  6000.000      32.04216 1   Chen, S. S. (1977)
 3.60134486E+00 1.02430954E-02-3.59985517E-06 5.72505986E-10-3.39117640E-14    2   TRC(6/87)w-5030
-2.59971910E+04 4.70512253E+00 5.71539582E+00-1.52309129E-02 6.52441155E-05    3
-7.10806889E-08 2.61352698E-11-2.56427656E+04-1.50409823E+00-2.41673893E+04    4
CN                TPIS91C  1.N  1.   Ø.   Ø.G   200.000  6000.000      26.01774 1   Gurvich (1991)
 3.74818333E+00 3.91753271E-05 2.99702996E-07-6.92704532E-11 4.46137691E-15    2
 5.17278419E+04 2.77469044E+00 3.61293502E+00-9.55513275E-04 2.14429765E-06    3
-3.15163270E-10-4.64303546E-13 5.19007958E+04 3.98049947E+00 5.29536254E+04    4
CN+               TPIS91C  1.N  1.E -1.   Ø.G   298.150  6000.000      26.01719 1   Gurvich (1991)
 7.29006713E+00-2.46331139E-03 9.03599308E-07-1.35970586E-10 7.33709859E-15    2
 2.13579081E+05-1.91340387E+01 6.92808505E+00-2.81492178E-02 7.58511376E-05    3
-7.24174336E-08 2.33891503E-11 2.15195507E+05-1.01730501E+01 2.16548044E+05    4
CN-               L10/92C  1.N  1.E  1.   Ø.G   298.150  6000.000      26.01829 1   Gurvich (1991)
 3.09051928E+00 1.33181759E-03-4.84902266E-07 7.96865228E-11-4.82770916E-15    2
 6.88195665E+03 5.63128351E+00 3.81962846E+00-2.48247316E-03 6.04567838E-06    3
-4.52733194E-09 1.15679167E-12 6.80256336E+03 2.38904411E+00 7.87605980E+03    4
CNN               L12/89C  1.N  2.   Ø.   Ø.G   200.000  6000.000      40.02448 1   Bondybey (1977)
 4.86658084E+00 2.38499612E-03-8.52577832E-07 1.38423853E-10-8.18423116E-15    2   Jacox (1988)
 7.45586920E+04-6.77587146E-01 2.78240849E+00 1.25533110E-02-2.13082026E-05    3   Gurvich (1991)
 1.90941637E-08-6.59244187E-12 7.49551651E+04 9.10634736E+00 7.61890601E+04    4
CO                TPIS79C  1.O  1.   Ø.   Ø.G   200.000  6000.000      28.01040 1   Gurvich (1979)
 3.04848583E+00 1.35172818E-03-4.85794075E-07 7.88536486E-11-4.69807489E-15    2   TRC(4/84)tuv-1000
-1.42661171E+04 6.01709790E+00 3.57953347E+00-6.10353680E-04 1.01681433E-06    3
 9.07005884E-10-9.04424499E-13-1.43440860E+04 3.50840928E+00-1.32936276E+04    4
CO+               TPIS91C  1.O  1.E -1.   Ø.G   298.150  6000.000      28.00985 1   Gurvich (1991)
 2.93059407E+00 1.56031391E-03-6.16238969E-07 1.09956019E-10-6.66111307E-15    2
 1.49144692E+05 7.33837920E+00 3.77057107E+00-2.01770820E-03 4.61076194E-06    3
-2.99171866E-09 6.06057760E-13 1.49004267E+05 3.38125716E+00 1.50073892E+05    4
COCL              J12/65C  1.O  1.CL 1.   Ø.G   300.000  5000.000      63.46310 1   Chase (1985)
 5.42912360E+00 1.61215350E-03-6.60062800E-07 1.21271140E-10-8.28586010E-15    2
-9.33050070E+03 3.82874056E-01 4.28637920E+00 5.08689800E-03-5.07294110E-06    3
 2.96479830E-09-7.70934530E-13-9.01252120E+03 6.25118670E+00-7.54776465E+03    4
COCLF             J 6/61C  1.O  1.CL 1.F  1.G   300.000  5000.000      82.46150 1   Chase (1985)
 7.08810810E+00 3.18164790E-03-1.37633160E-06 2.65440050E-10-1.89289690E-14    2
-5.38837810E+04-8.68499361E+00 1.70666610E+00 2.27225650E-02-3.01156390E-05    3
 2.04835660E-08-5.65722280E-12-5.26199020E+04 1.79876256E+01-5.13293738E+04    4
COCL2             TPIS91C  1.O  1.CL 2.   Ø.G   200.000  6000.000      98.91580 1   Gurvich (1991)
 7.86018378E+00 2.13271500E-03-8.22077158E-07 1.38951133E-10-8.58406653E-15    2
-2.91056423E+04-1.19011907E+01 1.70787910E+00 2.89369464E-02-4.93289116E-05    3
 4.16910139E-08-1.37057391E-11-2.78350932E+04 1.76202114E+01-2.63996315E+04    4
COF               J12/65C  1.O  1.F  1.   Ø.G   300.000  5000.000      47.00880 1   Chase (1985)
 4.89082140E+00 2.21797030E-03-9.25507250E-07 1.72701200E-10-1.19553430E-14    2
-2.23579840E+04 9.92783959E-01 3.20197270E+00 5.58377700E-03-1.49054810E-06    3
-2.31260690E-09 1.36143530E-12-2.18170430E+04 1.00607391E+01-2.06312897E+04    4
COF2              TPIS91C  1.O  1.F  2.   Ø.G   200.000  6000.000      66.00721 1   Gurvich (1991)
 6.81631730E+00 3.16473282E-03-1.21776269E-06 2.05582261E-10-1.26893125E-14    2
-7.95482716E+04-9.52864566E+00 2.12979489E+00 1.41019723E-02-5.94381359E-06    3
-5.30544790E-09 3.97367469E-12-7.81745339E+04 1.51109093E+01-7.69738686E+04    4
COS               J 3/61C  1.O  1.S  1.   Ø.G   300.000  5000.000      60.07640 1   Chase (1985)
 5.23920000E+00 2.41005840E-03-9.60645220E-07 1.77783470E-10-1.22357040E-14    2
-1.84804550E+04-3.07773889E+00 2.46253210E+00 1.19479920E-02-1.37943700E-05    3
 8.07077360E-09-1.83276530E-12-1.78039870E+04 1.08058688E+01-1.66455205E+04    4
CO2               L 7/88C  1.O  2.   Ø.   Ø.G   200.000  6000.000      44.00980 1   Gurvich (1991)
 4.63659493E+00 2.74131991E-03-9.95828531E-07 1.60373011E-10-9.16103468E-15    2
-4.90249341E+04-1.93534855E+00 2.35677352E+00 8.98459677E-03-7.12356269E-06    3
 2.45919022E-09-1.43699548E-13-4.83719697E+04 9.90105222E+00-4.73281047E+04    4
CO2+              L10/92C  1.O  2.E -1.   Ø.G   298.150  6000.000      44.00925 1   Gurvich (1991)
 5.61292513E+00 1.89829994E-03-7.34596383E-07 1.23975665E-10-7.57692288E-15    2
 1.11621136E+05-5.65135703E+00 3.39305653E+00 5.82300415E-03 4.38012075E-08    3
-4.68236271E-09 2.31552825E-12 1.12356151E+05 6.39038548E+00 1.13618832E+05    4
COOH              TPIS91C  1.O  2.H  1.   Ø.G   200.000  6000.000      45.01774 1   Gurvich (1991)
 5.39206247E+00 4.11221305E-03-1.48194817E-06 2.39875278E-10-1.43902965E-14    2
-2.76708786E+04-2.23528631E+00 2.92207915E+00 7.62453820E-03 3.29884683E-06    3
-1.07135249E-08 5.11587309E-12-2.68383588E+04 1.12925989E+01-2.56178656E+04    4
CP                L 9/93C  1.P  1.   Ø.   Ø.G   200.000  6000.000      42.98476 1   Gurvich (1991)
 4.16986061E+00-3.33893154E-04 6.30510095E-07-1.65248916E-10 1.25248542E-14    2
 6.12121016E+04 2.05762288E+00 3.70291400E+00-2.94026330E-03 1.25263783E-05    3
-1.45948287E-08 5.61955320E-12 6.15029332E+04 5.34971467E+00 8.71534000E+03    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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CS                J12/76C  1.S  1.   0.   0.G   300.000  5000.000      44.07700 1   Chase (1985)
 3.68260120E+00 9.04732030E-04-3.64363740E-07 6.38542940E-11-3.69339820E-15    2
 3.24974900E+04 3.89841679E+00 3.40393440E+00-6.57733080E-04 6.17121570E-06    3
-7.36896040E-09 2.73467380E-12 3.26893930E+04 5.91106729E+00 3.37162928E+04    4
CS2               J12/76C  1.S  2.   0.   0.G   300.000  5000.000      76.14300 1   Chase (1985)
 5.92526100E+00 1.82529960E-03-7.55853800E-07 1.46050730E-10-1.04385950E-14    2
 1.20480710E+04-6.05893229E+00 2.83260130E+00 1.32907910E-02-1.81446940E-05    3
 1.28316810E-08-3.68006090E-12 1.27667820E+04 9.22219411E+00 1.40653694E+04    4
C2                TPIS91C  2.   0.   0.   0.G   200.000  6000.000      24.02200 1   Gurvich (1991)
 4.12487314E+00 1.08346618E-04 1.57250890E-07-4.24042102E-11 3.25055714E-15    2
 9.89228066E+04 7.97421015E-01-1.96258641E+00 5.76815310E-02-1.58037735E-04    3
 1.72460636E-07-6.57905286E-11 9.89883317E+04 2.33198418E+01 1.01690000E+04    4
C2+               TPIS91C  2.E -1.   0.   0.G   298.150  6000.000      24.02145 1   Gurvich (1991)
 1.47436235E+00 3.90858415E-03-1.15362712E-06 1.28522790E-10-4.37160939E-15    2
 2.40801585E+05 1.56570955E+01 3.74438466E+00-2.75060804E-03 9.41697986E-06    3
-9.54472049E-09 3.48743458E-12 2.40057573E+05 3.70168855E+00 2.41117688E+05    4
C2-               TPIS91C  2.E  1.   0.   0.G   298.150  6000.000      24.02255 1   Gurvich (1991)
 1.94147766E+00 3.34554328E-03-1.21401317E-06 1.86836326E-10-1.03447699E-14    2
 5.72696669E+04 1.20032531E+01 3.82038230E+00-2.88162408E-03 8.21923044E-06    3
-7.32254863E-09 2.41405929E-12 5.67523968E+04 2.43181247E+00 5.78226498E+04    4
C2CL2             J12/68C  2.CL 2.   0.   0.G   300.000  5000.000      94.92740 1   Chase (1985)
 8.17285470E+00 2.36598920E-03-9.65525050E-07 1.77361480E-10-1.21352030E-14    2
 2.25101900E+04-1.49035905E+01 5.02294820E+00 1.40826670E-02-1.80956690E-05    3
 1.16103480E-08-2.88174780E-12 2.32274820E+04 6.09995206E-01 2.52127141E+04    4
C2CL4             L10/87C  2.CL 4.   0.   0.G   298.150  5000.000     165.82800 1   Gurvich (1978)
 1.29359370E+01 3.43092000E-03-1.50671940E-06 2.93469930E-10-2.10708960E-14    2
-5.89323370E+03-3.46806920E+01 4.14347920E+00 3.74223720E-02-5.43697930E-05    3
 3.91128630E-08-1.11763840E-11-3.94926290E+03 8.34457019E+00-1.45891290E+03    4
C2CL6             L10/87C  2.CL 6.   0.   0.G   298.150  5000.000     236.73820 1   Chao (1974)
 1.90342860E+01 3.39568210E-03-1.51152890E-06 2.97003150E-10-2.14538270E-14    2
-2.31038030E+04-6.28529170E+01 4.63835310E+00 6.33655610E-02-1.00800300E-04    3
 7.66369220E-08-2.26465500E-11-2.01565130E+04 6.47480699E+00-1.67069940E+04    4
C2F2              J12/67C  2.F  2.   0.   0.G   300.000  5000.000      62.01881 1   Chase (1985)
 7.51645810E+00 3.16864620E-03-1.33113850E-06 2.49600490E-10-1.73420720E-14    2
-1.61076550E+02-1.50680621E+01 3.53458370E+00 1.44458450E-02-1.21896920E-05    3
 3.60429850E-09 1.91189510E-13 9.21335620E+02 5.41946520E+00 2.51676233E+03    4
C2F4              J 6/69C  2.F  4.   0.   0.G   300.000  5000.000     100.01561 1   Chase (1985)
 1.10864680E+01 5.27884290E-03-2.23544000E-06 4.21668460E-10-2.94339140E-14    2
-8.32928840E+04-2.98668810E+01 3.61661830E+00 2.64886180E-02-2.24332660E-05    3
 6.22864450E-09 6.21492440E-13-8.12772420E+04 8.52376403E+00-7.92072049E+04    4
C2H               L 1/91C  2.H  1.   0.   0.G   200.000  6000.000      25.02994 1   Peric (1991)
 3.36118395E+00 4.38989724E-03-1.62772218E-06 2.60556663E-10-1.52939305E-14    2   Ervin (1990)
 6.70492214E+04 5.57127542E+00 2.88965733E+00 1.34099611E-02-2.84769501E-05    3   Kanamori (1987)
 2.94791045E-08-1.09331511E-11 6.68393932E+04 6.22296438E+00 6.80984775E+04    4   Kanamori (1988)
C2HCL             TPIS91C  2.H  1.CL 1.   0.G   298.150  5000.000      60.48264 1   Gurvich (1991)
 6.32104570E+00 3.84597370E-03-1.48646060E-06 2.65613790E-10-1.79524660E-14    2
 2.34404780E+04-8.28464441E+00 1.80471580E+00 2.58378710E-02-4.31499540E-05    3
 3.58835790E-08-1.14479920E-11 2.42302070E+04 1.27377610E+01 2.56009760E+04    4
C2HF              J12/67C  2.H  1.F  1.   0.G   300.000  5000.000      44.02834 1   Chase (1985)
 6.09495010E+00 3.94324280E-03-1.47114380E-06 2.52946410E-10-1.64466630E-14    2
 1.29769070E+04-8.31534304E+00 2.69017700E+00 1.76808530E-02-2.27498550E-05    3
 1.49205680E-08-3.73819250E-12 1.36832230E+04 8.14697176E+00 1.50978852E+04    4
CHCO,ketyl        L 6/89C  2.H  1.O  1.   0.G   200.000  6000.000      41.02934 1   Burcat (1982)
 4.26038110E+00 4.82740500E-03-1.66618844E-06 2.61405204E-10-1.53257963E-14    2   Wagman (1982)
 1.78804760E+04 3.97874320E+00 2.76593971E+00 1.41741202E-02-2.32600986E-05    3
 2.15728089E-08-7.58509308E-12 1.80856324E+04 1.05408591E+01 1.93738416E+04    4
C2H2,acetylene    L 1/91C  2.H  2.   0.   0.G   200.000  6000.000      26.03788 1   Gurvich (1979)
 4.65878504E+00 4.88396547E-03-1.60828775E-06 2.46974226E-10-1.38605680E-14    2   TRC(10/88)w-3040
 2.57594044E+04-3.99834772E+00 8.08681094E-01 2.33615629E-02-3.55171815E-05    3
 2.80152437E-08-8.50072974E-12 2.64289807E+04 1.39397051E+01 2.74459950E+04    4
C2H2,vinylidene   L12/89C  2.H  2.   0.   0.G   200.000  6000.000      26.03788 1   Chen, Y. (1989)
 4.27807139E+00 4.75622883E-03-1.63007513E-06 2.54622981E-10-1.48860326E-14    2   Osamura (1981)
 4.83166722E+04 6.40022600E-01 3.28154933E+00 6.97642740E-03-2.38528283E-06    3
-1.21077045E-09 9.82038579E-13 4.86217943E+04 5.92039169E+00 4.98872655E+04    4
CH2CO,ketene      L 5/90C  2.H  2.0  1.   0.G   200.000  6000.000      42.03728 1   Moore, C.B. (1963)
 5.75793307E+00 6.34911413E-03-2.25814835E-06 3.62026733E-10-2.15651204E-14    2   Wagman (1982)
-7.97878384E+03-6.10772150E+00 2.13583630E+00 1.81188721E-02-1.73947474E-05    3
 9.34397568E-09-2.01457615E-12-7.04291804E+03 1.22156480E+01-5.73695864E+03    4
C2H3,vinyl        L 2/92C  2.H  3.   0.   0.G   200.000  6000.000      27.04582 1   Ervin (1990)
 4.35105055E+00 7.49330091E-03-2.64314586E-06 4.21285906E-10-2.49896119E-14    2   Taylor,P.R.: NASA
 3.41546181E+04 5.71676529E-01 3.21246645E+00 1.51479162E-03 2.59209412E-05    3      Ames, private
-3.57657847E-08 1.47150873E-11 3.48598468E+04 8.51054025E+00 3.60502484E+04    4      communication
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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CH3CN             L12/92C  2.H  3.N  1.   0.G   200.000  6000.000      41.05256 1   Spangenberg (1974)
 5.08576974E+00 9.70797040E-03-3.48484946E-06 5.62106760E-10-3.36234670E-14    2   TRC(12/86)w-9270
 5.45853074E+03-3.26553903E+00 3.82484221E+00 4.10100359E-03 2.14545679E-05    3
-2.87234543E-08 1.11804146E-11 6.28838522E+03 5.54024211E+00 7.74910368E+03    4
CH3CO,acetyl      BUR 84C  2.H  3.0  1.   0.G   300.000  5000.000      43.04522 1   Burcat (1984)
 5.61227890E+00 8.44988600E-03-2.85414720E-06 4.23837630E-10-2.26840370E-14    2
-5.18786330E+03-3.26178193E+00 3.12527850E+00 9.77822020E-03 4.52144830E-06    3
-9.00946160E-09 3.19371790E-12-4.10850780E+03 1.12420212E+01-2.71844485E+03    4
C2H4              L 1/91C  2.H  4.   0.   0.G   200.000  6000.000      28.05376 1   Chao (1975)
 3.99182761E+00 1.04833910E-02-3.71721385E-06 5.94628514E-10-3.53630526E-14    2   Knippers (1985)
 4.26865819E+03-2.69052151E-01 3.95920148E+00-7.57052247E-03 5.70990292E-05    3   TRC(4/87)w-2500
-6.91588753E-08 2.69884373E-11 5.08977593E+03 4.09733096E+00 6.31426266E+03    4
C2H4O,ethylen o   L 8/88C  2.H  4.0  1.   0.G   200.000  6000.000      44.05316 1   Chase (1985)
 5.48888429E+00 1.20460231E-02-4.33361545E-06 7.00269000E-10-4.19481870E-14    2   Shimanouchi (1972)
-9.18047576E+03-7.08063868E+00 3.75904931E+00-9.44119292E-03 8.03096770E-05    3
-1.00807756E-07 4.00398357E-11-7.56081402E+03 7.84977030E+00-6.33046566E+03    4
CH3CHO,ethanal    L 8/88C  2.H  4.0  1.   0.G   200.000  6000.000      44.05316 1   Chao (1986)
 5.40417899E+00 1.17229675E-02-4.22626830E-06 6.83715733E-10-4.09842676E-14    2   TRC(6/78)w-5300
-2.25931508E+04-3.48117593E+00 4.72947627E+00-3.19343161E-03 4.75353505E-05    3
-5.74590474E-08 2.19312619E-11-2.15728799E+04 4.10295455E+00-1.99879488E+04    4
CH3COOH           L 8/88C  2.H  4.0  2.   0.G   200.000  6000.000      60.05256 1   Chao (1978)
 7.67083678E+00 1.35152695E-02-5.25874688E-06 8.93185062E-10-5.53180891E-14    2
-5.57560971E+04-1.54676590E+01 2.78936844E+00 1.00001016E-02 3.42557978E-05    3
-5.09017919E-08 2.06217504E-11-5.34752292E+04 1.41059504E+01-5.19873137E+04    4
(HCOOH)2          BUR 92C  2.H  4.0  4.   0.G   300.000  5000.000      92.05136 1   Burcat (1992)
 1.22073710E+01 1.36888510E-02-4.68403690E-06 7.05116630E-10-3.83692850E-14    2
-1.03959380E+05-3.57098080E+01 3.76923850E+00 2.72247160E-02 1.72380530E-06    3
-2.07767240E-08 9.93799490E-12-1.01049880E+05 1.05054940E+01-9.87373140E+04    4
C2H5              L12/92C  2.H  5.   0.   0.G   200.000  6000.000      29.06170 1   Chen, Y. (1990)
 4.28800535E+00 1.24337374E-02-4.41383829E-06 7.06526943E-10-4.20341856E-14    2
 1.20564200E+04 8.45299623E-01 4.30646568E+00-4.18658892E-03 4.97142807E-05    3
-5.99126606E-08 2.30509004E-11 1.28416265E+04 4.70720924E+00 1.42712246E+04    4
C2H6              L 8/88C  2.H  6.   0.   0.G   200.000  6000.000      30.06964 1   Pamidimukala (1982)
 4.04666674E+00 1.53538766E-02-5.47039321E-06 8.77826228E-10-5.23167305E-14    2
-1.24473512E+04-9.68683607E-01 4.29142492E+00-5.50154270E-03 5.99438288E-05    3
-7.08466285E-08 2.68685771E-11-1.15222055E+04 2.66682316E+00-1.00849652E+04    4
CH3N2CH3          L 8/88C  2.H  6.N  2.   0.G   200.000  6000.000      58.08312 1   Pamidimukala (1982)
 7.44954851E+00 1.74406153E-02-6.27382453E-06 1.01351178E-09-6.06937494E-14    2
 1.41979978E+04-1.41567638E+01 6.29613632E+00-2.25815427E-03 6.21232803E-05    3
-7.46292997E-08 2.80371947E-11 1.56928850E+04-2.49925915E+00 1.78843203E+04    4
CH3OCH3           L12/92C  2.H  6.0  1.   0.G   200.000  6000.000      46.06904 1   Chao (1986)
 5.64844183E+00 1.63381899E-02-5.86802367E-06 9.46836869E-10-5.66504738E-14    2   TRC(6/91)w-6040
-2.51074690E+04-5.96264939E+00 5.30562279E+00-2.14254272E-03 5.30873244E-05    3
-6.23147136E-08 2.30731036E-11-2.39866295E+04 7.13264209E-01-2.21432171E+04    4
C2H5OH            L 8/88C  2.H  6.0  1.   0.G   200.000  6000.000      46.06904 1   Chao (1986)
 6.56289770E+00 1.52034264E-02-5.38922247E-06 8.62150224E-10-5.12824683E-14    2   TRC(6/87)w-5030
-3.15257984E+04-9.47557644E+00 4.85868178E+00-3.74006740E-03 6.95550267E-05    3
-8.86541147E-08 3.51684430E-11-2.99961309E+04 4.80192294E+00-2.82578288E+04    4
CCN               L12/92C  2.N  1.   0.   0.G   200.000  6000.000      38.02874 1   Gurvich (1991)
 5.53594940E+00 1.93336181E-03-7.43007993E-07 1.25654167E-10-7.70420035E-15    2   Jacox (1988)
 9.49028065E+04-3.70380637E+00 3.67600724E+00 7.88842348E-03-9.55326639E-06    3
 7.31344088E-09-2.48035202E-12 9.54195535E+04 5.81651950E+00 9.67950500E+04    4
CNC               TPIS91C  2.N  1.   0.   0.G   200.000  6000.000      38.02874 1   Gurvich (1991)
 5.93259696E+00 1.57914754E-03-6.12333532E-07 1.03869610E-10-6.43161897E-15    2
 8.03326833E+04-6.60207157E+00 3.98958871E+00 5.21977832E-03-5.81083706E-07    3
-3.39416520E-09 1.76273084E-12 8.09656357E+04 3.88721926E+00 8.23761254E+04    4
C2N2              TPIS79C  2.N  2.   0.   0.G   200.000  6000.000      52.03548 1   Gurvich (1979)
 6.70544769E+00 3.64260339E-03-1.30934250E-06 2.16411061E-10-1.31187410E-14    2
 3.48608005E+04-1.04803695E+01 2.32925325E+00 2.61537847E-02-4.90003994E-05    3
 4.61917478E-08-1.64323855E-11 3.56684424E+04 9.86336227E+00 3.71759731E+04    4
C2O               L12/89C  2.O  1.   0.   0.G   200.000  6000.000      40.02140 1   Jacox (1988)
 5.51576444E+00 1.87745704E-03-7.01159757E-07 1.21505291E-10-7.76778855E-15    2   Gurvich (1979)
 3.30970458E+04-4.27636138E+00 2.86345422E+00 1.19732969E-02-1.81232501E-05    3
 1.53813634E-08-5.28906524E-12 3.37500945E+04 8.89405881E+00 3.50037906E+04    4
C3                TPIS79C  3.   0.   0.   0.G   200.000  6000.000      36.03300 1   Gurvich (1979)
 4.80357768E+00 2.14511233E-03-1.07292074E-06 2.60735259E-10-2.01631960E-14    2
 9.93965416E+04 3.89369308E-01 5.43283963E+00-4.46754383E-03 1.49321482E-05    3
-1.47953138E-08 5.01421112E-12 9.94957222E+04-1.58720715E+00 1.01022009E+05    4
C3H3,propargyl    BUR 92C  3.H  3.   0.   0.G   200.000  6000.000      39.05682 1   Burcat (1992)
 6.64175821E+00 8.08587428E-03-2.84787887E-06 4.53525977E-10-2.68879815E-14    2
 3.89793699E+04-1.04004255E+01 1.82840766E+00 2.37839036E-02-2.19228176E-05    3
 1.00067444E-08-1.38984644E-12 4.01863058E+04 1.38447957E+01 4.16139977E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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C3H4,allene       L12/92C  3.H  4.   0.   0.G   200.000  6000.000     40.06476 1   Butcher (1973b)
 6.31694869E+00 1.11336262E-02-3.96289018E-06 6.35633775E-10-3.78749885E-14    2   Shimanouchi (1972)
 2.01174617E+04-1.09718862E+01 2.61307487E+00 1.21223371E-02 1.85405400E-05    3   TRC(4/84)w-2750
-3.45258475E-08 1.53353389E-11 2.15415642E+04 1.02503319E+01 2.29622672E+04    4
C3H4,propyne      L12/92C  3.H  4.   0.   0.G   200.000  6000.000     40.06476 1   Shimanouchi (1972)
 6.02531092E+00 1.13364427E-02-4.02229048E-06 6.43751365E-10-3.82990082E-14    2   Trambarulo (1950)
 1.95101792E+04-8.58912592E+00 2.68040760E+00 1.57994429E-02 2.50775737E-06    3   TRC(10/85)w-3000
-1.36584584E-08 6.61576607E-12 2.06916392E+04 9.89251047E+00 2.21913258E+04    4
C3H4,cyclo-       L 5/90C  3.H  4.   0.   0.G   200.000  6000.000     40.06476 1   Dorofeeva (1986)
 6.28078730E+00 1.12393819E-02-4.01957526E-06 6.46920648E-10-3.86433248E-14    2
 3.03415086E+04-1.11419945E+01 2.24666553E+00 5.76238084E-03 4.42080305E-05    3
-6.62906786E-08 2.81824730E-11 3.21284389E+04 1.33451837E+01 3.33272797E+04    4
C3H5,allyl        BUR 92C  3.H  5.   0.   0.G   200.000  6000.000     41.07270 1   Burcat (1992)
 6.54761132E+00 1.33152246E-02-4.78333100E-06 7.71949814E-10-4.61930808E-14    2   Tsang (1991)
 1.72714707E+04-9.27486841E+00 3.78794693E+00 9.48414335E-03 2.42343368E-05    3
-3.65604010E-08 1.48592356E-11 1.86261218E+04 7.82822499E+00 2.03259122E+04    4
C3H6,propylene    L 7/90C  3.H  6.   0.   0.G   200.000  6000.000     42.08064 1   Chao (1975)
 6.03870499E+00 1.62963895E-02-5.82130624E-06 9.35936483E-10-5.58602903E-14    2   TRC(4/87)w-2500
-7.76595092E+02-8.43824322E+00 3.83464524E+00 3.29078405E-03 5.05228184E-05    3
-6.66251418E-08 2.63707585E-11 7.53838295E+02 7.53410995E+00 2.37055461E+03    4
C3H6,cyclo-       L 1/93C  3.H  6.   0.   0.G   200.000  6000.000     42.08064 1   Butcher (1973a)
 6.21663293E+00 1.65393614E-02-5.90075961E-06 9.48095473E-10-5.65661737E-14    2   Dorofeeva (1986)
 2.95937555E+03-1.36040607E+01 2.83278555E+00-5.21027462E-03 9.29582837E-05    3
-1.22753146E-07 4.99191154E-11 5.19520057E+03 1.08306700E+01 6.41047999E+03    4
C3H6O             L 6/90C  3.H  6.0  1.   0.G   200.000  6000.000     58.08004 1   Oetting (1964)
 7.94555710E+00 1.74061678E-02-6.25436463E-06 1.00975457E-09-6.04488953E-14    2   Swalen (1957)
-1.52867683E+04-1.84184133E+01 3.56851051E+00 5.02717292E-03 6.42315607E-05    3   TRC(6/84)w-6150
-8.90229548E-08 3.62423766E-11-1.29679205E+04 9.88838229E+00-1.12718609E+04    4   Villarreal (1975)
C3H7,n-propyl     L 6/90C  3.H  7.   0.   0.G   200.000  6000.000     43.08858 1
 6.96468462E+00 1.75451946E-02-6.23370055E-06 9.98529735E-10-5.94394793E-14    2   Tsang (1985)
 8.54244358E+03-1.14831478E+01 4.03239996E+00 3.42728312E-03 6.14344420E-05    3
-8.37646338E-08 3.40857776E-11 1.03393839E+04 8.77428079E+00 1.20873028E+04    4
C3H7,i-propyl     L 9/85C  3.H  7.   0.   0.G   200.000  6000.000     43.08858 1
 5.75125882E+00 1.87605762E-02-6.70191976E-06 1.07751871E-09-6.43090885E-14    2   Tsang (1985)
 7.97977293E+03-4.91359355E+00 5.40872872E+00-8.55221825E-03 8.42178491E-05    3
-1.00942683E-07 3.86914479E-11 9.42600956E+03 3.62322504E+00 1.12213468E+04    4
C3H8              L 6/90C  3.H  8.   0.   0.G   200.000  6000.000     44.09652 1   Chao (1973)
 6.66789363E+00 2.06120214E-02-7.36553027E-06 1.18440761E-09-7.06953210E-14    2   TRC(10/85)w-1350
-1.62748521E+04-1.31859503E+01 4.21102620E+00 1.71599803E-03 7.06183472E-05    3
-9.19594116E-08 3.64421372E-11-1.43812106E+04 5.60930491E+00-1.25900384E+04    4
C3H8O,1propanol   L 9/88C  3.H  8.0  1.   0.G   200.000  6000.000     60.09592 1   Chao (1986)
 8.71010929E+00 2.08051473E-02-7.38480898E-06 1.18188977E-09-7.03597783E-14    2   TRC(6/87)tuvw-5000
-3.51244024E+04-1.88965453E+01 5.27799420E+00 8.08660546E-04 8.21548179E-05    3
-1.08488185E-07 4.34886897E-11-3.28348774E+04 5.70526835E+00-3.06933301E+04    4
C3H8O,2propanol   L 9/88C  3.H  8.0  1.   0.G   200.000  6000.000     60.09592 1   Chao (1986)
 9.64271113E+00 2.00224413E-02-7.11948364E-06 1.14136355E-09-6.79921667E-14    2   TRC(6/87)w-5030
-3.74840095E+04-2.56346074E+01 4.30803027E+00 1.02498010E-02 6.19857805E-05    3
-9.03311088E-08 3.74065372E-11-3.49248843E+04 7.55826254E+00-3.27980843E+04    4
C3O2              L 7/88C  3.O  2.   0.   0.G   200.000  6000.000     68.03180 1   Chase (1985)
 8.46175920E+00 4.81552825E-03-1.80930759E-06 3.00787080E-10-1.83722162E-14    2   Shimanouchi (1977)
-1.43271654E+04-1.70605688E+01 2.19668211E+00 3.14553138E-02-5.07458623E-05    3
 4.35794398E-08-1.47351787E-11-1.29460980E+04 1.32985264E+01-1.12622391E+04    4   TRC(4/84)w-1000
C4                L 7/88C  4.   0.   0.   0.G   200.000  6000.000     48.04400 1   Gurvich (1979)
 5.63091494E+00 4.83116397E-03-1.50405642E-06 2.02872357E-10-1.00345687E-14    2
 1.22500879E+05-2.98954731E+00 3.32273482E+00 2.02596453E-02-3.73466071E-05    3
 3.56878255E-08-1.27727382E-11 1.22723638E+05 6.80994829E+00 1.24349329E+05    4
C4H2              L 2/93C  4.H  2.   0.   0.G   200.000  6000.000     50.05988 1   Dorofeeva (1991)
 8.66704895E+00 6.71505191E-03-2.35355060E-06 3.73635366E-10-2.21054043E-14    2
 5.10016978E+04-2.18002050E+01-4.07132393E-01 5.20775143E-02-9.21138340E-05    3
 8.08657403E-08-2.70422080E-11 5.25957367E+04 2.03240223E+01 5.41222513E+04    4
C4H4,1,3-cyclo-   L 5/90C  4.H  4.   0.   0.G   200.000  6000.000     52.07576 1   Dorofeeva (1986)
 8.04207751E+00 1.25202174E-02-4.52337047E-06 7.33120443E-10-4.40110864E-14    2
 4.25108494E+04-2.11284483E+01 1.27895318E+00 1.34203350E-02 4.11992063E-05    3
-6.98956727E-08 3.07252120E-11 4.50864097E+04 1.76787788E+01 4.63045928E+04    4
C4H6,butadiene    X10/92C  4.H  6.   0.   0.G   200.000  6000.000     54.09164 1   TRC(10/92)tuvw-2820
 1.60010139E+01 3.91825115E-03 1.14355733E-06-2.07925748E-10 7.57713551E-15    2
 6.51708221E+03-6.28204145E+01 1.68530424E+00 1.96120012E-02 4.46523571E-05    3
-8.31523114E-08 3.80651226E-11 1.16075709E+04 1.67545967E+01 1.32298837E+04    4
C4H6,2-butyne     X10/88C  4.H  6.   0.   0.G   200.000  6000.000     54.09164 1   TRC(10/88)w-3040
 6.93232090E+00 1.86425873E-02-6.82359104E-06 1.11910485E-09-6.76783113E-14    2
 1.40309558E+04-1.22084283E+01 5.42481699E+00 2.65380004E-03 5.30443281E-05    3
-6.71392095E-08 2.58190081E-11 1.54641216E+04 5.40967409E-01 1.75476366E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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C4H6,cyclo-       L 5/90C  4.H  6.   0.   0.G   200.000  6000.000      54.09164 1   Dorofeeva (1986)
 7.84858253E+00 1.80812892E-02-6.53186644E-06 1.05842123E-09-6.35253939E-14    2
 1.46153461E+04-2.08980257E+01 2.91633433E+00-3.20584810E-03 1.00263571E-04    3
-1.34248167E-07 5.46670100E-11 1.74732236E+04 1.24817183E+01 1.88465706E+04    4
C4H8,1-butene     X 4/88C  4.H  8.   0.   0.G   200.000  6000.000      56.10752 1   TRC(4/88)tuvw-2600
 8.02147991E+00 2.26010707E-02-8.31284033E-06 1.37803072E-09-8.42175459E-14    2
-4.30852153E+03-1.71170697E+01 4.42674073E+00 6.63946249E-03 6.80652815E-05    3
-9.28753562E-08 3.73473949E-11-2.11532796E+03 7.54694860E+00-6.49467016E+01    4
C4H8,cis2-buten   X 4/88C  4.H  8.   0.   0.G   200.000  6000.000      56.10752 1   TRC(4/88)tuvw-2600
 7.08335025E+00 2.34982430E-02-8.64483079E-06 1.43160107E-09-8.73762642E-14    2
-4.92320266E+03-1.28709317E+01 5.44417817E+00-5.20451694E-03 9.62906577E-05    3
-1.20068814E-07 4.68194825E-11-2.91741472E+03 3.46050733E+00-8.90010355E+02    4
C4H8,tr2-butene   X 4/88C  4.H  8.   0.   0.G   200.000  6000.000      56.10752 1   TRC(4/88)tuvw-2600
 7.62514670E+00 2.30451042E-02-8.49424864E-06 1.41152554E-09-8.64751757E-14    2
-5.40102815E+03-1.61987080E+01 5.57278967E+00 3.76541017E-03 6.52226708E-05    3
-8.30909522E-08 3.20311342E-11-3.57903301E+03 5.37796708E-01-1.32298837E+03    4
C4H8,isobutene    X 4/88C  4.H  8.   0.   0.G   200.000  6000.000      56.10752 1   TRC(4/88)tuvw-2600
 7.83555330E+00 2.27459679E-02-8.36517549E-06 1.39076250E-09-8.53329969E-14    2
-6.16356322E+03-1.76540719E+01 3.68049727E+00 1.69414445E-02 3.51963555E-05    3
-5.43166856E-08 2.20201636E-11-4.12099308E+03 8.11457149E+00-2.05664555E+03    4
C4H8,cyclo-       L 5/90C  4.H  8.   0.   0.G   200.000  6000.000      56.10752 1   Dorofeeva (1986)
 7.76331054E+00 2.30653350E-02-8.25983758E-06 1.33412389E-09-7.99363302E-14    2
-1.17672008E+03-2.19148211E+01 3.81144720E+00-9.68049998E-03 1.27917694E-04    3
-1.63057125E-07 6.48314790E-11 1.87107930E+03 8.60998196E+00 3.41571542E+03    4
(CH3COOH)2        L 6/90C  4.H  8.0  4.   0.G   200.000  6000.000     120.10512 1   Chao (1978)
 1.58245208E+01 2.61835117E-02-9.46098358E-06 1.53337616E-09-9.20476545E-14    2
-1.19039141E+05-5.11097617E+01 7.75481743E+00 1.38918897E-02 8.32955609E-05    3
-1.20021855E-07 4.90679645E-11-1.15185669E+05-1.22446814E+00-1.11734228E+05    4
C4H9,n-butyl      X10/84C  4.H  9.   0.   0.G   200.000  6000.000      57.11546 1   TRC(10/84)tuvw-1940
 9.18975615E+00 2.36322267E-02-8.64270985E-06 1.42770515E-09-8.70203716E-14    2
 3.37702909E+03-2.15600560E+01 5.82430540E+00 5.50309080E-03 7.49300330E-05    3
-1.02085943E-07 4.13484714E-11 5.54078049E+03 2.17609509E+00 8.00167418E+03    4
C4H9,i-butyl      X10/84C  4.H  9.   0.   0.G   200.000  6000.000      57.11546 1   TRC(10/84)tuvw-1940
 9.43040607E+00 2.34271349E-02-8.53599182E-06 1.39748355E-09-8.44057456E-14    2
 2.14214862E+03-2.42207994E+01 3.54885235E+00 1.78747638E-02 5.00782825E-05    3
-7.94475071E-08 3.35802354E-11 4.74011588E+03 1.11849382E+01 6.89397210E+03    4
C4H9,s-butyl      L 1/93C  4.H  9.   0.   0.G   200.000  6000.000      57.11546 1   Tsang (1985)
 8.42611939E+00 2.39379265E-02-8.56035783E-06 1.37735160E-09-8.22496005E-14    2
 3.96484253E+03-1.69876875E+01 5.03930607E+00 4.09387100E-04 9.15574112E-05    3
-1.19411713E-07 4.75043987E-11 6.42327236E+03 8.24360444E+00 8.53928854E+03    4
C4H9,t-butyl      L 1/93C  4.H  9.   0.   0.G   200.000  6000.000      57.11546 1   Tsang (1985)
 6.63074656E+00 2.59353745E-02-9.37163111E-06 1.51845890E-09-9.11190863E-14    2
 2.00861323E+03-9.20581440E+00 6.87327133E+00-1.85146306E-02 1.30560116E-04    3
-1.50832755E-07 5.65358282E-11 4.10958938E+03 2.30016604E-01 6.21804532E+03    4
C4H10,isobutane   L 6/90C  4.H 10.   0.   0.G   200.000  6000.000      58.12340 1   Chen, S. S. (1975)
 9.76991245E+00 2.54997210E-02-9.14142932E-06 1.47328271E-09-8.80800188E-14    2   TRC(10/85)w-1350
-2.14052647E+04-3.00329101E+01 4.45479276E+00 8.26057985E-03 8.29886664E-05    3
-1.14647642E-07 4.64570101E-11-1.84593931E+04 4.92743175E+00-1.62354727E+04    4
C4H10,n-butane    L 6/90C  4.H 10.   0.   0.G   200.000  6000.000      58.12340 1   Chen, S. S. (1975)
 9.44535834E+00 2.57858073E-02-9.23619122E-06 1.48632755E-09-8.87897158E-14    2   TRC(10/85)w-1350
-2.01382165E+04-2.63470076E+01 6.14746806E+00 1.55947389E-04 9.67913517E-05    3
-1.25483910E-07 4.97816555E-11-1.75994402E+04-1.09409879E+00-1.51289733E+04    4
C4N2              J 3/61C  4.N  2.   0.   0.G   200.000  6000.000      76.05748 1   Chase (1985)
 1.04854800E+01 5.69544889E-03-2.12745547E-06 3.52323196E-10-2.14631729E-14    2
 6.04620630E+04-2.72266502E+01 2.28116845E+00 4.61273513E-02-8.53293243E-05    3
 7.93407779E-08-2.80356399E-11 6.20401013E+04 1.12898174E+01 6.41601249E+04    4
C5                L 7/88C  5.   0.   0.   0.G   200.000  6000.000      60.05500 1   Gurvich (1979)
 9.57456888E+00 3.86016798E-03-1.47558014E-06 2.48048833E-10-1.52660253E-14    2
 1.23053517E+05-2.37137980E+01 3.35873023E+00 3.24350875E-02-5.93058470E-05    3
 5.60114864E-08-2.03075176E-11 1.24376242E+05 6.04915848E+00 1.26396424E+05    4
C5H6,1,3cyclo-    L 5/90C  5.H  6.   0.   0.G   200.000  6000.000      66.10264 1   Dorofeeva (1986)
 9.97582745E+00 1.89055233E-02-6.84110300E-06 1.10992117E-09-6.66791427E-14    2   Pedley (1986)
 1.10816727E+04-3.22096892E+01 8.61044032E-01 1.48045870E-02 7.21072084E-05    3
-1.13378398E-07 4.86890482E-11 1.48017548E+04 2.13536259E+01 1.61524852E+04    4
C5H8,cyclo-       L 1/93C  5.H  8.   0.   0.G   200.000  6000.000      68.11852 1   Dorofeeva (1986)
 9.64282423E+00 2.42562834E-02-8.72089503E-06 1.41190868E-09-8.47267848E-14    2   TRC(10/84)w-2840
-1.29255032E+03-3.01225606E+01 2.68980514E+00 2.09635533E-03 1.13034459E-04    3
-1.54077581E-07 6.27623564E-11 2.45827067E+03 1.53075040E+01 4.07720960E+03    4
C5H10,1-pentene   X 4/87C  5.H 10.   0.   0.G   200.000  6000.000      70.13440 1   TRC(4/87)w-2500
 1.17397055E+01 2.57467071E-02-9.25988701E-06 1.51497885E-09-9.17883939E-14    2
-8.46274839E+03-3.54375619E+01 5.88356456E+00 5.10401267E-03 9.78282156E-05    3
-1.32389227E-07 5.32231507E-11-5.16823068E+03 3.41987031E+00-2.55938113E+03    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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C5H10,cyclo-      L 6/90C  5.H 10.   0.   0.G   200.000  6000.000      70.13440 1   Dorofeeva (1986)
 9.13295790E+00 3.01130430E-02-1.09169137E-05 1.77298767E-09-1.06575248E-13    2
-1.51597372E+04-2.92618828E+01 3.70327955E+00-1.15565354E-02 1.64111439E-04    3
-2.09368134E-07 8.31054507E-11-1.10951786E+04 1.19777761E+01-9.42929890E+03    4
C5H11,pentyl      X10/84C  5.H 11.   0.   0.G   200.000  6000.000      71.14234 1   TRC(10/84)tuvw-1941
 1.12985135E+01 2.97314215E-02-1.09772714E-05 1.82708895E-09-1.11996026E-13    2
-2.39764167E+02-3.10395910E+01 7.17401432E+00 3.80921588E-03 1.04379065E-04    3
-1.39634050E-07 5.60395117E-11 2.52870902E+03-1.18868630E+00 5.50964519E+03    4
C5H11,t-pentyl    L 1/93C  5.H 11.   0.   0.G   200.000  6000.000      71.14234 1   Tsang (1985)
 9.23121001E+00 3.11688383E-02-1.12478586E-05 1.82090658E-09-1.09205395E-13    2
-1.60069498E+03-2.06141974E+01 6.44622533E+00-9.54177763E-03 1.37891362E-04    3
-1.69241631E-07 6.53097127E-11 1.50837506E+03 5.43091742E+00 3.92085643E+03    4
C5H12,n-pentane   X10/85C  5.H 12.   0.   0.G   298.150  5000.000      72.15028 1   TRC(10/85)tuvw-1350
 1.35469980E+01 2.84217860E-02-9.41746480E-06 1.38935890E-09-7.42126090E-14    2
-2.45776800E+04-4.70211850E+01 1.89836790E+00 4.12030370E-02 1.23121750E-05    3
-3.65895010E-08 1.50425090E-11-2.00915000E+04 1.86790720E+01-1.76512800E+04    4
C5H12,i-pentane   X10/85C  5.H 12.   0.   0.G   298.150  5000.000      72.15028 1   TRC(10/85)tuvw-1350
 1.23277870E+01 3.06130870E-02-9.84157850E-06 1.39197760E-09-7.03373450E-14    2
-2.50374920E+04-4.11335040E+01 1.08328820E+00 4.45710760E-02 8.23899340E-06    3
-3.52580470E-08 1.57857620E-11-2.08075350E+04 2.17951450E+01-1.84859760E+04    4
CH3C(CH3)2CH3     X10/85C  5.H 12.   0.   0.G   298.150  5000.000      72.15028 1   TRC(10/85)tuvw-1350
 1.01104160E+01 3.53495660E-02-1.10399670E-05 1.47777210E-09-6.84670420E-14    2
-2.58067110E+04-3.37569940E+01 7.26389940E-01 4.81254760E-02 1.59174580E-06    3
-2.66924580E-08 1.20782820E-11-2.24079800E+04 1.83272040E+01-2.01962590E+04    4
C6H2              L 2/93C  6.H  2.   0.   0.G   200.000  6000.000      74.08188 1   Bjarnov (1974)
 1.25238060E+01 8.78596282E-03-3.13663173E-06 5.04345908E-10-3.01109700E-14    2   Dorofeeva (1991)
 7.60771037E+04-3.88501245E+01-5.94405026E-01 7.46613329E-02-1.35847980E-04    3
 1.22198100E-07-4.17696751E-11 7.84192204E+04 2.21178780E+01 8.05820187E+04    4
C6H5,phenyl       L 1/91C  6.H  5.   0.   0.G   200.000  6000.000      77.10570 1   Burcat (1985)
 1.07702200E+01 1.83848597E-02-6.69985951E-06 1.09225620E-09-6.58414439E-14    2   TRC(10/89)w-4270
 3.52040328E+04-3.50146837E+01 7.09725032E-01 1.93299484E-02 5.94079007E-05    3
-9.85084147E-08 4.25424755E-11 3.91345677E+04 2.30299294E+01 4.05556070E+04    4
C6D5              L12/84C  6.D  5.   0.   0.G   300.000  5000.000      82.13651 1   Burcat (1985)
 1.47294920E+01 1.52105350E-02-5.52416350E-06 8.79845750E-10-5.09792170E-14    2
 3.02826290E+04-5.57549640E+01-1.25497820E+00 4.73287660E-02-8.07598830E-06    3
-2.99019720E-08 1.71490600E-11 3.53140630E+04 2.97801460E+01 3.69171280E+04    4
C6H5O,phenoxy     L 6/90C  6.H  5.O  1.   0.G   200.000  6000.000      93.10510 1   Burcat (1985)
 1.31515134E+01 1.90165507E-02-6.94695592E-06 1.13442172E-09-6.84634203E-14    2
-4.72968266E+02-4.67107225E+01 7.76296446E-02 3.30574915E-02 3.60356256E-05    3
-7.93165426E-08 3.64328623E-11 4.06539383E+03 2.57598920E+01 5.73666999E+03    4
C6H6              L 1/91C  6.H  6.   0.   0.G   200.000  6000.000      78.11364 1   Burcat (1985)
 1.10771708E+01 2.07067895E-02-7.51625100E-06 1.22209416E-09-7.35312513E-14    2   TRC(10/86)w-3200
 4.30988395E+03-4.00116950E+01 5.03469664E-01 1.85142363E-02 7.37864409E-05    3
-1.18106127E-07 5.07182527E-11 8.55266293E+03 2.16481796E+01 9.96811598E+03    4
C6D6              L12/84C  6.D  6.   0.   0.G   300.000  5000.000      84.15061 1   Burcat (1985)
 1.56198640E+01 1.71239340E-02-6.20127590E-06 9.84930580E-10-5.68915570E-14    2
-1.44330520E+02-6.38881890E+01-2.07012180E+00 5.29381970E-02-9.60748280E-06    3
-3.28023720E-08 1.90125280E-11 5.40689840E+03 3.06938730E+01 6.99716330E+03    4
C6H5OH,phenol     L 6/90C  6.H  6.O  1.   0.G   200.000  6000.000      94.11304 1   Burcat (1985)
 1.41553674E+01 1.99349498E-02-7.18217132E-06 1.16228680E-09-6.97145840E-14    2
-1.81287342E+04-5.17991412E+01-2.91049229E-01 4.08567842E-02 2.42823545E-05    3
-7.14476757E-08 3.46003044E-11-1.34129231E+04 2.68748886E+01-1.15940687E+04    4
C6H10,cyclo-      L 1/93C  6.H 10.   0.   0.G   200.000  6000.000      82.14540 1   Dorofeeva (1986)
 1.17733889E+01 3.09482743E-02-1.12347262E-05 1.82632045E-09-1.09855683E-13    2
-7.20263233E+03-4.26557933E+01 2.36627804E+00 1.06814158E-02 1.18222243E-04    3
-1.65679913E-07 6.76133786E-11-2.48250358E+03 1.67692033E+01-5.53249680E+02    4
C6H12,1-hexene    X 4/87C  6.H 12.   0.   0.G   200.000  6000.000      84.16128 1   TRC(4/87)tuvw-2500
 1.51268820E+01 2.94975192E-02-1.05411189E-05 1.72131394E-09-1.04218853E-13    2
-1.24861590E+04-5.19351758E+01 7.31539830E+00 3.70903758E-03 1.27255723E-04    3
-1.71562233E-07 6.89824521E-11-8.20916239E+03-5.95782436E-01-5.04539654E+03    4
C6H12,cyclo-      L 6/90C  6.H 12.   0.   0.G   200.000  6000.000      84.16128 1   Dorofeeva (1986)
 1.32147562E+01 3.58242410E-02-1.32110595E-05 2.17202254E-09-1.31730540E-13    2
-2.28091954E+04-5.53526464E+01 4.04348764E+00-6.19527424E-03 1.76621086E-04    3
-2.22967809E-07 8.63667390E-11-1.69202872E+04 8.52566766E+00-1.48294969E+04    4
C6H13,n-hexyl     X10/83C  6.H 13.   0.   0.G   200.000  6000.000      85.16922 1   TRC(10/83)tuvw-1930
 1.40301977E+01 3.47114029E-02-1.26836103E-05 2.09365902E-09-1.27627985E-13    2
-4.06907890E+03-4.39643824E+01 8.76344954E+00 2.16243850E-03 1.31674084E-04    3
-1.73827452E-07 6.92515009E-11-5.42628115E+02-5.91726978E+00 2.89830000E+04    4
C7H7,benzyl       L 1/93C  7.H  7.   0.   0.G   200.000  6000.000      91.13258 1   Brouwer (1988)
 1.40435627E+01 2.34946209E-02-8.53786999E-06 1.38914523E-09-8.36183659E-14    2   Hippler (1990)
 1.85643697E+04-5.16632394E+01 4.81145711E-01 3.85126943E-02 3.28618341E-05    3
-7.69728603E-08 3.54230267E-11 2.33070210E+04 2.35487000E+01 2.53171865E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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C7H8              L 1/93C  7.H  8.   0.   0.G   200.000  6000.000     92.14052 1   Hitchcock (1975)
 1.29394750E+01 2.66921558E-02-9.68420108E-06 1.57392140E-09-9.46670482E-14    2   Rudolph (1967)
-6.77035769E+02-4.67255302E+01 1.61191400E+00 2.11188902E-02 8.53221453E-05    3   TRC(10/85)w-3000
-1.32566876E-07 5.59406109E-11 4.09651976E+03 2.02973614E+01 6.03402967E+03    4
C7H8O,cresol mx   L 1/93C  7.H  8.0  1.   0.G   200.000  6000.000    108.13992 1   Kudchadker (1978)
 1.65179499E+01 2.54721604E-02-9.18781249E-06 1.48772675E-09-8.92617180E-14    2
-2.36116775E+04-6.19386224E+01 7.98026029E-01 4.67284934E-02 2.73617362E-05    3
-7.75823278E-08 3.68948350E-11-1.83324087E+04 2.42303179E+01-1.59117014E+04    4
C7H14,1-heptene   X 4/87C  7.H 14.   0.   0.G   200.000  6000.000     98.18816 1   TRC(4/87)tuvw-2500
 1.84972484E+01 3.32575990E-02-1.18150330E-05 1.92513278E-09-1.16441886E-13    2
-1.65142044E+04-6.83095138E+01 8.70575623E+00 2.79788048E-03 1.55212260E-04    3
-2.09020114E-07 8.40527224E-11-1.12661385E+04-4.45341873E+00-7.54824999E+03    4
C7H15,n-heptyl    X10/83C  7.H 15.   0.   0.G   200.000  6000.000     99.19610 1   TRC(10/83)tuvw-1930
 1.64117107E+01 4.03602901E-02-1.47823188E-05 2.44414560E-09-1.49160374E-13    2
-7.76310920E+03-5.49531828E+01 1.02804136E+01 7.01553566E-04 1.59551347E-04    3
-2.09593179E-07 8.33445318E-11-3.60307311E+03-1.03020940E+01 3.35430000E+04    4
C7H16,n-heptane   X10/85C  7.H 16.   0.   0.G   200.000  6000.000    100.20404 1   TRC(10/85)tuvw-1460
 1.85354704E+01 3.91420468E-02-1.38030268E-05 2.22403874E-09-1.33452580E-13    2
-3.19500783E+04-7.01902840E+01 1.11532484E+01-9.49415433E-03 1.95571181E-04    3
-2.49752520E-07 9.84873213E-11-2.67711735E+04-1.59096110E+01 3.32210000E+04    4
C8H8,styrene      X 4/89C  8.H  8.   0.   0.G   200.000  6000.000    104.15152 1   TRC(4/89)tuvw-4490
 1.58813334E+01 2.68374055E-02-9.90244561E-06 1.63759141E-09-9.98448972E-14    2
 1.00847804E+04-6.09419319E+01 1.18175769E+00 3.34876025E-02 6.92366253E-05    3
-1.24490419E-07 5.49384735E-11 1.56039062E+04 2.26624980E+01 1.78362886E+04    4
C8H10,ethylbenz   X10/86C  8.H 10.   0.   0.G   200.000  6000.000    106.16740 1   TRC(10/86)tuvw-3200
 1.55760759E+01 3.23064579E-02-1.19002723E-05 1.96792542E-09-1.19911164E-13    2
-4.41157516E+03-5.91043877E+01 3.51534963E+00 1.78145681E-02 1.18934012E-04    3
-1.75639764E-07 7.32061099E-11 1.02038595E+03 1.41539629E+01 3.59852836E+03    4
C8H16,1-octene    X 4/87C  8.H 16.   0.   0.G   200.000  6000.000    112.21504 1   TRC(4/87)tuvw-2500
 2.20134086E+01 3.67972174E-02-1.29830482E-05 2.10854637E-09-1.27294158E-13    2
-2.06109835E+04-8.55337170E+01 1.01487860E+01 1.25107538E-03 1.85252736E-04    3
-2.49094162E-07 1.00250395E-10-1.43267453E+04-8.50774418E+00-1.00535089E+04    4
C8H17,n-octyl     X10/83C  8.H 17.   0.   0.G   200.000  6000.000    113.22298 1   TRC(10/83)tuvw-1930
 1.87968043E+01 4.60048523E-02-1.68790126E-05 2.79422477E-09-1.70663886E-13    2
-1.14592578E+04-6.59622206E+01 1.18082518E+01-8.50348136E-04 1.87697700E-04    3
-2.45690702E-07 9.75813027E-11-6.66450442E+03-1.47298487E+01 3.81030000E+04    4
C8H18,isooctane   X 4/85C  8.H 18.   0.   0.G   200.000  6000.000    114.23092 1   TRC(4/85)tuvw-1490
 1.59899273E+01 5.53184790E-02-1.95267072E-05 3.11779172E-09-1.85312577E-13    2
-3.58757973E+04-6.01161414E+01 8.15737338E-01 7.32643959E-02 1.78300688E-05    3
-6.93589620E-08 3.21629382E-11-3.04772862E+04 2.41509994E+01-2.69420567E+04    4
C8H18,n-octane    X 4/85C  8.H 18.   0.   0.G   200.000  6000.000    114.23092 1   TRC(4/85)tuvw-1490
 2.21755407E+01 4.24426161E-02-1.49161103E-05 2.40376673E-09-1.44359037E-13    2
-3.61030944E+04-8.80854457E+01 1.25244908E+01-1.01018365E-02 2.21991595E-04    3
-2.84862420E-07 1.12409624E-10-2.98433034E+04-1.97108554E+01 3.77800000E+04    4
C9H19,n-nonyl     X10/83C  9.H 19.   0.   0.G   298.150  5000.000    127.24986 1   TRC(10/83)tuvw-1930
 1.91952670E+01 5.54392490E-02-2.14366010E-05 3.78851440E-09-2.50029870E-13    2
-1.43737110E+04-6.60562950E+01 2.87564850E+00 7.57927890E-02 1.34624310E-05    3
-6.40883970E-08 2.86941720E-11-8.68345310E+03 2.42622320E+01-4.45371290E+03    4
C10H8,naphthale   L 8/93C 10.H  8.   0.   0.G   200.000  6000.000    128.17352 1   Chen (1979)
 1.86129899E+01 3.04494141E-02-1.11224799E-05 1.81615406E-09-1.09601224E-13    2
 8.91552944E+03-8.00230479E+01-1.04919326E+00 4.62970611E-02 7.07592203E-05    3
-1.38408186E-07 6.20475748E-11 1.59846388E+04 3.02121571E+01 2.07130760E+04    4
C10H21,n-decyl    X10/83C 10.H 21.   0.   0.G   298.150  5000.000    141.27674 1   TRC(10/83)tuvw-1930
 2.13221280E+01 6.15735240E-02-2.38494830E-05 4.22091160E-09-2.78893070E-13    2
-1.79678090E+04-7.56437890E+01 3.08970070E+00 8.41179490E-02 1.59018380E-05    3
-7.23879340E-08 3.22669250E-11-1.16149410E+04 2.52811840E+01-6.94456890E+03    4
C12H9,o-bipheny   L12/84C 12.H  9.   0.   0.G   200.000  6000.000    153.20346 1   Burcat (1985)
 2.25693421E+01 3.45619386E-02-1.27020788E-05 2.08111827E-09-1.25849480E-13    2
 4.05905091E+04-9.57792390E+01 4.07649156E-01 5.42797841E-02 7.12514701E-05    3
-1.44404490E-07 6.48500575E-11 4.85349837E+04 2.81982515E+01 2.65893350E+04    4
O-C12D9           L12/84C 12.D  9.   0.   0.G   300.000  5000.000    162.25892 1   Burcat (1985)
 3.01231990E+01 2.83282550E-02-1.03665400E-05 1.65933380E-09-9.65271160E-14    2
 3.32077890E+04-1.35191307E+02-7.32993960E-01 8.98368950E-02-1.37312750E-05    3
-5.94270200E-08 3.37024300E-11 4.29430940E+04 3.00419560E+01 4.64864100E+04    4
C12H10,biphenyl   L12/84C 12.H 10.   0.   0.G   200.000  6000.000    154.21140 1   Burcat (1985)
 2.28964892E+01 3.68452570E-02-1.35016270E-05 2.20802808E-09-1.33358223E-13    2
 1.07394499E+04-1.00510148E+02 1.94566186E-01 5.35264368E-02 8.54996701E-05    3
-1.63903606E-07 7.29977217E-11 1.90020431E+04 2.72151271E+01 2.67835110E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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C12D10            L12/84C 12.D 10.   0.   0.G   300.000  5000.000    164.27302 1   Burcat (1985)
 3.09050600E+01 3.03499880E-02-1.10950480E-05 1.77558100E-09-1.03323270E-13    2
 2.88344530E+03-1.42438937E+02-1.57934860E+00 9.50595740E-02-1.45320710E-05    3
-6.26455970E-08 3.55300790E-11 1.31374220E+04 3.15298410E+01 1.66475020E+04    4
Jet-A(g)          L 6/88C 12.H 23.   0.   0.G   273.150  5000.000    167.31462 1   Gracia-Salcedo (1988)
 2.48802010E+01 7.82500480E-02-3.15509730E-05 5.78789000E-09-3.98279680E-13    2
-4.31106840E+04-9.36552550E+01 2.08692170E+00 1.33149650E-01-8.11574520E-05    3
 2.94092860E-08-6.51952130E-12-3.59128140E+04 2.73552890E+01-3.00344960E+04    4
Ca                L 3/93CA 1.   0.   0.   0.G   200.000  6000.000     40.07800 1   Chase (1985)
 1.92707623E+00 1.34909167E-03-1.07515862E-06 3.25457865E-10-2.64671538E-14    2   Sugar (1979)
 2.08196210E+04 7.42878398E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 2.06389279E+04 4.38454833E+00 2.13843029E+04    4
Ca+               J 9/83CA 1.E -1.   0.   0.G   298.150  6000.000     40.07745 1   Chase (1985)
 2.64221438E+00-1.60517359E-04-2.70843966E-08 5.13522496E-11-5.96487048E-15    2
 9.22596379E+04 4.25372623E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 9.23242106E+04 5.07767498E+00 9.30695856E+04    4
CaBr              J12/74CA 1.BR 1.   0.   0.G   300.000  5000.000    119.98200 1   Chase (1985)
 4.32173630E+00 4.09036740E-04-2.45415310E-07 6.90268740E-11-5.36841960E-15    2
-7.24627320E+03 5.67668059E+00 3.85118770E+00 3.02714810E-03-5.50978070E-06    3
 4.67645710E-09-1.49599600E-12-7.18372390E+03 7.77803289E+00-5.94108833E+03    4
CaBr2             J 6/74CA 1.BR 2.   0.   0.G   300.000  5000.000    199.88600 1   Chase (1985)
 7.41516390E+00 9.65490130E-05-4.24638160E-08 8.22868650E-12-5.86170570E-16    2
-4.85368240E+04-4.48080162E+00 6.60571570E+00 3.60588920E-03-5.83146500E-06    3
 4.26348010E-09-1.16672780E-12-4.83829630E+04-6.31052281E-01-4.62968444E+04    4
CaCL              J 6/70CA 1.CL 1.   0.   0.G   300.000  5000.000     75.53070 1   Chase (1985)
 4.30671160E+00 4.00849630E-04-2.33136610E-07 6.39217970E-11-4.86623830E-15    2
-1.38926560E+04 4.37337421E+00 3.67305150E+00 3.31441640E-03-5.16824350E-06    3
 3.71112670E-09-9.96870310E-13-1.37841440E+04 7.33679641E+00-1.25805061E+04    4
CaCL2             J 6/70CA 1.CL 2.   0.   0.G   300.000  5000.000    110.98340 1   Chase (1985)
 7.36500140E+00 1.53271080E-04-6.72752850E-08 1.30141310E-11-9.25679680E-16    2
-5.89547310E+04-7.18852085E+00 6.16133630E+00 5.30604290E-03-8.46494630E-06    3
 6.11288970E-09-1.65223620E-12-5.87229350E+04-1.44829735E+00-5.67135827E+04    4
CaF               J12/68CA 1.F  1.   0.   0.G   300.000  5000.000     59.07640 1   Chase (1985)
 4.19886210E+00 4.92440930E-04-2.61021230E-07 6.47916350E-11-4.73039510E-15    2
-3.40211290E+04 3.46314749E+00 3.05089900E+00 5.15494390E-03-7.35082960E-06    3
 4.78764580E-09-1.15231550E-12-3.37923450E+04 8.98800879E+00-3.27096252E+04    4
CaF2              J12/68CA 1.F  2.   0.   0.G   300.000  5000.000     78.07481 1   Chase (1985)
 6.65434310E+00 3.90526920E-04-1.70810700E-07 3.29528400E-11-2.33877410E-15    2
-9.64452790E+04-5.31072110E+00 4.23081520E+00 1.02558050E-02-1.54443450E-05    3
 1.05467910E-08-2.68439160E-12-9.59552610E+04 6.36780660E+00-9.43548797E+04    4
CaI               J 6/74CA 1.I  1.   0.   0.G   300.000  5000.000    166.98247 1   Chase (1985)
 4.31984710E+00 4.34666910E-04-2.74419200E-07 8.00804410E-11-6.54516080E-15    2
-1.90648040E+03 6.71480235E+00 4.02391010E+00 2.25599780E-03-4.09398330E-06    3
 3.48400510E-09-1.11629960E-12-1.87705110E+03 7.99031065E+00-6.06862329E+02    4
CaI2              J 6/74CA 1.I  2.   0.   0.G   300.000  5000.000    293.88694 1   Chase (1985)
 7.42386650E+00 8.85553580E-05-3.98468930E-08 7.89183570E-12-5.73526580E-16    2
-3.32877520E+04-2.97844542E+00 6.56417270E+00 4.26846500E-03-7.92475830E-06    3
 6.72056000E-09-2.14854610E-12-3.31382820E+04 1.02209228E+00-3.10492020E+04    4
CaO               J12/74CA 1.O  1.   0.   0.G   300.000  5000.000     56.07740 1   Chase (1985)
 9.17458650E+00-1.06432340E-02 7.69689680E-06-1.90704430E-09 1.55092310E-13    2
 2.32480410E+03-2.44275825E+01 2.67186020E+00 6.43240250E-03-9.57270300E-06    3
 6.76204240E-09-1.81730490E-12 4.27345310E+03 9.65422679E+00 5.28389925E+03    4
CaOH              J12/75CA 1.O  1.H  1.   0.G   300.000  5000.000     57.08534 1   Chase (1985)
 5.27547590E+00 1.80256200E-03-6.84356480E-07 1.30601960E-10-8.91315800E-15    2
-2.49846810E+04-2.31108541E+00 2.10048520E+00 1.86951590E-02-3.35066440E-05    3
 2.80256380E-08-8.79926890E-12-2.45309150E+04 1.20387635E+01-2.33185135E+04    4
CaOH+             J12/75CA 1.O  1.H  1.E -1.G   300.000  5000.000     57.08479 1   Chase (1985)
 5.40510870E+00 1.52450030E-03-4.78308080E-07 7.13472160E-11-4.12983490E-15    2
 4.26859330E+04-3.66981133E+00 2.15664600E+00 1.85186760E-02-3.32682220E-05    3
 2.78722200E-08-8.76080100E-12 4.31683950E+04 1.10927661E+01 4.43915181E+04    4
CaO2H2            J12/75CA 1.O  2.H  2.   0.G   300.000  5000.000     74.09268 1   Chase (1985)
 8.85820360E+00 2.99419090E-03-9.32192990E-07 1.37883860E-10-7.91119850E-15    2
-7.62794960E+04-1.71393039E+01 2.32221660E+00 3.75156820E-02-6.79965130E-05    3
 5.72902630E-08-1.80814750E-11-7.53228630E+04 1.24879611E+01-7.34591048E+04    4
CaS               J 9/77CA 1.S  1.   0.   0.G   298.150  5000.000     72.14400 1   Chase (1985)
 5.35707752E+00-4.18392513E-03 4.68291375E-06-1.40725075E-09 1.28892668E-13    2
 1.34741825E+04-1.43173210E+00 3.22586008E+00 5.30640418E-03-8.76527639E-06    3
 6.42601054E-09-1.61529035E-12 1.37334866E+04 8.34892080E+00 9.35841600E+03    4
Ca2               J 9/83CA 2.   0.   0.   0.G   200.000  6000.000     80.15600 1   Chase (1985)
 3.16700199E+00-6.16814444E-04 2.03540960E-07-2.77128180E-11 1.65003046E-15    2
 4.04382380E+04 1.37113509E+01 4.94590110E+00 4.30621337E-03-3.23384227E-05    3
 4.51640811E-08-1.93501071E-11 3.96175492E+04 2.54511315E+00 4.10779763E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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CL                J 6/82CL 1.   0.   0.   0.G   200.000  6000.000      35.45270 1   Chase (1985)
 2.94658358E+00-3.85985408E-04 1.36139388E-07-2.17032923E-11 1.28751025E-15    2
 1.36970327E+04 3.11330136E+00 2.26062480E+00 1.54154399E-03-6.80283622E-07    3
-1.59972975E-09 1.15416636E-12 1.38552986E+04 6.57020799E+00 1.45891941E+04    4
CL+               J 6/82CL 1.E -1.   0.   0.G   298.150  6000.000      35.45215 1   Chase (1985)
 3.12286072E+00-6.36624037E-04 2.48337920E-07-3.72507849E-11 1.98433686E-15    2
 1.64912234E+05 2.49731343E+00 1.71435396E+00 6.62489248E-03-1.35523086E-05    3
 1.14999760E-08-3.58760566E-12 1.65123809E+05 8.91739546E+00 1.65830698E+05    4
CL-               J 6/82CL 1.E  1.   0.   0.G   298.150  6000.000      35.45325 1   Chase (1985)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.88834132E+04 4.20062933E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.88834132E+04 4.20062933E+00-2.81380382E+04    4
CLCN              J 6/66CL 1.C  1.N  1.   0.G   300.000  5000.000      61.47044 1   Chase (1985)
 5.49200210E+00 2.09872480E-03-7.74159140E-07 1.38238820E-10-9.23348640E-15    2
 1.47491610E+04-3.73046245E+00 3.33908540E+00 1.03974680E-02-1.37046500E-05    3
 9.50619620E-09-2.59252600E-12 1.52375390E+04 6.83103255E+00 1.65917045E+04    4
CLF               J 6/77CL 1.F  1.   0.   0.G   300.000  5000.000      54.45110 1   Chase (1985)
 2.84862330E+00 3.17332790E-03-2.05233870E-06 5.21627330E-10-3.74722620E-14    2
-6.92788240E+03 9.31699651E+00 2.64455690E+00 6.24812560E-03-9.03543510E-06    3
 6.34005750E-09-1.74353720E-12-7.04691060E+03 9.63042791E+00-6.04884780E+03    4
CLF3              J 9/65CL 1.F  3.   0.   0.G   300.000  5000.000      92.44791 1   Chase (1985)
 8.95359670E+00 1.17221630E-03-5.08961880E-07 9.75634890E-11-6.88587310E-15    2
-2.20759680E+04-1.80815549E+01 2.89491190E+00 2.47185500E-02-3.51393230E-05    3
 2.25595910E-08-5.32619780E-12-2.07986400E+04 1.13816921E+01-1.91052460E+04    4
CLO               J 6/61CL 1.O  1.   0.   0.G   300.000  5000.000      51.45210 1   Chase (1985)
 4.09126190E+00 5.00031260E-04-1.87782060E-07 3.50976710E-11-2.42050380E-15    2
 1.08532230E+04 3.61889244E+00 2.81793640E+00 4.45313330E-03-4.41248930E-06    3
 1.59209420E-09-1.44862420E-14 1.11713970E+04 1.00579823E+01 1.21736480E+04    4
CLO2              L 7/93CL 1.O  2.   0.   0.G   200.000  6000.000      67.45150 1   Gurvich (1989)
 5.76647681E+00 1.41132506E-03-5.43714031E-07 1.00734295E-10-6.43543762E-15    2
 1.06324182E+04-2.86560082E+00 3.29338614E+00 6.19311337E-03 1.05685372E-06    3
-8.16191254E-09 4.34694600E-12 1.13760776E+04 1.03017024E+01 1.26285253E+04    4
CL2               TPIS89CL 2.   0.   0.   0.G   200.000  6000.000      70.90540 1   McBride (1993a)
 4.74727508E+00-4.88581710E-04 2.68444871E-07-2.43476083E-11-1.03683148E-15    2
-1.51101862E+03-3.44551305E-01 2.73638114E+00 7.83525700E-03-1.45104963E-05    3
 1.25730834E-08-4.13247145E-12-1.05880114E+03 9.44555879E+00 0.00000000E+00    4
CL2O              J12/65CL 2.0  1.   0.   0.G   300.000  5000.000      86.90480 1   Chase (1985)
 6.43400620E+00 6.27288090E-04-2.69332520E-07 5.10763940E-11-3.56915450E-15    2
 8.48605300E+03-4.93672407E+00 3.25452380E+00 1.27994490E-02-1.78824600E-05    3
 1.12643830E-08-2.59642520E-12 9.16574230E+03 1.05712106E+01 1.05680184E+04    4
Cr                J 6/79CR 1.   0.   0.   0.G   200.000  6000.000      51.99610 1   Chase (1985)
 3.08497752E+00-1.44703683E-03 1.08492194E-06-2.35643635E-10 1.86355816E-14    2
 4.68928202E+04 3.65913914E+00 2.50259371E+00-2.76560170E-05 1.03974095E-07    3
-1.61996406E-10 8.89391985E-14 4.70600237E+04 6.71107210E+00 4.78055833E+04    4
CrN               J12/73CR 1.N  1.   0.   0.G   300.000  5000.000      66.00284 1   Chase (1985)
 3.86496020E+00 8.51604560E-04-4.40707580E-07 1.06676010E-10-8.37314220E-15    2
 5.94774370E+04 5.29506757E+00 2.93046360E+00 3.03770420E-03-1.27139640E-06    3
-1.17812490E-09 8.55513490E-13 5.97442030E+04 1.01918812E+01 6.07397802E+04    4
CrO               J12/73CR 1.O  1.   0.   0.G   300.000  5000.000      67.99550 1   Chase (1985)
 4.01398180E+00 6.27002450E-04-2.79567940E-07 6.00031000E-11-4.40579160E-15    2
 2.13466930E+04 5.55171510E+00 2.84149960E+00 4.09533580E-03-3.57764630E-06    3
 8.17104390E-10 2.40720090E-13 2.16460670E+04 1.15179922E+01 2.26454051E+04    4
CrO2              J12/73CR 1.O  2.   0.   0.G   300.000  5000.000      83.99490 1   Chase (1985)
 5.84999980E+00 1.27251010E-03-5.49205480E-07 1.04974910E-10-7.39954860E-15    2
-1.10421830E+04-1.74497632E+00 3.30126450E+00 8.16258570E-03-5.89076800E-06    3
 1.61708560E-11 1.08162670E-12-1.03535690E+04 1.13991138E+01-9.05799743E+03    4
CrO3              J12/73CR 1.O  3.   0.   0.G   300.000  5000.000      99.99430 1   Chase (1985)
 8.16289460E+00 2.04508390E-03-8.85941310E-07 1.69762820E-10-1.19877650E-14    2
-3.80925570E+04-1.58958945E+01 1.90728580E+00 2.30496080E-02-2.65012940E-05    3
 1.28624130E-08-1.83819910E-12-3.66086800E+04 1.53451415E+01-3.52251261E+04    4
Cs                L 3/93CS 1.   0.   0.   0.G   200.000  6000.000     132.90543 1   Chase (1985)
 2.82023315E+00-3.34840327E-04-9.82915709E-08 1.27564369E-10-1.46119271E-14    2   Moore, C.E. (1971)
 8.30639354E+03 5.00894042E+00 2.50004554E+00-4.66833356E-07 1.68005061E-09    3
-2.48218029E-12 1.27712190E-15 8.45540436E+03 6.87573539E+00 9.20078273E+03    4
Cs+               J12/83CS 1.E -1.   0.   0.G   298.150  6000.000     132.90488 1   Chase (1985)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2   Moore, C.E. (1971)
 5.43873989E+04 6.18275754E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 5.43873989E+04 6.18275754E+00 5.51327739E+04    4
CsCL              J 6/68CS 1.CL 1.   0.   0.G   300.000  5000.000     168.35813 1   Chase (1985)
 4.47984550E+00 1.09491640E-04-3.99899140E-09 2.06419950E-13 2.21846400E-17    2
-3.02358090E+04 5.21731708E+00 4.18230300E+00 1.37595530E-03-2.05869330E-06    3
 1.48364740E-09-3.97645460E-13-3.01779270E+04 6.63848788E+00-2.88852607E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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CsF               J 6/68CS 1.F  1.   0.   0.G   300.000  5000.000    151.90383 1   Chase (1985)
 4.43733090E+00 1.27150000E-04-2.05476500E-08 2.98133570E-12-1.47742450E-16    2
-4.42279950E+04 3.87355582E+00 3.74498790E+00 3.01005160E-03-4.58838160E-06    3
 3.21796940E-09-8.37860170E-13-4.40906960E+04 7.19487312E+00-4.28749148E+04    4
CsO               J12/68CS 1.O  1.   0.   0.G   300.000  5000.000    148.90483 1   Chase (1985)
 4.46602820E+00 1.15632320E-04-5.99891870E-09 1.31766990E-13 5.76397450E-17    2
 6.19503090E+03 5.21454869E+00 3.98574190E+00 2.12792510E-03-3.21702550E-06    3
 2.27642950E-09-5.97219760E-13 6.28989400E+03 7.51602259E+00 7.54861703E+03    4
CsOH              J 6/71CS 1.O  1.H  1.   0.G   300.000  5000.000    149.91277 1   Chase (1985)
 5.70056490E+00 1.18203840E-03-3.19390940E-07 3.86429170E-11-1.66356360E-15    2
-3.29192050E+04-2.11870021E+00 4.54860030E+00 7.96123330E-03-1.33264970E-05    3
 1.03142340E-08-2.89737770E-12-3.28108900E+04 2.86187969E+00-3.11995968E+04    4
CsOH+             J12/71CS 1.O  1.H  1.E -1.G   300.000  5000.000    149.91222 1   Chase (1985)
 5.72925630E+00 1.15713240E-03-3.10444310E-07 3.70962910E-11-1.55094630E-15    2
 5.16264830E+04-5.76482232E-01 4.84871580E+00 6.89083460E-03-1.18393280E-05    3
 9.43353720E-09-2.72226850E-12 5.16781670E+04 3.08484850E+00 5.33428450E+04    4
Cs2               J12/83CS 2.   0.   0.   0.G   200.000  6000.000    265.81086 1   Chase (1985)
 6.86645178E+00-3.99014326E-03 1.31948084E-06-1.63413186E-10 6.88125908E-15    2
 1.08054293E+04-4.29749465E+00 4.74588225E+00-2.63862819E-03 1.14139305E-05    3
-1.60430500E-08 6.56112294E-12 1.15444856E+04 7.60679272E+00 1.29144271E+04    4
Cs2CL2            J 6/68CS 2.CL 2.   0.   0.G   300.000  5000.000    336.71626 1   Chase (1985)
 9.94243750E+00 6.26593030E-05-2.63310970E-08 4.89121420E-12-3.35541520E-16    2
-8.23458550E+04-1.05980604E+01 9.29526420E+00 2.85056000E-03-4.55760190E-06    3
 3.25577310E-09-8.60673620E-13-8.22228620E+04-7.51835332E+00-7.93590189E+04    4
Cs2F2             J 6/68CS 2.F  2.   0.   0.G   300.000  5000.000    303.80767 1   Chase (1985)
 9.87937250E+00 1.26748290E-04-5.09052530E-08 8.97117620E-12-5.80909600E-16    2
-1.10050570E+05-1.40548217E+01 8.44255610E+00 6.49210010E-03-1.08327570E-05    3
 8.17910540E-09-2.31739780E-12-1.09781650E+05-7.24824483E+00-1.07056586E+05    4
Cs2O              J12/68CS 2.O  1.   0.   0.G   300.000  5000.000    281.81026 1   Chase (1985)
 6.89794670E+00 1.01650980E-04-3.80620620E-08 6.14663930E-12-3.57582160E-16    2
-1.31699890E+04-1.16591689E+00 5.75536390E+00 4.91160730E-03-7.70725180E-06    3
 5.41569570E-09-1.40808980E-12-1.29468290E+04 4.30015461E+00-1.10706171E+04    4
Cs2O2H2           J 6/71CS 2.O  2.H  2.   0.G   300.000  5000.000    299.82554 1   Chase (1985)
 9.58093620E+00 5.32605090E-03-1.87805450E-06 3.09259250E-10-1.94295330E-14    2
-8.60258390E+04-1.32145943E+01 7.52281910E+00 7.90783720E-03 3.54302990E-06    3
-1.04563280E-08 4.80140320E-12-8.53384120E+04-1.90663311E+00-8.27310993E+04    4
Cs2SO4            J 6/79CS 2.S  1.O  4.   0.G   300.000  5000.000    361.87446 1   Chase (1985)
 1.54190450E+01 4.05276500E-03-1.79103410E-06 3.50246530E-10-2.52157360E-14    2
-1.40367750E+05-4.14921849E+01 4.29653850E+00 4.48543000E-02-6.09879230E-05    3
 4.05163880E-08-1.06734950E-11-1.37825590E+05 1.34096371E+01-1.35014739E+05    4
Cu                J 9/84CU 1.   0.   0.   0.G   200.000  6000.000     63.54600 1   Chase (1985)
 3.13522595E+00-1.13337547E-03 5.72023041E-07-7.66326177E-11 2.83881466E-15    2
 3.96177240E+04 2.25331944E+00 2.50006597E+00-6.77306412E-07 2.44116818E-09    3
-3.61314758E-12 1.86303224E-15 3.98583358E+04 5.76884604E+00 4.06037157E+04    4
Cu+               J 9/84CU 1.E -1.   0.   0.G   298.150  6000.000     63.54545 1   Chase (1985)
 2.49981754E+00 3.57922146E-07-2.21769848E-10 4.86937918E-14-2.39019610E-18    2
 1.30263854E+05 1.24951186E+01 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 1.30263788E+05 1.24941209E+01 1.31009163E+05    4
CuCL              J 3/66CU 1.CL 1.   0.   0.G   300.000  5000.000     98.99870 1   Chase (1985)
 4.39029880E+00 1.83494840E-04-5.71107030E-08 1.12933210E-11-8.19755200E-16    2
 9.60972660E+03 3.39216514E+00 3.34916000E+00 5.10283020E-03-9.12780020E-06    3
 7.60141550E-09-2.39844890E-12 9.79675620E+03 8.26947304E+00 1.09553590E+04    4
CuF               J12/77CU 1.F  1.   0.   0.G   300.000  5000.000     82.54440 1   Chase (1985)
 4.12273990E+00 6.31634630E-04-3.34728200E-07 8.08373670E-11-5.78348170E-15    2
-2.80059530E+03 3.48564565E+00 2.76545050E+00 6.85118050E-03-1.13388190E-05    3
 8.90965780E-09-2.69276920E-12-2.55485650E+03 9.87277405E+00-1.50966578E+03    4
CuF2              J12/77CU 1.F  2.   0.   0.G   300.000  5000.000    101.54281 1   Chase (1985)
 6.81842360E+00-1.64979080E-04 2.02917740E-07-2.54531130E-11 1.20657320E-16    2
-3.43227440E+04-7.12862916E+00 3.11076960E+00 1.43258070E-02-2.28117430E-05    3
 1.72788930E-08-5.07269770E-12-3.35004530E+04 1.09995699E+01-3.21060286E+04    4
CuO               J12/77CU 1.O  1.   0.   0.G   300.000  5000.000     79.54540 1   Chase (1985)
 4.27236250E+00 4.47132760E-04-2.39569790E-07 6.04053160E-11-4.24560160E-15    2
 3.55353490E+04 3.72701889E+00 3.70935200E+00 3.19650590E-03-5.29701090E-06    3
 4.21642380E-09-1.28918550E-12 3.56274700E+04 6.33140079E+00 3.68364130E+04    4
Cu2               J 9/66CU 2.   0.   0.   0.G   300.000  5000.000    127.09200 1   Chase (1985)
 4.42397340E+00 2.02489520E-04-6.44897930E-08 1.40654120E-11-7.60204940E-16    2
 5.70381310E+04 3.78535579E+00 3.92443580E+00 2.72749490E-03-4.91949560E-06    3
 4.18219650E-09-1.33935330E-12 5.71191870E+04 6.08380829E+00 5.83746552E+04    4
Cu3CL3            J 3/66CU 3.CL 3.   0.   0.G   300.000  5000.000    296.99610 1   Chase (1985)
 1.56261270E+01 4.33738330E-04-1.94670060E-07 3.84669380E-11-2.78997000E-15    2
-3.58818530E+04-3.77523345E+01 1.14429000E+01 2.06908060E-02-3.82640030E-05    3
 3.23410530E-08-1.03098840E-11-3.51516100E+04-1.82687865E+01-3.10992833E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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D                 J 3/82D  1.   0.   0.   0.G   200.000  6000.000      2.01410 1   Chase (1985)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 2.59212596E+04 5.91714338E-01 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 2.59212596E+04 5.91714338E-01 2.66666346E+04    4
D+                J 3/82D  1.E -1.   0.   0.G   298.150  6000.000      2.01355 1   Chase (1985)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 1.84511964E+05-1.01841452E-01 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 1.84511964E+05-1.01841452E-01 1.85257339E+05    4
D-                J 3/82D  1.E  1.   0.   0.G   298.150  6000.000      2.01465 1   Chase (1985)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 1.64237667E+04-1.01024344E-01 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 1.64237667E+04-1.01024344E-01 1.71691417E+04    4
DCL               J 6/77D  1.CL 1.   0.   0.G   300.000  5000.000     37.46680 1   Chase (1985)
 2.95720340E+00 1.59181600E-03-6.33202720E-07 1.17556580E-10-8.15999110E-15    2
-1.21735150E+04 5.89879666E+00 3.82692130E+00-2.50133260E-03 6.04661240E-06    3
-4.48375190E-09 1.13676410E-12-1.23019210E+04 1.89177776E+00-1.12270035E+04    4
DF                J 6/77D  1.F  1.   0.   0.G   300.000  5000.000     21.01251 1   Chase (1985)
 2.72646200E+00 1.50912930E-03-5.17049380E-07 8.54853710E-11-5.41960240E-15    2
-3.39369400E+04 5.82982015E+00 3.49813860E+00 2.21767930E-04-1.33202400E-06    3
 2.56194930E-09-1.15122410E-12-3.41832320E+04 1.65507895E+00-3.31376542E+04    4
DOCL              J 3/79D  1.O  1.CL 1.   0.G   300.000  5000.000     53.46620 1   Chase (1985)
 4.43507610E+00 2.53223870E-03-1.03123310E-06 1.90054540E-10-1.26823840E-14    2
-1.09194020E+04 2.72715963E+00 2.47904180E+00 1.08458960E-02-1.52283050E-05    3
 1.14373140E-08-3.42049250E-12-1.05180920E+04 1.21267106E+01-9.41045332E+03    4
D2                TPIS89D  2.   0.   0.   0.G   200.000  6000.000      4.02820 1   McBride (1993)
 2.73068929E+00 1.48004781E-03-4.79314848E-07 7.89496274E-11-4.88380823E-15    2
-7.95267504E+02 1.64266094E+00 3.49546974E+00 2.58348159E-04-1.31762502E-06    3
 2.42912018E-09-1.05982498E-12-1.04631580E+03-2.51905534E+00 0.00000000E+00    4
D2+               J 9/77D  2.E -1.   0.   0.G   300.000  5000.000      4.02766 1   Chase (1985)
 3.58918000E+00 8.92146510E-04-2.42644840E-07 5.75844090E-11-6.73805600E-15    2
 1.79037520E+05-2.05817714E+00 3.80751400E+00-3.11062600E-03 1.01629820E-05    3
-9.83632710E-09 3.26598530E-12 1.79170960E+05-2.28662654E+00 1.80239805E+05    4
D2-               J 9/77D  2.E  1.   0.   0.G   300.000  5000.000      4.02875 1   Chase (1985)
 3.75310420E+00 9.80189910E-04-3.63879600E-07 7.07004820E-11-5.06742720E-15    2
 2.70647080E+04-2.81955268E+00 3.21448000E+00 7.83581650E-04 3.58926850E-06    3
-5.23941900E-09 2.08713650E-12 2.72930090E+04 3.68154876E-01 2.83085763E+04    4
D2O               J 6/77D  2.O  1.   0.   0.G   300.000  5000.000     20.02760 1   Chase (1985)
 2.72645950E+00 3.98451730E-03-1.49326260E-06 2.63497720E-10-1.76495570E-14    2
-3.09026380E+04 7.31820104E+00 3.85411310E+00 1.47122880E-04 3.00690060E-06    3
-1.77476280E-09 2.30188620E-13-3.11516510E+04 1.73341954E+00-2.99728411E+04    4
D2S               J 6/77D  2.S  1.   0.   0.G   300.000  5000.000     36.09420 1   Chase (1985)
 3.66629010E+00 3.49922640E-03-1.42072840E-06 2.66856390E-10-1.86847390E-14    2
-4.21473080E+03 3.79969952E+00 3.80708240E+00 3.75963110E-04 5.75307990E-06    3
-5.34857400E-09 1.40540830E-12-4.06612190E+03 3.87928732E+00-2.87340817E+03    4
F                 J 6/82F  1.   0.   0.   0.G   200.000  6000.000     18.99840 1   Chase (1985)
 2.66749541E+00-1.66693548E-04 6.42448457E-08-1.08588758E-11 6.70845755E-16    2
 8.78895350E+03 4.00729173E+00 2.41951429E+00 2.94132793E-03-8.92799246E-06    3
 9.92060935E-09-3.79860044E-12 8.75732351E+03 4.74771017E+00 9.54836785E+03    4
F+                J 6/82F  1.E -1.   0.   0.G   298.150  6000.000     18.99785 1   Chase (1985)
 2.68834861E+00-1.76182961E-04 6.06940639E-08-8.91530067E-12 5.47552167E-16    2
 2.11744095E+05 4.27480802E+00 3.08421084E+00-9.00062139E-04-1.64599174E-07    3
 1.10121336E-09-5.56270920E-13 2.11619101E+05 2.14597617E+00 2.12499113E+05    4
F-                J 6/82F  1.E  1.   0.   0.G   298.150  6000.000     18.99895 1   Chase (1985)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-3.14241522E+04 3.26488271E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-3.14241522E+04 3.26488271E+00-3.06787772E+04    4
FCN               J 6/69F  1.C  1.N  1.   0.G   300.000  5000.000     45.01614 1   Chase (1985)
 5.08985570E+00 2.41706840E-03-9.76827660E-07 1.78134420E-10-1.21185670E-14    2
 2.57807810E+03-2.87278107E+00 3.25169410E+00 8.30731440E-03-8.36663580E-06    3
 4.41256440E-09-9.08824230E-13 3.05511980E+03 6.44214763E+00 4.32821878E+03    4
FO                J12/66F  1.O  1.   0.   0.G   300.000  5000.000     34.99780 1   Chase (1985)
 3.91927740E+00 7.04423450E-04-2.66482040E-07 4.96175990E-11-3.36885710E-15    2
 1.17981930E+04 3.32875823E+00 2.96800240E+00 2.64833930E-03-3.73680050E-07    3
-1.90062250E-09 1.06142830E-12 1.20878440E+04 8.39349733E+00 1.30839080E+04    4
FO2               J 9/66F  1.O  2.   0.   0.G   300.000  5000.000     50.99720 1   Chase (1985)
 5.70409350E+00 1.38628890E-03-5.83553740E-07 1.09372140E-10-7.58691810E-15    2
-3.96786780E+02-2.06791742E+00 3.78050730E+00 6.81745950E-03-5.81336050E-06    3
 1.75625040E-09 6.77574300E-14 1.27694680E+02 7.83568288E+00 1.51000973E+03    4
F2                TPIS89F  2.   0.   0.   0.G   200.000  6000.000     37.99681 1   McBride (1993)
 3.86166219E+00 7.88367679E-04-1.81982940E-07-9.17436560E-12 2.65193472E-15    2
-1.23238655E+03 2.04119869E+00 3.20832415E+00 1.25919179E-03 3.89747979E-06    3
-7.22184984E-09 3.31837862E-12-1.03425794E+03 5.61903603E+00 0.00000000E+00    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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F2O               J12/69F  2.0  1.   0.   0.G   300.000  5000.000     53.99621 1   Chase (1985)
 6.00518710E+00 1.10284020E-03-4.75479370E-07 9.06831450E-11-6.37570980E-15    2
 9.19060650E+02-5.22210571E+00 2.61092190E+00 1.22312800E-02-1.34414150E-05    3
 5.89094120E-09-5.74871750E-13 1.73471960E+03 1.17878819E+01 2.94942436E+03    4
FS2F,fluorodisu   J 6/76F  2.S  2.   0.   0.G   200.000  6000.000    102.12881 1   Chase (1985)
 9.11491404E+00 9.25549788E-04-3.66972859E-07 6.31489899E-11-3.94877764E-15    2
-4.34448561E+04-1.73685774E+01 2.22664682E+00 3.28125204E-02-5.92797021E-05    3
 5.02331280E-08-1.62599019E-11-4.21538019E+04 1.51239428E+01-4.04636521E+04    4
Fe                J 3/78FE 1.   0.   0.   0.G   200.000  6000.000     55.84700 1   Chase (1985)
 3.26197970E+00-1.05582533E-03 5.92906998E-07-1.07189455E-10 7.48064402E-15    2
 4.90969873E+04 3.52443894E+00 1.70744428E+00 1.06339224E-02-2.76118171E-05    3
 2.80917854E-08-1.01219824E-11 4.91843725E+04 9.80811099E+00 4.99728787E+04    4
Fe+               J 6/84FE 1.E -1.   0.   0.G   298.150  6000.000     55.84645 1   Chase (1985)
 3.33602399E+00-2.72549262E-04 8.05440344E-09 1.51229089E-11-1.43376595E-15    2
 1.41036455E+05 2.86476964E+00 2.76418106E+00 2.86948238E-03-7.61235651E-06    3
 8.18183334E-09-3.11792199E-12 1.41159039E+05 5.53997977E+00 1.42058161E+05    4
Fe-               J 6/84FE 1.E  1.   0.   0.G   298.150  6000.000     55.84755 1   Chase (1985)
 3.36310586E+00-8.29375042E-04 3.12426241E-07-5.20068355E-11 3.17875241E-15    2
 4.63564307E+04 2.76802425E+00 1.52174510E+00 9.79673193E-03-2.11078670E-05    3
 1.84820903E-08-5.89537134E-12 4.65710215E+04 1.08683385E+01 4.73074180E+04    4
FeC5O5            J 3/78FE 1.C  5.O 5.   0.G   300.000  5000.000    195.89900 1   Chase (1985)
 2.11640210E+01 1.03331030E-02-4.33109360E-06 8.20474970E-10-5.77738740E-14    2
-9.48889340E+04-7.20736520E+01 6.60654600E+00 7.50421290E-02-1.22012750E-04    3
 1.00553780E-07-3.22609730E-11-9.19514380E+04-2.57600621E+00-8.75408014E+04    4
FeCL              J 6/65FE 1.CL 1.   0.   0.G   300.000  5000.000     91.29970 1   Chase (1985)
 4.69406690E+00 1.16040780E-04-2.08401750E-08-1.76265560E-12 5.23138140E-16    2
 2.87903440E+04 4.19355506E+00 3.78858260E+00 4.36780110E-03-6.69223280E-06    3
 4.17074540E-09-8.46867730E-13 2.89200970E+04 8.35336756E+00 3.01925149E+04    4
FeCL2             J12/70FE 1.CL 2.   0.   0.G   300.000  5000.000    126.75240 1   Chase (1985)
 6.94926010E+00 5.33716410E-04 7.02212070E-08-6.14754900E-11 6.79331430E-15    2
-1.90458320E+04-3.75951441E+00 5.45575050E+00 7.96329270E-03-1.25939640E-05    3
 8.99767340E-09-2.32423630E-12-1.88442970E+04 3.02284219E+00-1.69583047E+04    4
FeCL3             J 6/65FE 1.CL 3.   0.   0.G   300.000  5000.000    162.20510 1   Chase (1985)
 9.77711060E+00 2.44213620E-04-1.03139940E-07 1.92074260E-11-1.31792990E-15    2
-3.34395700E+04-1.45491463E+01 7.56148730E+00 9.73382490E-03-1.55433050E-05    3
 1.11863680E-08-3.00229980E-12-3.30136240E+04-3.98583203E+00-3.04431637E+04    4
FeO               J 9/66FE 1.O  1.   0.   0.G   300.000  5000.000     71.84640 1   Chase (1985)
 4.20498170E+00 2.68384520E-04-8.94267360E-08 3.18559110E-11-3.39225430E-15    2
 2.88291700E+04 4.83043159E+00 2.82452560E+00 4.30492070E-03-4.10847810E-06    3
 1.32011890E-09 7.13162170E-14 2.91940350E+04 1.18911760E+01 3.01938519E+04    4
Fe(OH)2           J12/66FE 1.O  2.H  2.   0.G   200.000  6000.000     89.86168 1   Chase (1985)
 8.96262012E+00 4.20137342E-03-1.61017443E-06 2.68347076E-10-1.63497305E-14    2
-4.27994358E+04-1.86912367E+01-1.67667734E+00 6.16931464E-02-1.20738995E-04    3
 1.09814026E-07-3.72856831E-11-4.11289708E+04 2.96771710E+01-3.97541166E+04    4
Fe2CL4            J12/70FE 2.CL 4.   0.   0.G   300.000  5000.000    253.50480 1   Chase (1985)
 1.53575000E+01 6.42078610E-04 2.08177300E-08-5.15805590E-11 6.06734950E-15    2
-5.65100370E+04-3.18965871E+01 1.27382420E+01 1.32355580E-02-2.16418730E-05    3
 1.59936670E-08-4.35070970E-12-5.61065790E+04-1.98247491E+01-5.18820452E+04    4
Fe2CL6            J 6/65FE 2.CL 6.   0.   0.G   200.000  6000.000    324.41020 1   Chase (1985)
 2.15645031E+01 4.62349015E-04-1.84952078E-07 3.20143043E-11-2.01002737E-15    2
-8.52432375E+04-5.86538185E+01 1.42211808E+01 4.35485968E-02-9.60390188E-05    3
 9.37463081E-08-3.36051626E-11-8.41996265E+04-2.59244694E+01-7.87030865E+04    4
H                 L 5/93H  1.   0.   0.   0.G   200.000  6000.000      1.00794 1   Moore, C.E. (1972)
 2.50000286E+00-5.65334214E-09 3.63251723E-12-9.19949720E-16 7.95260746E-20    2   Herzberg (1970)
 2.54736589E+04-4.46698494E-01 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 2.54736599E+04-4.46682853E-01 2.62190349E+04    4
H+                L 7/88H  1.E -1.   0.   0.G   298.150  6000.000      1.00739 1   Moore, C.E. (1972)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 1.84021428E+05-1.14064664E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 1.84021428E+05-1.14064664E+00 1.84766803E+05    4
H-                L/7/88H  1.E  1.   0.   0.G   298.150  6000.000      1.00849 1   Chase (1985)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 1.59761670E+04-1.13901387E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 1.59761670E+04-1.13901387E+00 1.67215420E+04    4
HALO              J 3/64H  1.AL 1.O  1.   0.G   200.000  6000.000     43.98888 1   Chase (1985)
 5.09075339E+00 2.42514117E-03-9.39932946E-07 1.59391004E-10-9.86747317E-15    2
 2.05009459E+03-4.61450791E+00 3.29221159E+00-2.68200399E-03 2.86841292E-05    3
-3.79708866E-08 1.54020350E-11 2.97771050E+03 6.96160970E+00 4.02573333E+03    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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HBO               J12/75H  1.B  1.O  1.   Ø.G   300.000  5000.000     27.81834 1   Chase (1985)
 3.74851810E+00 3.66108590E-03-1.46354090E-06 2.65199030E-10-1.78342750E-14    2
-2.52257980E+04 1.74647757E+00 2.21431060E+00 9.37185130E-03-1.07110740E-05    3
 7.67697740E-09-2.35863710E-12-2.48492460E+04 9.37201677E+00-2.38530740E+04    4
HBO+              J12/75H  1.B  1.O  1.E -1.G   300.000  5000.000     27.81779 1   Chase (1985)
 3.94750800E+00 3.43154360E-03-1.27870840E-06 2.21806040E-10-1.47571920E-14    2
 1.41359980E+05 1.99889589E+00 2.25442830E+00 8.03018720E-03-5.97490720E-06    3
 2.42819500E-09-4.30511240E-13 1.41850690E+05 1.08122075E+01 1.42831572E+05    4
HBO-              J12/75H  1.B  1.O  1.E  1.G   300.000  5000.000     27.81889 1   Chase (1985)
 4.08692650E+00 2.97847560E-03-1.23871070E-06 2.46933350E-10-1.84550480E-14    2
-3.09300260E+04 2.78014255E+00 3.97079550E+00-2.21001070E-03 1.45354130E-05    3
-1.56389250E-08 5.39789660E-12-3.05894990E+04 4.82496975E+00-2.94037719E+04    4
HBO2              J12/64H  1.B  1.O  2.   Ø.G   300.000  5000.000     43.81774 1   Chase (1985)
 4.73895190E+00 4.77187710E-03-1.80634940E-06 3.14928890E-10-2.07383120E-14    2
-6.92488380E+04 9.86391767E-03 2.87078660E+00 7.88626440E-03-4.07368420E-07    3
-4.70590220E-09 2.35488930E-12-6.86241110E+04 1.01805186E+01-6.74294533E+04    4
HBS               J12/75H  1.B  1.S  1.   Ø.G   300.000  5000.000     43.88494 1   Chase (1985)
 4.44122650E+00 2.99798250E-03-1.19382300E-06 2.11958320E-10-1.34660970E-14    2
 4.44029750E+03-6.46783174E-01 1.55959030E+00 1.39668380E-02-1.79885950E-05    3
 1.23151410E-08-3.40909570E-12 5.08909360E+03 1.35018986E+01 6.03866710E+03    4
HBS+              J12/75H  1.B  1.S  1.E -1.G   300.000  5000.000     43.88439 1   Chase (1985)
 4.70975420E+00 2.81870360E-03-1.16330880E-06 2.17688390E-10-1.51086860E-14    2
 1.34191390E+05-8.37472195E-01 2.25115610E+00 1.20771680E-02-1.53221560E-05    3
 1.04940900E-08-2.93252920E-12 1.34754760E+05 1.12707699E+01 1.35846718E+05    4
HBr               J 9/65H  1.BR 1.   Ø.   Ø.G   300.000  5000.000     80.91194 1   Chase (1985)
 2.79358040E+00 1.56559250E-03-5.61710640E-07 9.57831420E-11-6.18139900E-15    2
-5.23383840E+03 7.65553403E+00 3.60566900E+00-5.95294310E-04 6.50295680E-07    3
 9.37812190E-10-7.11418520E-13-5.43894550E+03 3.49634113E+00-4.38311167E+03    4
HCN               L 7/88H  1.C  1.N  1.   Ø.G   200.000  6000.000     27.02568 1   Gurvich (1979)
 3.80231733E+00 3.14630009E-03-1.06315698E-06 1.66185395E-10-9.79891789E-15    2
 1.49104829E+04 1.57503584E+00 2.25901123E+00 1.00510591E-02-1.33514911E-05    3
 1.00920882E-08-3.00882048E-12 1.52158495E+04 8.91634590E+00 1.62366754E+04    4
HCO               L12/89H  1.C  1.O  1.   Ø.G   200.000  6000.000     29.01834 1   Jacox (1988)
 3.64896209E+00 3.08090819E-03-1.12429876E-06 1.86308085E-10-1.13951828E-14    2   Gurvich (1979)
 3.71209048E+03 5.06147406E+00 4.22118584E+00-3.24392532E-03 1.37799446E-05    3
-1.33144093E-08 4.33768865E-12 3.83956496E+03 3.39437243E+00 5.05141013E+03    4
HCO+              J12/70H  1.C  1.O  1.E -1.G   300.000  5000.000     29.01779 1   Chase (1985)
 3.74118800E+00 3.34415170E-03-1.23971210E-06 2.11893880E-10-1.37041500E-14    2
 9.88840780E+04 2.07861350E+00 2.47397360E+00 8.67155900E-03-1.00315000E-05    3
 6.71705270E-09-1.78726740E-12 9.91466080E+04 8.17571180E+00 1.00193449E+05    4
HCCN              TPIS91H  1.C  2.N  1.   Ø.G   200.000  6000.000     39.03668 1   Gurvich (1991)
 6.56314169E+00 3.48040967E-03-1.24603080E-06 2.00764486E-10-1.20044547E-14    2
 7.11347086E+04-9.86556141E+00 1.87184307E+00 2.60611314E-02-4.62723965E-05    3
 4.18609731E-08-1.45352705E-11 7.20340360E+04 1.22173228E+01 7.34175107E+04    4
HCL               J 9/64H  1.CL 1.   Ø.   Ø.G   300.000  5000.000     36.46064 1   Chase (1985)
 2.76658840E+00 1.43818830E-03-4.69930000E-07 7.34994080E-11-4.37311060E-15    2
-1.19174680E+04 6.47150629E+00 3.52481710E+00 2.99848620E-05-8.62218910E-07    3
 2.09797210E-09-9.86581910E-13-1.21505090E+04 2.40892359E+00-1.11021897E+04    4
HD                J 6/77H  1.D  1.   Ø.   Ø.G   300.000  5000.000      3.02204 1   Chase (1985)
 2.84645440E+00 1.06319610E-03-2.44338050E-07 2.90508340E-11-1.16215310E-15    2
-7.61824650E+02 9.80143004E-01 3.43254770E+00 6.51070280E-04-1.93326660E-06    3
 2.41017360E-09-8.67323970E-13-1.00092720E+03-2.38902346E+00 3.86979786E+01    4
HD+               J 9/77H  1.D  1.E -1.   Ø.G   300.000  5000.000      3.02149 1   Chase (1985)
 3.29097640E+00 1.15515290E-03-3.44494630E-07 7.67226820E-11-8.09481330E-15    2
 1.78942790E+05-4.78608910E-01 3.88271360E+00-3.07793810E-03 8.19144730E-06    3
-6.81194990E-09 1.98598980E-12 1.78945630E+05-2.80336148E+00 1.80026303E+05    4
HD-               J 9/77H  1.D  1.E  1.   Ø.G   300.000  5000.000      3.02259 1   Chase (1985)
 3.49399490E+00 1.24486670E-03-4.72887140E-07 9.10596370E-11-6.48629260E-15    2
 2.71577340E+04-2.23110490E+00 3.64288770E+00-2.12912890E-03 8.92841230E-06    3
-9.34812040E-09 3.25649710E-12 2.72692710E+04-2.25562690E+00 2.83227106E+04    4
HDO               J 6/77H  1.D  1.O  1.   Ø.G   300.000  5000.000     19.02144 1   Chase (1985)
 2.66726880E+00 3.55752090E-03-1.20260030E-06 1.96072090E-10-1.23526200E-14    2
-3.03728690E+04 7.98359910E+00 4.07544220E+00-1.38202850E-03 5.70255340E-06    3
-4.41636460E-09 1.22630620E-12-3.07076080E+04 9.71067969E-01-2.95117089E+04    4
HF                J 6/77H  1.F  1.   Ø.   Ø.G   300.000  5000.000     20.00634 1   Chase (1985)
 2.99191100E+00 7.14894750E-04-6.86309730E-08-1.16171300E-11 1.94123750E-15    2
-3.36213640E+04 3.82549503E+00 3.43799860E+00 5.35715980E-04-1.52296550E-06    3
 1.75644910E-09-5.78699400E-13-3.38189720E+04 1.20618153E+00-3.27803794E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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HI                J 9/61H  1.I  1.   0.   0.G   300.000  5000.000    127.91241 1   Chase (1985)
 2.91040080E+00 1.56881880E-03-5.92276320E-07 1.05370940E-10-7.03751160E-15    2
 2.25086590E+03 7.86447051E+00 3.69637220E+00-1.42247550E-03 3.01311880E-06    3
-1.26664030E-09-3.50987650E-14 2.10735810E+03 4.08812111E+00 3.17030779E+03    4
HNC               L11/92H  1.N  1.C  1.   0.G   200.000  6000.000     27.02568 1   Jacox (1988)
 4.22248103E+00 2.59458278E-03-8.58480969E-07 1.30745002E-10-7.50339765E-15    2   Gurvich (1991)
 2.20127593E+04-7.79447358E-02 2.30186735E+00 1.54157529E-02-3.13262156E-05    3
 3.08816551E-08-1.11912353E-11 2.22277183E+04 8.14751135E+00 2.33781812E+04    4
HNCO              J12/70H  1.N  1.C  1.O  1.G   200.000  6000.000     43.02508 1   Chase (1985)
 5.29404664E+00 4.03039650E-03-1.41290348E-06 2.24428234E-10-1.32859380E-14    2
-1.41653759E+04-3.08763130E+00 2.24322454E+00 1.44986380E-02-1.52609054E-05    3
 8.36364453E-09-1.72191967E-12-1.34257512E+04 1.21565469E+01-1.22316288E+04    4
HNO               L12/89H  1.N  1.O  1.   0.G   200.000  6000.000     31.01408 1   Jacox (1988)
 3.16554762E+00 3.00005132E-03-3.94350282E-07-3.85787491E-11 7.08091931E-15    2   Gurvich (1989)
 1.11944169E+04 7.64764695E+00 4.53525882E+00-5.68546910E-03 1.85199976E-05    3
-1.71883674E-08 5.55833090E-12 1.10398805E+04 1.74314734E+00 1.22716461E+04    4
HNO2              TPIS89H  1.N  1.O  2.   0.G   200.000  6000.000     47.01348 1   Gurvich (1989)
 5.79182658E+00 3.65162663E-03-1.29293451E-06 2.06892932E-10-1.23154855E-14    2
-1.15655526E+04-4.05538525E+00 3.21415925E+00 8.12777920E-03 1.65999516E-06    3
-9.52815563E-09 4.87131816E-12-1.07532360E+04 9.82200021E+00-9.43554377E+03    4
HNO3              L 4/90H  1.N  1.O  3.   0.G   200.000  6000.000     63.01288 1   Gurvich (1989)
 8.00379234E+00 4.49837533E-03-1.73648758E-06 2.93685555E-10-1.81478673E-14    2
-1.92563022E+04-1.60985546E+01 1.74492946E+00 1.88040888E-02-8.15963597E-06    3
-5.78584532E-09 4.43768083E-12-1.73805296E+04 1.69545524E+01-1.61059245E+04    4
HOCL              J 3/79H  1.O  1.CL 1.   0.G   300.000  5000.000     52.46004 1   Chase (1985)
 4.22501050E+00 2.31826750E-03-8.38423800E-07 1.41763980E-10-8.74699940E-15    2
-1.03686570E+04 3.59007556E+00 2.93205370E+00 6.93777440E-03-6.71918450E-06    3
 3.15688660E-09-4.69658800E-13-1.00867990E+04 9.95256576E+00-8.95759158E+03    4
HOF               J12/72H  1.O  1.F  1.   0.G   300.000  5000.000     36.00574 1   Chase (1985)
 4.04643360E+00 2.44862830E-03-8.62835530E-07 1.42099040E-10-8.93569150E-15    2
-1.32090670E+04 3.34993279E+00 3.23109290E+00 3.73898570E-03 6.30097620E-07    3
-3.62150020E-09 1.78671330E-12-1.29547790E+04 7.75090349E+00-1.18259888E+04    4
HO2               L 5/89H  1.O  2.   0.   0.G   200.000  6000.000     33.00674 1   Jacox (1988)
 4.17228728E+00 1.88117647E-03-3.46277408E-07 1.94657853E-11 1.76254294E-16    2   Hills (1984)
 6.18102964E+01 2.95767746E+00 4.30179801E+00-4.74912051E-03 2.11582891E-05    3
-2.42763894E-08 9.29225124E-12 2.94808040E+02 3.71666245E+00 1.50965000E+03    4
HSO3F             J 6/72H  1.S  1.O  3.F  1.G   300.000  5000.000    100.07054 1   Chase (1985)
 1.03641900E+01 5.38611640E-03-2.12315720E-06 3.82083430E-10-2.58070900E-14    2
-9.43983340E+04-2.60055034E+01 2.11924450E+00 3.15457100E-02-3.13178880E-05    3
 1.24615070E-08-8.25146300E-13-9.23615960E+04 1.55596956E+01-9.05800898E+04    4
H2                TPIS78H  2.   0.   0.   0.G   200.000  6000.000      2.01588 1   McBride (1993)
 2.93286579E+00 8.26607967E-04-1.46402335E-07 1.54100359E-11-6.88804432E-16    2
-8.13065597E+02-1.02432887E+00 2.34433112E+00 7.98052075E-03-1.94781510E-05    3
 2.01572094E-08-7.37611761E-12-9.17935173E+02 6.83010238E-01 0.00000000E+00    4
H2+               TPIS78H  2.E -1.   0.   0.G   298.150  6000.000      2.01533 1   Gurvich (1978)
 3.44204765E+00 5.99083239E-04 6.69133685E-08-3.43574373E-11 1.97626599E-15    2
 1.78649686E+05-2.79499055E+00 3.77256072E+00-1.95746589E-03 4.54812047E-06    3
-2.82152141E-09 5.33969209E-13 1.78694104E+05-3.96609192E+00 1.79766749E+05    4
H2-               J 9/77H  2.E  1.   0.   0.G   300.000  5000.000      2.01643 1   Chase (1985)
 3.29210760E+00 1.43586260E-03-5.47055930E-07 1.04338830E-10-7.38279980E-15    2
 2.72161810E+04-1.98277664E+00 3.83801420E+00-3.17947680E-03 1.00430110E-05    3
-9.55181160E-09 3.12813300E-12 2.72348560E+04-3.99862254E+00 2.83091721E+04    4
HCHO,formaldehy   L 8/88H  2.C  1.O  1.   0.G   200.000  6000.000     30.02628 1   Gurvich (1978)
 3.16952654E+00 6.19320583E-03-2.25056377E-06 3.65975680E-10-2.20149470E-14    2   TRC(6/87)w-5030
-1.44784444E+04 6.04209449E+00 4.79372315E+00-9.90833369E-03 3.73220008E-05    3
-3.79285261E-08 1.31772652E-11-1.43089567E+04 6.02812900E-01-1.30590979E+04    4
HCOOH             L 8/88H  2.C  1.O  2.   0.G   200.000  6000.000     46.02568 1   Chao (1978)
 5.69579404E+00 7.72237361E-03-3.18037808E-06 5.57949466E-10-3.52618226E-14    2
-4.81599723E+04-6.01680080E+00 3.23262453E+00 2.81129582E-03 2.44034975E-05    3
-3.17501066E-08 1.20631660E-11-4.67785606E+04 9.86205647E+00-4.55312460E+04    4
H2F2              J 6/77H  2.F  2.   0.   0.G   300.000  5000.000     40.01269 1   Chase (1985)
 4.91603890E+00 3.98576540E-03-1.35587070E-06 2.19309210E-10-1.37160050E-14    2
-7.05947770E+04-6.29605759E-01 2.67633120E+00 1.22979910E-02-1.24559650E-05    3
 6.36025230E-09-1.12708230E-12-7.01237150E+04 1.03109299E+01-6.88771705E+04    4
H2O               L 8/89H  2.O  1.   0.   0.G   200.000  6000.000     18.01528 1   Cox (1989)
 2.67703787E+00 2.97318329E-03-7.73769690E-07 9.44336689E-11-4.26900959E-15    2   Haar (1984)
-2.98858938E+04 6.88255571E+00 4.19864056E+00-2.03643410E-03 6.52040211E-06    3   TRC(10/88)tuv-25
-5.48797062E-09 1.77197817E-12-3.02937267E+04-8.49032208E-01-2.90848168E+04    4   Woolley (1987)
H2O+              TPIS89H  2.O  1.E -1.   0.G   298.150  6000.000     18.01473 1   Gurvich (1989)
 3.31570460E+00 2.10648728E-03-3.76341449E-07 3.47525900E-11-1.70335651E-15    2
 1.16991617E+05 4.03220429E+00 4.02465853E+00-1.08850969E-03 5.13575400E-06    3
-4.40026592E-09 1.40726274E-12 1.16869757E+05 6.99971245E-01 1.18058671E+05    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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H2O2              L 2/93H  2.0  2.   0.   0.G   200.000  6000.000      34.01468 1   Gurvich (1978)
 4.57333537E+00 4.04984070E-03-1.29479479E-06 1.97281710E-10-1.13402846E-14    2   TRC(6/88)w-31
-1.80548121E+04 7.04278488E-01 4.27611269E+00-5.42822417E-04 1.67335701E-05    3
-2.15770813E-08 8.62454363E-12-1.77542989E+04 3.43505074E+00-1.63942313E+04    4
H2S               J 6/77H  2.S  1.   0.   0.G   300.000  5000.000      34.08188 1   Chase (1985)
 2.74521990E+00 4.04346070E-03-1.53845100E-06 2.75202490E-10-1.85920950E-14    2
-3.41994440E+03 8.05467450E+00 3.93234760E+00-5.02609050E-04 4.59284730E-06    3
-3.18072140E-09 6.64975610E-13-3.65053590E+03 2.31579050E+00-2.46584037E+03    4
H2SO4             J 9/77H  2.S  1.0  4.   0.G   300.000  5000.000      98.07948 1   Chase (1985)
 1.08895320E+01 7.50041780E-03-2.92104780E-06 5.25955130E-10-3.57894150E-14    2
-9.24713640E+04-2.94047820E+01 1.07256800E+00 4.37692260E-02-5.53332430E-05    3
 3.55182530E-08-9.06773580E-12-9.02597580E+04 1.89395820E+01-8.84175226E+04    4
H3B3O6            J12/64H  3.B  3.0  6.   0.G   300.000  5000.000     131.45322 1   Chase (1985)
 2.01535790E+01 1.30162860E-02-5.06696190E-06 9.03082530E-10-6.05324100E-14    2
-2.81040920E+05-7.96763324E+01-2.27051160E+00 8.70248940E-02-9.15877140E-05    3
 3.94453920E-08-3.66660350E-12-2.75695230E+05 3.25296526E+01-2.73237150E+05    4
H3F3              J 6/77H  3.F  3.   0.   0.G   300.000  5000.000      60.01903 1   Chase (1985)
 8.53073730E+00 6.71659390E-03-2.54567000E-06 4.47809290E-10-2.98942750E-14    2
-1.08717940E+05-1.62112010E+01 2.07178640E+00 3.72793820E-02-5.81502920E-05    3
 4.59061980E-08-1.39874980E-11-1.07578590E+05 1.39817790E+01-1.05733574E+05    4
H3O+              TPIS89H  3.0  1.E -1.   0.G   298.150  6000.000      19.02267 1   Gurvich (1989)
 2.49647716E+00 5.72844920E-03-1.83953281E-06 2.73577439E-10-1.54093985E-14    2
 7.09729113E+04 7.45850768E+00 3.79295270E+00-9.10854000E-04 1.16363549E-05    3
-1.21364887E-08 4.26159663E-12 7.07512401E+04 1.47156845E+00 7.19224584E+04    4
(HCOOH)2          L 8/88H  4.C  2.0  4.   0.G   200.000  6000.000      92.05136 1   Chao (1978)
 1.16290939E+01 1.48350345E-02-5.39529341E-06 8.78326929E-10-5.28913475E-14    2
-1.03759144E+05-3.25539738E+01 5.12766711E+00 1.68445826E-02 2.91126977E-05    3
-5.07453596E-08 2.15546828E-11-1.01180748E+05 4.89874978E+00-9.87361420E+04    4
H4F4              J 6/77H  4.F  4.   0.   0.G   200.000  6000.000      80.02537 1   Chase (1985)
 1.25199698E+01 8.00005980E-03-2.76976303E-06 4.35659635E-10-2.55951507E-14    2
-1.46732646E+05-3.23317811E+01 3.79006866E+00 4.68050125E-02-6.97456832E-05    3
 5.26555513E-08-1.53446182E-11-1.45071082E+05 9.07837207E+00-1.42380123E+05    4
H5F5              J 6/77H  5.F  5.   0.   0.G   300.000  5000.000     100.03172 1   Chase (1985)
 1.55441350E+01 1.12023770E-02-4.24631630E-06 7.47031830E-10-4.98723600E-14    2
-1.84546860E+05-4.32813901E+01 4.68417500E+00 6.26053080E-02-9.77989890E-05    3
 7.72573220E-08-2.35504610E-11-1.82631590E+05 7.48167503E+00-1.79174885E+05    4
H6F6              J 6/77H  6.F  6.   0.   0.G   300.000  5000.000     120.03806 1   Chase (1985)
 1.90509240E+01 1.34450930E-02-5.09652930E-06 8.96615810E-10-5.98590720E-14    2
-2.23981100E+05-5.70591470E+01 5.99633170E+00 7.52257730E-02-1.17517160E-04    3
 9.28217600E-08-2.82904570E-11-2.21678470E+05 3.96435298E+00-2.17415294E+05    4
H7F7              J 6/77H  7.F  7.   0.   0.G   300.000  5000.000     140.04440 1   Chase (1985)
 2.25575360E+01 1.56881520E-02-5.94695760E-06 1.04625320E-09-6.98503510E-14    2
-2.60642480E+05-7.09521060E+01 7.30097910E+00 8.78997660E-02-1.37369080E-04    3
 1.08526180E-07-3.30827150E-11-2.57951770E+05 3.62476052E-01-2.52882912E+05    4
He                L10/90HE 1.   0.   0.   0.G   200.000  6000.000       4.00260 1   McBride (1993)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-7.45375000E+02 9.28723974E-01 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-7.45375000E+02 9.28723974E-01 0.00000000E+00    4
He+               L10/92HE 1.E -1.   0.   0.G   298.150  6000.000       4.00205 1   Moore, C.E. (1971)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 2.85315086E+05 1.62166556E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 2.85315086E+05 1.62166556E+00 2.86060462E+05    4
Hg                J 9/84HG 1.   0.   0.   0.G   200.000  6000.000     200.59000 1   Chase (1985)
 2.50953611E+00-1.98827279E-05 1.38910849E-08-3.93542920E-12 3.90959219E-16    2
 6.63358064E+03 6.74847966E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 6.63690008E+03 6.80020154E+00 7.38227508E+03    4
HgBr2             J 3/62HG 1.BR 2.   0.   0.G   300.000  5000.000     360.39800 1   Chase (1985)
 7.42269900E+00 7.86876630E-05-2.99103070E-08 4.84982280E-12-2.79309330E-16    2
-1.25220200E+04-3.86733971E+00 6.71889210E+00 2.57827430E-03-2.91802370E-06    3
 9.58184420E-10 1.38723070E-13-1.23714340E+04-4.13670823E-01-1.02774216E+04    4
I                 J 6/82I  1.   0.   0.   0.G   200.000  6000.000     126.90447 1   Chase (1985)
 2.61667712E+00-2.66010320E-04 1.86060150E-07-3.81927472E-11 2.52036053E-15    2
 1.20582790E+04 6.87896653E+00 2.50041683E+00-4.48046831E-06 1.69962536E-08    3
-2.67708030E-11 1.48927452E-14 1.20947990E+04 7.49816581E+00 1.28402035E+04    4
I2                TPIS89I  2.   0.   0.   0.G   200.000  6000.000     253.80894 1   Gurvich (1985)
 4.56588102E+00-3.42229361E-04 4.84410977E-07-1.42632157E-10 1.14951099E-14    2
 6.16085432E+03 5.41958286E+00 3.87234634E+00 3.64265414E-03-7.95349191E-06    3
 7.82149773E-09-2.80608071E-12 6.24706424E+03 8.49410267E+00 7.50737217E+03    4
K                 L 4/93K  1.   0.   0.   0.G   200.000  6000.000      39.09830 1   Chase (1985)
 2.26026721E+00 5.62341179E-04-4.48551838E-07 1.36243498E-10-1.02926268E-14    2   Corliss (1979)
 1.00348812E+04 6.31568201E+00 2.50000712E+00-7.25113166E-08 2.59068481E-10    3
-3.79460911E-13 1.93210641E-16 9.95880307E+03 5.04054517E+00 1.07041786E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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K+                J12/83K  1.E -1.   0.   0.G   298.150  6000.000      39.09775 1   Chase (1985)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 6.10751051E+04 4.34740444E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 6.10751051E+04 4.34740444E+00 6.18204801E+04    4
KBO2              J 6/71K  1.B  1.O  2.   0.G   300.000  5000.000      81.90810 1   Chase (1985)
 7.55025080E+00 2.56618230E-03-1.06715660E-06 1.98518850E-10-1.37041680E-14    2
-8.36538340E+04-8.49270000E+00 4.39678010E+00 1.21692020E-02-1.18042180E-05    3
 5.13165510E-09-6.59327200E-13-8.28270120E+04 7.57324310E+00-8.10696887E+04    4
KCN               J 3/66K  1.C  1.N  1.   0.G   300.000  5000.000      65.11604 1   Chase (1985)
 5.80071200E+00 1.72007860E-03-7.07910740E-07 1.31992470E-10-9.19083230E-15    2
 7.72726280E+03-3.15883419E+00 5.08107110E+00 5.52659560E-03-9.11571210E-06    3
 8.44888170E-09-3.00515480E-12 7.86621610E+03 1.86346868E-01 9.56151829E+03    4
KCL               J 3/66K  1.CL 1.   0.   0.G   300.000  5000.000      74.55100 1   Chase (1985)
 4.46367330E+00 1.22292070E-04-9.17192100E-09 9.26482420E-13-1.04079170E-17    2
-2.71731330E+04 3.24808995E+00 3.99085690E+00 2.10891690E-03-3.18365300E-06    3
 2.25253080E-09-5.90941790E-13-2.70801840E+04 5.51200445E+00-2.58205302E+04    4
KF                J 6/69K  1.F  1.   0.   0.G   300.000  5000.000      58.09670 1   Chase (1985)
 4.40407000E+00 1.78337250E-04-3.60937970E-08 5.88395870E-12-3.46940460E-16    2
-4.06558890E+04 2.03109577E+00 3.51560660E+00 3.78684220E-03-5.58649950E-06    3
 3.77514380E-09-9.39242180E-13-4.04760790E+04 6.31338537E+00-3.93019270E+04    4
KF2-              J12/68K  1.F  2.E  1.   0.G   300.000  5000.000      77.09565 1   Chase (1985)
 7.25816380E+00 2.67035570E-04-1.13846300E-07 2.14076850E-11-1.48270700E-15    2
-8.57808390E+04-1.01032784E+01 5.25075730E+00 8.63837180E-03-1.34036730E-05    3
 9.41408320E-09-2.46826020E-12-8.53839710E+04-4.77224810E-01-8.35354910E+04    4
KH                J 3/63K  1.H  1.   0.   0.G   300.000  5000.000      40.10624 1   Chase (1985)
 3.96033860E+00 7.21903230E-04-2.69187150E-07 5.26173000E-11-3.78726830E-15    2
 1.35018370E+04 8.55345083E-01 2.81577560E+00 3.98710600E-03-3.34105480E-06    3
 8.86029420E-10 1.14028470E-13 1.38058380E+04 6.72517899E+00 1.47948627E+04    4
KO                J12/67K  1.O  1.   0.   0.G   300.000  5000.000      55.09770 1   Chase (1985)
 4.42447780E+00 1.99361550E-04-3.71288370E-08 7.13083000E-12-5.03696870E-16    2
 7.20523310E+03 3.30766849E+00 3.74107780E+00 3.12420170E-03-4.80200390E-06    3
 3.46606050E-09-9.35997910E-13 7.33687140E+03 6.56692389E+00 8.55511701E+03    4
KO-               J12/67K  1.O  1.E  1.   0.G   300.000  5000.000      55.09825 1   Chase (1985)
 4.42010840E+00 2.01242660E-04-3.93309960E-08 7.55985110E-12-5.34422750E-16    2
-1.79561090E+04 1.92000412E+00 3.70836600E+00 3.23764800E-03-4.96905000E-06    3
 3.57288460E-09-9.60802680E-13-1.78186070E+04 5.31662592E+00-1.66063485E+04    4
KOH               J12/70K  1.O  1.H  1.   0.G   300.000  5000.000      56.10564 1   Chase (1985)
 5.64009490E+00 1.25102260E-03-3.49845470E-07 4.45669930E-11-2.08702790E-15    2
-2.96987320E+04-4.04365464E+00 4.07334410E+00 9.72179450E-03-1.59888040E-05    3
 1.21483530E-08-3.37093420E-12-2.95065580E+04 2.93540136E+00-2.79788313E+04    4
KOH+              J12/71K  1.O  1.H  1.E -1.G   300.000  5000.000      56.10509 1   Chase (1985)
 5.68061400E+00 1.21209510E-03-3.34471170E-07 4.17279320E-11-1.87939130E-15    2
 5.81676020E+04-2.55415141E+00 4.43251670E+00 8.46316250E-03-1.42478550E-05    3
 1.11066250E-08-3.15636120E-12 5.82926320E+04 2.87334569E+00 5.98849275E+04    4
K2                J12/83K  2.   0.   0.   0.G   200.000  6000.000      78.19660 1   Chase (1985)
 6.94866371E+00-3.60468319E-03 1.17553193E-06-1.74220367E-10 9.70302874E-15    2
 1.26044349E+04-9.31939051E+00 4.50665127E+00-4.35676221E-04 3.26618741E-06    3
-4.17835102E-09 1.19618367E-12 1.35287953E+04 4.37318917E+00 1.48742534E+04    4
K2C2N2            J 3/66K  2.C  2.N  2.   0.G   300.000  5000.000     130.23208 1   Chase (1985)
 1.26257540E+01 3.41239960E-03-1.40348880E-06 2.61563960E-10-1.82068650E-14    2
-4.97536140E+03-2.81538911E+01 1.11330580E+01 1.15163620E-02-1.94765330E-05    3
 1.81698590E-08-6.46472520E-12-4.69806930E+03-2.12679591E+01-1.00610098E+03    4
K2CL2             J 3/66K  2.CL 2.   0.   0.G   300.000  5000.000     149.10200 1   Chase (1985)
 9.90410690E+00 1.11797070E-04-5.03911970E-08 9.99346140E-12-7.27030090E-16    2
-7.72723300E+04-1.40902820E+01 8.70679740E+00 6.01540470E-03-1.13039390E-05    3
 9.66208140E-09-3.10556570E-12-7.70676960E+04-8.53754725E+00-7.42866401E+04    4
K2F2              J 6/69K  2.F  2.   0.   0.G   300.000  5000.000     116.19341 1   Chase (1985)
 9.81480960E+00 2.04530810E-04-8.70716650E-08 1.63372270E-11-1.12872560E-15    2
-1.06759870E+05-1.76418030E+01 7.83295040E+00 8.92408310E-03-1.47198520E-05    3
 1.09824690E-08-3.07217200E-12-1.06387520E+05-8.24238276E+00-1.03765274E+05    4
K2O2H2            J12/70K  2.O  2.H  2.   0.G   300.000  5000.000     112.21128 1   Chase (1985)
 9.50977220E+00 5.41670660E-03-1.92235320E-06 3.18660660E-10-2.01525080E-14    2
-8.20483520E+04-1.68125059E+01 6.91905960E+00 1.03007030E-02-2.51732960E-07    3
-7.74500140E-09 4.07960410E-12-8.12605480E+04-2.97285644E+00-7.87554000E+04    4
K2SO4             J 6/78K  2.S  1.O  4.   0.G   300.000  5000.000     174.26020 1   Chase (1985)
 1.53741080E+01 4.10561390E-03-1.81489350E-06 3.54972430E-10-2.55587540E-14    2
-1.36953290E+05-4.61438154E+01 3.47585200E+00 4.87732370E-02-6.84200800E-05    3
 4.68863160E-08-1.27210820E-11-1.34280850E+05 1.23448286E+01-1.31594543E+05    4
Kr                L10/90KR 1.   0.   0.   0.G   200.000  6000.000      83.80000 1   McBride (1993)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-7.45375000E+02 5.49095651E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-7.45375000E+02 5.49095651E+00 0.00000000E+00    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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Kr+                 L10/92KR 1.E -1.   0.   0.G   298.150  6000.000     83.79945 1   Moore, C.E. (1971)
 2.18968725E+00 4.63775689E-04-1.29507482E-07 1.31158688E-11-3.84977987E-16    2
 1.62583110E+05 8.62427685E+00 2.48153546E+00 1.49864676E-04-4.15576590E-07    3
 4.40237547E-10-1.19374746E-13 1.62460592E+05 6.95257995E+00 1.63204264E+05    4
Li                  J12/83LI 1.   0.   0.   0.G   200.000  6000.000      6.94100 1   Chase (1985)
 2.50413107E+00 3.45604704E-05-6.44790018E-08 2.75752966E-11-1.78783935E-15    2
 1.84074474E+04 2.40802074E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 1.84139020E+04 2.44762297E+00 1.91592770E+04    4
Li+                 J12/83LI 1.E -1.   0.   0.G   298.150  6000.000      6.94045 1   Chase (1985)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 8.17271940E+04 1.75435723E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 8.17271940E+04 1.75435723E+00 8.24725690E+04    4
LiALF4              J12/79LI 1.AL 1.F  4.   0.G   300.000  5000.000    109.91615 1   Chase (1985)
 1.40377420E+01 2.24826420E-03-1.00100020E-06 1.96702490E-10-1.42088860E-14    2
-2.27627570E+05-4.23601480E+01 2.54034210E+00 5.19858810E-02-8.61880310E-05    3
 6.74968160E-08-2.03675090E-11-2.25357670E+05 1.25719320E+01-2.22927352E+05    4
LiBO2               J 6/71LI 1.B  1.0  2.   0.G   300.000  5000.000     49.75080 1   Chase (1985)
 7.42660960E+00 2.70437570E-03-1.12847410E-06 2.10623980E-10-1.45849090E-14    2
-8.03702850E+04-1.06007918E+01 3.74354740E+00 1.44752570E-02-1.52096880E-05    3
 7.41365410E-09-1.22421910E-12-7.94377560E+04 8.01202564E+00-7.77985412E+04    4
LiCL                J 6/62LI 1.CL 1.   0.   0.G   300.000  5000.000     42.39370 1   Chase (1985)
 4.27121430E+00 3.14002910E-04-1.01231300E-07 1.84518530E-11-1.23987310E-15    2
-2.48844420E+04 1.04172158E+00 2.99069060E+00 5.03386420E-03-6.56719790E-06    3
 3.80501600E-09-7.61174550E-13-2.46031820E+04 7.32818448E+00-2.35386288E+04    4
LiF                 J12/68LI 1.F  1.   0.   0.G   300.000  5000.000     25.93940 1   Chase (1985)
 4.04302480E+00 5.70410540E-04-2.14541440E-07 4.06090130E-11-2.83579200E-15    2
-4.22993180E+04 6.97695282E-01 2.85288690E+00 3.95327810E-03-3.17249850E-06    3
 4.32443970E-10 3.70556670E-13-4.19872650E+04 6.79102868E+00-4.09879652E+04    4
LiFO                J 9/65LI 1.F  1.0  1.   0.G   300.000  5000.000     41.93880 1   Chase (1985)
 5.99261090E+00 1.11392000E-03-4.78884930E-07 9.10683320E-11-6.38491230E-15    2
-1.31009890E+04-5.33660340E+00 2.50017900E+00 1.26617170E-02-1.41575890E-05    3
 6.45063740E-09-7.42614310E-13-1.22655340E+04 1.21440181E+01-1.10700161E+04    4
LiF2-               J12/68LI 1.F  2.E  1.   0.G   300.000  5000.000     44.93835 1   Chase (1985)
 6.34485900E+00 1.25712720E-03-5.35228300E-07 1.01130250E-10-7.05817440E-15    2
-8.76678900E+04-9.29840302E+00 3.47181360E+00 1.06367130E-02-1.17776460E-05    3
 5.67654870E-09-8.46598400E-13-8.69631110E+04 5.14092778E+00-8.55484576E+04    4
LiH                 J 9/67LI 1.H  1.   0.   0.G   300.000  5000.000      7.94894 1   Chase (1985)
 3.58842970E+00 1.07276910E-03-4.01945880E-07 7.38285570E-11-4.92696440E-15    2
 1.57176250E+04-3.75038965E-01 3.42094860E+00-6.80673660E-04 5.65273810E-06    3
-6.21803480E-09 2.15317550E-12 1.58849450E+04 1.06574194E+00 1.69133172E+04    4
LiN                 J12/66LI 1.N  1.   0.   0.G   300.000  5000.000     20.94774 1   Chase (1985)
 4.22580770E+00 3.96671870E-04-1.24939930E-07 2.31747590E-11-1.58519170E-15    2
 3.89169520E+04 7.00851481E-01 2.88943000E+00 5.22125340E-03-6.59690210E-06    3
 3.72889970E-09-7.23551430E-13 3.92163230E+04 7.28887145E+00 4.02586191E+04    4
LiO                 J 3/64LI 1.O  1.   0.   0.G   300.000  5000.000     22.94040 1   Chase (1985)
 4.18762050E+00 4.11865740E-04-1.45202960E-07 2.72530700E-11-1.88647750E-15    2
 8.77952590E+03 1.23142599E+00 2.83890070E+00 5.15386260E-03-6.30823820E-06    3
 3.41143850E-09-6.16313430E-13 9.08843140E+03 7.91311789E+00 1.01146405E+04    4
LiO-                J12/67LI 1.O  1.E  1.   0.G   300.000  5000.000     22.94095 1   Chase (1985)
 4.18102170E+00 4.17850000E-04-1.50248450E-07 2.83977320E-11-1.97891810E-15    2
-9.38497020E+03-1.42392244E-01 2.85158660E+00 5.01698800E-03-5.95474750E-06    3
 3.03994510E-09-4.78729690E-13-9.07780760E+03 6.45947076E+00-8.05144594E+03    4
LiOH                J 6/71LI 1.O  1.H  1.   0.G   300.000  5000.000     23.94834 1   Chase (1985)
 5.50969570E+00 1.36854640E-03-3.94414690E-07 5.23321950E-11-2.59586760E-15    2
-2.98992310E+04-6.50701600E+00 3.34623000E+00 1.17872530E-02-1.82526570E-05    3
 1.30856140E-08-3.43287420E-12-2.95646360E+04 3.46123330E+00-2.81800732E+04    4
LiOH+               J12/71LI 1.O  1.H  1.E -1.G   300.000  5000.000     23.94779 1   Chase (1985)
 5.53292690E+00 1.37779310E-03-4.06593090E-07 5.55909100E-11-2.86046240E-15    2
 9.18885790E+04-4.99359277E+00 3.63797390E+00 1.08971540E-02-1.72296700E-05    3
 1.26679270E-08-3.41652590E-12 9.21611930E+04 3.63776083E+00 9.36013974E+04    4
LiON                J 9/66LI 1.O  1.N  1.   0.G   300.000  5000.000     36.94714 1   Chase (1985)
 5.81234960E+00 1.28706260E-03-5.46677100E-07 1.03149870E-10-7.19304470E-15    2
 1.96923020E+04-4.34470559E+00 3.67011640E+00 7.25681770E-03-5.86811460E-06    3
 1.16283120E-09 4.27041220E-13 2.02717030E+04 6.68249511E+00 2.16391463E+04    4
Li2                 J12/83LI 2.   0.   0.   0.G   200.000  6000.000     13.88200 1   Chase (1985)
 5.58393935E+00-7.87699402E-04-3.84878120E-07 2.91133039E-10-3.39438475E-14    2
 2.40394686E+04-8.50679127E+00 3.21590490E+00 7.09389748E-03-1.50723370E-05    3
 1.48684882E-08-5.43740256E-12 2.47988772E+04 3.80489004E+00 2.59666535E+04    4
Li2CL2              J 6/62LI 2.CL 2.   0.   0.G   300.000  5000.000     84.78740 1   Chase (1985)
 9.52456140E+00 5.24588340E-04-2.23379490E-07 4.19511140E-11-2.90213060E-15    2
-7.49902630E+04-2.00316716E+01 5.28013510E+00 1.83841000E-02-2.87694480E-05    3
 2.03133590E-08-5.34332470E-12-7.41600030E+04 2.79279422E-01-7.19851709E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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Li2F2             J12/68LI 2.F  2.   0.   0.G   300.000  5000.000      51.87881 1   Chase (1985)
 8.95666360E+00 1.17192690E-03-5.09905040E-07 9.79175340E-11-6.92156020E-15    2
-1.16372280E+05-2.08863311E+01 2.40075080E+00 2.70662370E-02-3.92561800E-05    3
 2.57225990E-08-6.22372250E-12-1.15010910E+05 1.08917789E+01-1.13391048E+05    4
Li2O              J 3/64LI 2.0  1.   0.   0.G   300.000  5000.000      29.88140 1   Chase (1985)
 6.61987480E+00 9.68794480E-04-4.14905060E-07 7.86373370E-11-5.49692920E-15    2
-2.22553250E+04-1.08215590E+01 3.97217080E+00 9.24609210E-03-9.35961490E-06    3
 3.46391600E-09-7.56588800E-14-2.15969880E+04 2.55230409E+00-2.00776073E+04    4
Li2O2             J 3/64LI 2.0  2.   0.   0.G   300.000  5000.000      45.88080 1   Chase (1985)
 9.52752600E+00 5.30210130E-04-2.30058620E-07 4.40308310E-11-3.10187020E-15    2
-3.21824840E+04-2.18591120E+01 5.53752320E+00 1.73442230E-02-2.71979710E-05    3
 1.93056290E-08-5.12079570E-12-3.14020440E+04-2.76831291E+00-2.91846934E+04    4
Li2O2H2           J 6/71LI 2.0  2.H  2.   0.G   300.000  5000.000      47.89668 1   Chase (1985)
 8.99361290E+00 6.00396330E-03-2.18101810E-06 3.68887260E-10-2.37380140E-14    2
-8.88441500E+04-2.13586495E+01 2.86466370E+00 2.52373090E-02-2.26327910E-05    3
 7.46327130E-09 2.29254980E-13-8.73388110E+04 9.54312960E+00-8.55480943E+04    4
Li2SO4            J12/78LI 2.S  1.0  4.   0.G   300.000  5000.000     109.94560 1   Chase (1985)
 1.49295950E+01 4.60974740E-03-2.03795560E-06 3.98625790E-10-2.87030300E-14    2
-1.30635280E+05-4.91664911E+01 7.11457250E-01 5.94511790E-02-8.63634900E-05    3
 6.11710870E-08-1.70989230E-11-1.27508420E+05 2.03803279E+01-1.25304083E+05    4
Li3CL3            J 6/62LI 3.CL 3.   0.   0.G   300.000  5000.000     127.18110 1   Chase (1985)
 1.43194400E+01 1.88540070E-03-8.19783300E-07 1.57354940E-10-1.11194720E-14    2
-1.25588510E+05-4.27110226E+01 4.57459590E+00 3.97492390E-02-5.65082130E-05    3
 3.62941450E-08-8.57847000E-12-1.23533510E+05 4.68059658E+00-1.20834437E+05    4
Li3F3             J12/68LI 3.F  3.   0.   0.G   300.000  5000.000      77.81821 1   Chase (1985)
 1.43644220E+01 1.82854980E-03-7.92211590E-07 1.51545290E-10-1.06756730E-14    2
-1.87237360E+05-4.50609130E+01 4.64139750E+00 3.98786960E-02-5.72489910E-05    3
 3.71935440E-08-8.92301250E-12-1.85198520E+05 2.16235968E+00-1.82478706E+05    4
Mg                J 9/83MG 1.   0.   0.   0.G   200.000  6000.000      24.30500 1   Chase (1985)
 2.31664484E+00 3.65866339E-04-2.33227803E-07 5.37117570E-11-2.99513065E-15    2
 1.70119233E+04 4.63449516E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 1.69465876E+04 3.63433014E+00 1.76919626E+04    4
Mg+               J 9/83MG 1.E -1.   0.   0.G   298.150  6000.000      24.30445 1   Chase (1985)
 2.50416574E+00-9.19340966E-06 6.96171478E-09-2.17494938E-12 2.40903346E-16    2
 1.06420941E+05 4.30504485E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 1.06422335E+05 4.32744346E+00 1.07167710E+05    4
MgBr              J 6/75MG 1.BR 1.   0.   0.G   300.000  5000.000     104.20900 1   Chase (1985)
 4.40998540E+00 1.60217360E-04-4.15012230E-08 5.93703420E-12-4.82315730E-17    2
-5.59619090E+03 4.22960309E+00 3.51072850E+00 4.45285100E-03-8.01240750E-06    3
 6.70669000E-09-2.12327180E-12-5.43682570E+03 8.43148999E+00-4.25072458E+03    4
MgBr2             J 6/74MG 1.BR 2.   0.   0.G   300.000  5000.000     184.11300 1   Chase (1985)
 7.32151000E+00 2.06437250E-04-9.24892080E-08 1.82558380E-11-1.32311700E-15    2
-3.86713040E+04-5.67846591E+00 5.71391020E+00 7.73216170E-03-1.38657930E-05    3
 1.14779000E-08-3.60578840E-12-3.83794830E+04 1.86860229E+00-3.64337335E+04    4
MgCL              J 3/66MG 1.CL 1.   0.   0.G   300.000  5000.000      59.75770 1   Chase (1985)
 4.37758330E+00 1.88341780E-04-5.44885920E-08 9.94810310E-12-6.69496110E-16    2
-6.58308260E+03 2.98938866E+00 3.38005340E+00 4.28133890E-03-6.44573330E-06    3
 4.44722910E-09-1.14217270E-12-6.38265600E+03 7.78898816E+00-5.23329928E+03    4
MgCL+             J 6/68MG 1.CL 1.E -1.   0.G   300.000  5000.000      59.75715 1   Chase (1985)
 6.35123440E+00-3.79671900E-03 2.47129450E-06-5.08236530E-10 3.36726250E-14    2
 7.64808790E+04-8.29036231E+00 3.60122300E+00 3.47918590E-03-5.13531430E-06    3
 3.44463370E-09-8.38482060E-13 7.73146880E+04 6.13385929E+00 7.85040728E+04    4
MgCLF             J 3/66MG 1.CL 1.F  1.   0.G   200.000  6000.000      78.75610 1   Chase (1985)
 6.57082252E+00 4.48876208E-04-1.77994819E-07 3.06318205E-11-1.91554544E-15    2
-7.05235977E+04-5.83555414E+00 3.15704293E+00 1.64534790E-02-3.01126869E-05    3
 2.57974606E-08-8.42487547E-12-6.98910040E+04 1.02255402E+01-6.84374665E+04    4
MgCL2             J12/69MG 1.CL 2.   0.   0.G   300.000  5000.000      95.21040 1   Chase (1985)
 7.24019130E+00 2.88562390E-04-1.24011870E-07 2.35271010E-11-1.64432050E-15    2
-4.94423260E+04-8.18090146E+00 5.40955290E+00 7.72062810E-03-1.16200940E-05    3
 7.94178890E-09-2.02525020E-12-4.90705370E+04 6.47158084E-01-4.72024455E+04    4
MgF               J 6/76MG 1.F  1.   0.   0.G   300.000  5000.000      43.30340 1   Chase (1985)
 4.19221190E+00 4.03626440E-04-1.50976310E-07 2.81692210E-11-1.82758920E-15    2
-2.98137100E+04 2.43696200E+00 2.65707520E+00 6.68261350E-03-1.03311560E-05    3
 7.68717660E-09-2.22450570E-12-2.94948900E+04 9.85508030E+00-2.84827958E+04    4
MgF+              J12/75MG 1.F  1.E -1.   0.G   300.000  5000.000      43.30285 1   Chase (1985)
 4.36810570E+00 4.11759660E-03-2.93947970E-06 7.27118430E-10-5.98448020E-14    2
 5.95360000E+04-1.34577810E+00 3.43876540E+00 2.22526540E-03-5.46212020E-06    3
 1.40842760E-08-8.07269060E-12 6.05156660E+04 5.77835440E+00 6.16156042E+04    4
MgF2              J 6/75MG 1.F  2.   0.   0.G   300.000  5000.000      62.30181 1   Chase (1985)
 6.36420730E+00 7.26278270E-04-3.22800460E-07 6.33636660E-11-4.57384370E-15    2
-8.94644290E+04-5.91513070E+00 3.34790580E+00 1.31152970E-02-2.05416070E-05    3
 1.53957840E-08-4.49090410E-12-8.88388740E+04 8.65190220E+00-8.74109410E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

MgF2+	J12/75MG 1.F 2.E -1. 0.G	300.000	5000.000	62.30126	1	Chase (1985)
6.89106730E+00	7.17812830E-04	-3.29411720E-07	6.58811280E-11	-4.58732280E-15	2	
6.89931450E+04	-8.71301390E+00	3.52128840E+00	1.52695560E-02	-2.51800890E-05	3	
1.96354990E-08	-5.90549190E-12	6.96583880E+04	7.39020950E+00	7.12004950E+04	4	
MgH	J12/66MG 1.H 1. 0. 0.G	300.000	5000.000	25.31294	1	Chase (1985)
3.46385910E+00	1.24040550E-03	-5.02782100E-07	9.81188340E-11	-6.61830680E-15	2	
1.91763100E+04	2.99775186E+00	3.51023970E+00	-1.23683520E-03	6.42469980E-06	3	
-6.60548460E-09	2.20036250E-12	1.92938930E+04	3.37365416E+00	2.03302445E+04	4	
MgI	J12/74MG 1.I 1. 0. 0.G	200.000	6000.000	151.20947	1	Chase (1985)
4.41245599E+00	1.78910914E-04	-5.22986679E-08	9.68713486E-12	-4.67113786E-16	2	
1.62581907E+03	5.16451018E+00	3.39596606E+00	6.11494866E-03	-1.31544146E-05	3	
1.27259311E-08	-4.53414297E-12	1.76933628E+03	9.69586508E+00	2.96042364E+03	4	
MgI2	J12/74MG 1.I 2. 0. 0.G	300.000	5000.000	278.11394	1	Chase (1985)
7.37111620E+00	1.49419540E-04	-6.70677380E-08	1.32575590E-11	-9.62005020E-16	2	
-2.15119230E+04	-3.93845663E+00	6.10814260E+00	6.14621180E-03	-1.11665270E-05	3	
9.32665250E-09	-2.94871660E-12	-2.12863230E+04	1.97126687E+00	-1.92736169E+04	4	
MgN	J 3/64MG 1.N 1. 0. 0.G	300.000	5000.000	38.31174	1	Chase (1985)
4.22144170E+00	3.64892400E-04	-1.29957300E-07	2.44189400E-11	-1.69177590E-15	2	
3.33829310E+04	2.73205196E+00	2.88945490E+00	5.17571750E-03	-6.58490160E-06	3	
MgO	J12/74MG 1.O 1. 0. 0.G	300.000	5000.000	40.30440	1	Chase (1985)
7.94944280E+00	-1.26407550E-03	-2.40097300E-07	1.62732770E-10	-1.76119090E-14	2	
3.49443840E+03	-2.18011730E+01	5.33534970E+00	-1.33391340E-02	3.56675260E-05	3	
-2.60574710E-08	4.98411960E-12	5.73155730E+03	-2.13277681E+00	6.99538853E+03	4	
MgOH	J12/75MG 1.O 1.H 1. 0.G	300.000	5000.000	41.31234	1	Chase (1985)
5.26714240E+00	1.67827200E-03	-5.43091730E-07	8.25633490E-11	-4.71335130E-15	2	
-2.15093360E+04	-3.39516556E+00	1.76243570E+00	1.91670050E-02	-3.32193180E-05	3	
2.71589780E-08	-8.38892750E-12	-2.09491820E+04	1.27344525E+01	-1.98155784E+04	4	
MgOH+	J12/75MG 1.O 1.H 1.E -1.G	300.000	5000.000	41.31179	1	Chase (1985)
5.28244790E+00	1.66404370E-03	-5.40166510E-07	8.34678240E-11	-5.00361680E-15	2	
6.85958160E+04	-4.15038868E+00	1.78314210E+00	1.92285270E-02	-3.35031430E-05	3	
2.74913640E-08	-8.51510070E-12	6.91505840E+04	1.19305235E+01	7.02911854E+04	4	
MgO2H2	J12/75MG 1.O 2.H 2. 0.G	300.000	5000.000	58.31968	1	Chase (1985)
8.51783840E+00	3.37913800E-03	-1.10220330E-06	1.71111790E-10	-1.03022860E-14	2	
-7.16267310E+04	-1.76294649E+01	1.54947500E+00	3.82704800E-02	-6.65093280E-05	3	
5.45362940E-08	-1.68913380E-11	-7.05167540E+04	1.44170361E+01	-6.88415815E+04	4	
MgS	J 9/77MG 1.S 1. 0. 0.G	300.000	5000.000	56.37100	1	Chase (1985)
1.03585650E+01	-5.53070850E-03	2.09511990E-06	-3.52248380E-10	2.22827360E-14	2	
1.33293460E+04	-3.31905223E+01	7.80892150E+00	-3.24935950E-02	9.25172570E-05	3	
-9.09652030E-08	2.97256310E-11	1.59322900E+04	-1.10479053E+01	1.74679365E+04	4	
Mg2	J 9/83MG 2. 0. 0. 0.G	200.000	6000.000	48.61000	1	Chase (1985)
1.55499308E+00	3.13771932E-03	-3.15497401E-06	1.11815199E-09	-1.08539001E-13	2	
3.41094885E+04	1.94547704E+01	5.66548917E+00	-1.81207983E-02	4.05706233E-05	3	
-4.00720091E-08	1.45040463E-11	3.34280753E+04	5.33095711E-01	3.45979248E+04	4	
Mg2F4	J12/75MG 2.F 4. 0. 0.G	300.000	5000.000	124.60361	1	Chase (1985)
1.46720160E+01	1.52993180E-03	-6.83471170E-07	1.34604690E-10	-9.73833980E-15	2	
-2.11437660E+05	-4.42782440E+01	4.22990530E+00	4.92908490E-02	-8.64496720E-05	3	
7.04593710E-08	-2.18871100E-11	-2.09492990E+05	5.00323612E+00	-2.06675889E+05	4	
Mo03	TPIS82MO 1.O 3. 0. 0.G	298.150	5000.000	143.93820	1	Gurvich (1982)
8.55990790E+00	1.51369070E-03	-6.13732600E-07	1.07588900E-10	-6.22775550E-15	2	
-4.67652700E+04	-1.67028250E+01	3.65431210E+00	1.44909920E-02	-7.66813900E-06	3	
-6.09846400E-09	5.18258090E-12	-4.54830940E+04	8.50521889E+00	-4.38287210E+04	4	
Mo206	TPIS82MO 2.O 6. 0. 0.G	298.150	5000.000	287.87640	1	Gurvich (1982)
1.39233320E+01	1.29087490E-02	-7.39293860E-06	1.74541090E-09	-1.44106680E-13	2	
-1.42928310E+05	-3.64486140E+01	7.75467210E+00	3.26250640E-02	-1.66599060E-05	3	
-1.50396000E-08	1.23603580E-11	-1.41833380E+05	-6.45092731E+00	-1.38247070E+05	4	
Mo309	TPIS82MO 3.O 9. 0. 0.G	298.150	5000.000	431.81460	1	Gurvich (1982)
2.22622990E+01	1.85849670E-02	-1.05893570E-05	2.49267520E-09	-2.05425360E-13	2	
-2.36200380E+05	-7.10881860E+01	1.35774240E+01	4.53893100E-02	-2.13059540E-05	3	
-2.28677660E-08	1.77523270E-11	-2.34596880E+05	-2.85771390E+01	-2.28762570E+05	4	
Mo4012	TPIS82MO 4.O 12. 0. 0.G	298.150	5000.000	575.75280	1	Gurvich (1982)
3.04317470E+01	2.47326460E-02	-1.41185490E-05	3.32712920E-09	-2.74390160E-13	2	
-3.25903630E+05	-1.07280337E+02	1.87274780E+01	6.11594990E-02	-2.91419130E-05	3	
-3.06580500E-08	2.40118200E-11	-3.23765940E+05	-5.00883840E+01	-3.15779310E+05	4	
Mo5015	TPIS82MO 5.O 15. 0. 0.G	298.150	5000.000	719.69100	1	Gurvich (1982)
3.86225430E+01	3.07427420E-02	-1.75360470E-05	4.13062300E-09	-3.40557710E-13	2	
-4.13241560E+05	-1.43736757E+02	2.38870540E+01	7.61410000E-02	-3.51747290E-05	3	
-3.98648650E-08	3.06311230E-11	-4.10521060E+05	-7.16041770E+01	-4.00401060E+05	4	
N	L 6/88N 1. 0. 0. 0.G	200.000	6000.000	14.00674	1	Moore, C.E. (1975)
2.41594293E+00	1.74890600E-04	-1.19023667E-07	3.02262387E-11	-2.03609790E-15	2	Cox (1989)
5.61337748E+04	4.64960986E+00	2.50000000E+00	0.00000000E+00	0.00000000E+00	3	
0.00000000E+00	0.00000000E+00	5.61046378E+04	4.19390932E+00	5.68500128E+04	4	

TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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N+                L 7/88N  1.E -1.   0.   0.G   298.150  6000.000      14.00619 1   Moore, C.E. (1975)
 2.51112967E+00 3.46441751E-06-1.59426938E-08 7.24865663E-12-6.44501426E-16    2
 2.25624340E+05 4.92767646E+00 2.80269445E+00-1.44758911E-03 2.77118380E-06    3
-2.40187352E-09 7.80839931E-13 2.25575244E+05 3.57377820E+00 2.26366632E+05    4
N-                L 7/88N  1.E  1.   0.   0.G   298.150  6000.000      14.00729 1   Chase (1985)
 2.50897099E+00-9.58412751E-06 3.85210062E-09-6.68935998E-13 4.20991172E-17    2
 5.62083017E+04 4.94953217E+00 2.62723403E+00-5.93445018E-04 1.12028916E-06    3
-9.62585603E-10 3.11119557E-13 5.61880871E+04 4.40111191E+00 5.69531625E+04    4
NCO               L12/89N  1.C  1.O  1.   0.G   200.000  6000.000      42.01714 1   Jacox (1988)
 5.15255717E+00 2.30945594E-03-8.83699519E-07 1.48525346E-10-9.08857905E-15    2   Gurvich (1979)
 1.94963750E+04-2.56406350E+00 2.75452392E+00 9.23008037E-03-9.28006629E-06    3
 5.62521381E-09-1.61200144E-12 2.01842954E+04 9.85368773E+00 2.13441716E+04    4
ND                J 6/77N  1.D  1.   0.   0.G   298.150  5000.000      16.02084 1   Chase (1985)
 2.82970340E+00 1.65841750E-03-6.32873330E-07 1.14776850E-10-7.83185840E-15    2
 4.42559510E+04 6.00662489E+00 3.72064880E+00-1.53418480E-03 3.18774260E-06    3
-1.50914010E-09 9.71261140E-14 4.40727560E+04 1.64955279E+00 4.51390710E+04    4
ND2               J 6/77N  1.D  2.   0.   0.G   298.150  5000.000      18.03494 1   Chase (1985)
 3.35153910E+00 3.37631620E-03-1.32134570E-06 2.68006790E-10-2.09101740E-14    2
 2.10777490E+04 4.37387609E+00 4.02697800E+00-1.40851280E-03 7.77658150E-06    3
-6.49675750E-09 1.75541700E-12 2.10980280E+04 1.75483929E+00 2.22927630E+04    4
ND3               J 6/77N  1.D  3.   0.   0.G   298.150  5000.000      20.04905 1   Chase (1985)
 3.19615660E+00 6.73117580E-03-2.64234000E-06 4.76308680E-10-3.28048280E-14    2
-8.39665270E+03 4.16290449E+00 2.94278390E+00 5.10352910E-03 2.73928210E-06    3
-4.68476620E-09 1.62766740E-12-8.16515630E+03 6.15521769E+00-7.04511980E+03    4
NF                TPIS89N  1.F  1.   0.   0.G   200.000  6000.000      33.00514 1   Gurvich (1989)
 4.06042292E+00 3.50654850E-04-6.95721815E-08 1.45925454E-11-1.56372401E-15    2
 2.66711982E+04 2.08774790E+00 3.59927999E+00-2.18190788E-03 1.14106853E-05    3
-1.40068494E-08 5.53332638E-12 2.69702525E+04 5.35573588E+00 2.80221438E+04    4
NF2               TPIS78N  1.F  2.   0.   0.G   298.150  5000.000      52.00355 1   Gurvich (1978)
 5.67109980E+00 1.52490640E-03-6.64320500E-07 1.29882090E-10-9.34891620E-15    2
 2.17289180E+03-3.21733831E+00 2.18233810E+00 1.30700080E-02-1.51478870E-05    3
 8.23364600E-09-1.68588640E-12 3.02632470E+03 1.42967350E+01 4.13964480E+03    4
NF3               L12/86N  1.F  3.   0.   0.G   298.150  5000.000      71.00195 1   Gurvich (1978)
 7.84199640E+00 2.69275920E-03-1.08013060E-06 2.12212560E-10-1.52881240E-14    2
-1.86684320E+04-1.49708930E+01 3.47412870E-01 3.07504790E-02-4.25860860E-05    3
 2.88432090E-08-7.70346550E-12-1.69875040E+04 2.18734930E+01-1.58399670E+04    4
NH                L11/89N  1.H  1.   0.   0.G   200.000  6000.000      15.01468 1   Anderson (1989)
 2.78372645E+00 1.32985886E-03-4.24785565E-07 7.83494425E-11-5.50451298E-15    2   Gurvich (1978)
 4.21345163E+04 5.74084857E+00 3.49295037E+00 3.11795722E-04-1.48906628E-06    3
 2.48167403E-09-1.03570916E-12 4.18942940E+04 1.84834974E+00 4.29408348E+04    4
NH+               L 2/89N  1.H  1.E -1.   0.G   298.150  6000.000      15.01413 1   Anderson (1989)
 2.95918980E+00 1.34991719E-03-4.61487782E-07 8.26977666E-11-5.55758913E-15    2   Gurvich (1989)
 1.99524505E+05 5.59978007E+00 4.61611136E+00-3.13435677E-03 2.91705130E-06    3   Gibson (1985)
 2.57384848E-10-7.31431347E-13 1.99085043E+05-2.92758474E+00 2.00347960E+05    4
NHF               TPIS78N  1.H  1.F  1.   0.G   298.150  5000.000      34.01308 1   Gurvich (1978)
 3.70551560E+00 3.05928380E-03-1.19481890E-06 2.15320410E-10-1.44712850E-14    2
 1.21713170E+04 5.63012479E+00 3.50790490E+00 1.46885700E-03 5.13893190E-06    3
-7.07642930E-09 2.73156520E-12 1.23266210E+04 7.16279689E+00 1.34705930E+04    4
NHF2              TPIS78N  1.H  1.F  2.   0.G   298.150  5000.000      53.01149 1   Gurvich (1978)
 5.28756150E+00 4.63323300E-03-1.87737490E-06 3.46993030E-10-2.40367500E-14    2
-1.44236330E+04-1.64463031E+00 2.20674810E+00 1.18774010E-02-5.50126930E-06    3
-2.19112190E-09 1.97461810E-12-1.35221410E+04 1.45510290E+01-1.23881340E+04    4
NH2               L12/89N  1.H  2.   0.   0.G   200.000  6000.000      16.02262 1   Gurvich (1978)
 2.84768992E+00 3.14280035E-03-8.98641458E-07 1.30318284E-10-7.48812926E-15    2   Jacox (1988)
 2.18239049E+04 6.47165433E+00 4.20556857E+00-2.13561363E-03 7.26851301E-06    3
-5.93069876E-09 1.80690978E-12 2.15352231E+04-1.46662770E-01 2.27475415E+04    4
NH2F              TPIS78N  1.H  2.F  1.   0.G   298.150  5000.000      35.02102 1   Gurvich (1978)
 3.03168860E+00 6.42239370E-03-2.48327540E-06 4.43703310E-10-2.99811000E-14    2
-1.03021670E+04 8.27719459E+00 3.64634270E+00-1.12299140E-03 1.71560860E-05    3
-1.90333680E-08 6.73845950E-12-1.01750020E+04 6.55726579E+00-9.02048620E+03    4
NH3               TPIS89N  1.H  3.   0.   0.G   200.000  6000.000      17.03056 1   Gurvich (1989)
 2.71709692E+00 5.56856338E-03-1.76886396E-06 2.67417260E-10-1.52731419E-14    2   Haar (1968)
-6.58451989E+03 6.09289837E+00 4.30177808E+00-4.77127330E-03 2.19341619E-05    3
-2.29856489E-08 8.28992268E-12-6.74806394E+03-6.90644393E-01-5.52528050E+03    4
NH2OH             TPIS89N  1.H  3.O  1.   0.G   200.000  6000.000      33.02996 1   Gurvich (1989)
 3.88112362E+00 8.15708719E-03-2.82615742E-06 4.37931330E-10-2.52724921E-14    2
-7.58782727E+03 3.79156901E+00 3.21016076E+00 6.19671780E-03 1.10594913E-05    3
-1.96668207E-08 8.82516311E-12-7.30912839E+03 7.93293640E+00-6.01358348E+03    4
NH4+              TPIS89N  1.H  4.E -1.   0.G   298.150  6000.000      18.03795 1   Gurvich (1989)
 1.31570311E+00 9.64926653E-03-3.29049595E-06 5.12045396E-10-2.98499060E-14    2
 7.67277044E+04 1.20930980E+01 5.02209278E+00-1.17098960E-02 3.97600112E-05    3
-3.69419871E-08 1.20264483E-11 7.63029754E+04-4.20522298E+00 7.75637944E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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NO                TPIS89N  1.0  1.   0.   0.G   200.000  6000.000      30.00614 1   Gurvich (1989)
 3.26071234E+00 1.19101135E-03-4.29122646E-07 6.94481463E-11-4.03295681E-15    2
 9.92143132E+03 6.36900518E+00 4.21859896E+00-4.63988124E-03 1.10443049E-05    3
-9.34055507E-09 2.80554874E-12 9.84509964E+03 2.28061001E+00 1.09770882E+04    4
NO+               TPIS89N  1.0  1.E -1.   0.G   298.150  6000.000      30.00559 1   Gurvich (1989)
 2.94587702E+00 1.40325260E-03-4.95503196E-07 7.95948973E-11-4.72076668E-15    2
 1.18244340E+05 6.70644634E+00 3.69301231E+00-1.34229158E-03 2.67343395E-06    3
-1.02609308E-09-6.95610492E-14 1.18103055E+05 3.09126691E+00 1.19166025E+05    4
NOCL              L12/86N  1.0  1.CL 1.   0.G   298.150  5000.000      65.45884 1   Gurvich (1978)
 5.86956760E+00 9.32184760E-04-2.52355420E-07 8.09444930E-11-9.02037270E-15    2
 4.37178100E+03-2.64405161E+00 3.84293630E+00 7.30757200E-03-9.14007260E-06    3
 6.66117580E-09-2.05029050E-12 4.93648720E+03 7.74079999E+00 6.33842060E+03    4
NOF               TPIS78N  1.0  1.F  1.   0.G   298.150  5000.000      49.00454 1   Gurvich (1978)
 4.98781620E+00 2.43822500E-03-1.11040450E-06 2.45413670E-10-1.88888130E-14    2
-9.53283150E+03 4.59172027E-01 3.01678900E+00 9.40745900E-03-1.14103680E-05    3
 7.75157000E-09-2.22328880E-12-9.04875930E+03 1.03043410E+01-7.81775470E+03    4
NOF3              TPIS78N  1.0  1.F  3.   0.G   298.150  5000.000      87.00135 1   Gurvich (1978)
 9.81602980E+00 3.54622150E-03-1.55212690E-06 3.01635030E-10-2.16229090E-14    2
-2.60181200E+04-2.45950120E+01 1.57858830E-01 4.18848250E-02-6.27310050E-05    3
 4.61904830E-08-1.34120260E-11-2.39304230E+04 2.24234230E+01-2.24910790E+04    4
NO2               L 7/88N  1.0  2.   0.   0.G   200.000  6000.000      46.00554 1   Gurvich (1989)
 4.88474429E+00 2.17241639E-03-8.28079020E-07 1.57477293E-10-1.05110549E-14    2
 2.31648462E+03-1.17357075E-01 3.94403907E+00-1.58547444E-03 1.66578984E-05    3
-2.04754478E-08 7.83503265E-12 2.89659865E+03 6.31196225E+00 4.11245173E+03    4
NO2-              TPIS89N  1.0  2.E  1.   0.G   298.150  6000.000      46.00609 1   Gurvich (1989)
 5.05329280E+00 2.07555672E-03-8.70003077E-07 1.61074250E-10-1.03448062E-14    2
-2.59043616E+04-1.54065058E+00 3.09783648E+00 3.70486312E-03 5.92938975E-06    3
-1.09497307E-08 4.62721721E-12-2.51798339E+04 9.48237148E+00-2.40586126E+04    4
NO2CL             L12/86N  1.0  2.CL 1.   0.G   298.150  5000.000      81.45824 1   Gurvich (1978)
 7.12026010E+00 3.18695570E-03-1.37798970E-06 2.66531630E-10-1.90437960E-14    2
-1.06153470E+03-9.45476081E+00 2.55980390E+00 1.79693190E-02-2.02652550E-05    3
 1.16991830E-08-2.78633720E-12 9.87906800E+01 1.35899630E+01 1.50341440E+03    4
NO2F              L12/86N  1.0  2.F  1.   0.G   298.150  5000.000      65.00394 1   Gurvich (1978)
 6.71038200E+00 3.62401660E-03-1.56660230E-06 3.02666410E-10-2.16088660E-14    2
-1.56110410E+04-8.88169701E+00 1.44668080E+00 2.08840580E-02-2.38855280E-05    3
 1.39438940E-08-3.34025010E-12-1.42842970E+04 1.76606690E+01-1.31097730E+04    4
NO3               J12/64N  1.0  3.   0.   0.G   200.000  6000.000      62.00494 1   Chase (1985)
 7.48347734E+00 2.57772041E-03-1.00945831E-06 1.72314072E-10-1.07154015E-14    2
 5.70919428E+03-1.41618155E+01 2.17359310E+00 1.04902697E-02 1.10472650E-05    3
-2.81561854E-08 1.36583958E-11 7.39219877E+03 1.46022098E+01 8.55492386E+03    4
NO3-              TPIS89N  1.0  3.E  1.   0.G   298.150  6000.000      62.00549 1   Gurvich (1989)
 6.88404739E+00 3.16062982E-03-1.23048782E-06 2.09257989E-10-1.29795471E-14    2
-4.00548152E+04-1.17087097E+01 1.21258521E+00 1.71545193E-02-1.05270457E-05    3
-1.16074097E-09 2.33114998E-12-3.84077713E+04 1.79933865E+01-3.73779731E+04    4
NO3F              L12/86N  1.0  3.F  1.   0.G   298.150  5000.000      81.00334 1   Gurvich (1978)
 9.28947900E+00 4.60181370E-03-2.21870670E-06 4.51297580E-10-3.32406540E-14    2
-1.64685160E+03-2.00889250E+01 2.03635710E+00 2.87840980E-02-3.48403410E-05    3
 2.17601730E-08-5.64964360E-12 1.85068170E+02 1.64435420E+01 1.80409650E+03    4
N2                TPIS78N  2.   0.   0.   0.G   200.000  6000.000      28.01348 1   McBride (1993 )
 2.95257626E+00 1.39690057E-03-4.92631691E-07 7.86010367E-11-4.60755321E-15    2
-9.23948645E+02 5.87189252E+00 3.53100528E+00-1.23660987E-04-5.02999437E-07    3
 2.43530612E-09-1.40881235E-12-1.04697628E+03 2.96747468E+00 0.00000000E+00    4
N2+               TPIS89N  2.E -1.   0.   0.G   298.150  6000.000      28.01293 1   Gurvich (1989)
 3.58661363E+00 2.53071949E-04 1.84778214E-07-4.55257223E-11 3.26818029E-15    2
 1.80390994E+05 3.09584142E+00 3.77540711E+00-2.06459157E-03 4.75752301E-06    3
-3.15664228E-09 6.70509973E-13 1.80481115E+05 2.69322178E+00 1.81551099E+05    4
N2-               J 9/77N  2.E  1.   0.   0.G   298.150  5000.000      28.01403 1   Chase (1985)
 3.11567530E+00 1.45886880E-03-6.01731480E-07 1.13484230E-10-7.96585180E-15    2
 1.68590580E+04 6.38985179E+00 3.88268480E+00-3.19244460E-03 8.52278380E-06    3
-7.34037460E-09 2.20568150E-12 1.67969350E+04 3.11180099E+00 1.78744680E+04    4
NCN               L12/89N  2.C  1.   0.   0.G   200.000  6000.000      40.02448 1   Jacox (1988)
 5.73815514E+00 1.77244606E-03-6.85751131E-07 1.15711980E-10-7.07567907E-15    2   Gurvich (1991)
 5.82214890E+04-6.30533665E+00 3.24134033E+00 8.50091346E-03-7.61608140E-06    3
 3.64986585E-09-8.42551872E-13 5.89477370E+04 6.70956450E+00 6.02315091E+04    4
cis-N2D2          J 6/77N  2.D  2.   0.   0.G   200.000  6000.000      32.04168 1   Chase (1985)
 4.51455308E+00 5.18901318E-03-1.93684288E-06 3.20575967E-10-1.95208624E-14    2
 2.30230396E+04-9.52662441E-01 3.87335899E+00-2.62328791E-03 2.63075819E-05    3
-3.13008744E-08 1.18109999E-11 2.36948344E+04 4.74949141E+00 2.49092250E+04    4
N2F2              L12/86N  2.F  2.   0.   0.G   298.150  5000.000      66.01029 1   Gurvich (1978)
 7.66719230E+00 2.59466270E-03-1.13460230E-06 2.20352680E-10-1.57886580E-14    2
 4.81399990E+03-1.28292930E+01 2.80589260E+00 1.92519670E-02-2.36977440E-05    3
 1.46168610E-08-3.64516030E-12 5.99444190E+03 1.14841490E+01 7.50450950E+03    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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N2F4              L12/86N  2.F  4.   0.   0.G   298.150  5000.000    104.00709 1   Gurvich (1978)
 1.29150660E+01 3.50813620E-03-1.55468900E-06 3.04562180E-10-2.19523540E-14    2
-7.20081890E+03-3.77109010E+01 9.87812940E-01 5.00295240E-02-7.36767080E-05    3
 5.25234550E-08-1.47129610E-11-4.61010860E+03 2.04857180E+01-2.64600820E+03    4
N2H2              L 5/90N  2.H  2.   0.   0.G   200.000  6000.000     30.02936 1   Gurvich (1989)
 1.31115086E+00 9.00187272E-03-3.14911866E-06 4.81449690E-10-2.71897983E-14    2
 2.47864167E+04 1.64091085E+01 4.91066016E+00-1.07791866E-02 3.86516441E-05    3
-3.86501628E-08 1.34852100E-11 2.42242727E+04 9.10279703E-02 2.54807559E+04    4
NH2N02            TPIS89N  2.H  2.0  2.   0.G   200.000  6000.000     62.02816 1   Gurvich (1989)
 7.38890998E+00 7.65188026E-03-2.75087039E-06 4.44622886E-10-2.66488122E-14    2
-6.21767034E+03-1.32737000E+01 2.17310105E+00 1.43162299E-02 1.09031619E-05    3
-2.76714677E-08 1.29868687E-11-4.45906121E+03 1.53831166E+01-3.12706341E+03    4
N2H4              L 5/90N  2.H  4.   0.   0.G   200.000  6000.000     32.04524 1   Gurvich (1989)
 4.93957357E+00 8.75017187E-03-2.99399058E-06 4.67278418E-10-2.73068599E-14    2
 9.28265548E+03-2.69439772E+00 3.83472149E+00-6.49129555E-04 3.76848463E-05    3
-5.00709182E-08 2.03362064E-11 1.00893925E+04 5.75272030E+00 1.14474575E+04    4
N20               L 7/88N  2.0  1.   0.   0.G   200.000  6000.000     44.01288 1   Gurvich (1989)
 4.82318873E+00 2.62685279E-03-9.58426058E-07 1.59991296E-10-9.77416939E-15    2
 8.07335662E+03-2.20236600E+00 2.25716860E+00 1.13046338E-02-1.36710350E-05    3
 9.68162098E-09-2.93055583E-12 8.74177146E+03 1.07579154E+01 9.81416824E+03    4
N20+              J12/70N  2.0  1.E -1.   0.G   298.150  6000.000     44.01233 1   Chase (1985)
 5.52859730E+00 1.95956970E-03-7.53758228E-07 1.27045911E-10-7.80207625E-15    2
 1.58375902E+05-4.41896705E+00 3.28688978E+00 7.40234563E-03-4.86688552E-06    3
 7.33141038E-10 2.98161683E-13 1.59054547E+05 7.40146499E+00 1.60322136E+05    4
N203              L 4/90N  2.0  3.   0.   0.G   200.000  6000.000     76.01168 1   Gurvich (1989)
 9.08583845E+00 3.37756330E-03-1.31583890E-06 2.30762329E-10-1.47151267E-14    2
 7.27160146E+03-1.55361904E+01 5.81083964E+00 1.43330962E-02-1.96208597E-05    3
 1.73060735E-08-6.46553954E-12 8.19184453E+03 1.20461321E+00 1.04192062E+04    4
N204              TPIS89N  2.0  4.   0.   0.G   200.000  6000.000     92.01108 1   Gurvich (1989)
 1.15752899E+01 4.01616086E-03-1.57178323E-06 2.68274309E-10-1.66922019E-14    2
-2.92191226E+03-3.19488439E+01 3.02002308E+00 2.95904321E-02-3.01342458E-05    3
 1.42360407E-08-2.44100049E-12-6.40040162E+02 1.18059606E+01 1.33632866E+03    4
N205              L 4/90N  2.0  5.   0.   0.G   200.000  6000.000    108.01048 1   Gurvich (1989)
 1.31108082E+01 4.87435791E-03-1.87548389E-06 3.16374121E-10-1.95926845E-14    2
-3.11634700E+03-3.46877692E+01 3.68767444E+00 3.92120798E-02-5.53770029E-05    3
 4.20097833E-08-1.31260710E-11-8.30291184E+02 1.21967866E+01 1.59961321E+03    4
N3                TPIS89N  3.   0.   0.   0.G   200.000  6000.000     42.02022 1   Gurvich (1989)
 4.64110696E+00 2.76960700E-03-1.04917582E-06 1.75340720E-10-1.07482704E-14    2
 5.06984238E+04-9.40135456E-01 2.86063038E+00 4.24883549E-03 5.14572136E-06    3
-1.01478406E-08 4.41878398E-12 5.13692093E+04 9.11596131E+00 5.24384480E+04    4
N3H               L 7/88N  3.H  1.   0.   0.G   200.000  6000.000     43.02816 1   Gurvich (1989)
 5.14700291E+00 4.30561265E-03-1.52704575E-06 2.46295774E-10-1.47144164E-14    2
 3.34283986E+04-2.25529103E+00 2.88510881E+00 9.44343451E-03-3.87919336E-06    3
-1.89404011E-09 1.60184132E-12 3.41172038E+04 9.71687818E+00 3.53598709E+04    4
Na                L 4/93NA 1.   0.   0.   0.G   200.000  6000.000     22.98977 1   Chase (1985)
 2.39858879E+00 2.15466997E-04-1.49077568E-07 3.66821795E-11-1.66036037E-15    2   Martin (1981)
 1.21943069E+04 4.79181133E+00 2.50000005E+00-4.98492323E-10 1.76034086E-12    3
-2.54461602E-15 1.27603872E-18 1.21597752E+04 4.24402786E+00 1.29051502E+04    4
Na+               J12/83NA 1.E -1.   0.   0.G   298.150  6000.000     22.98922 1   Chase (1985)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 7.25413250E+04 3.55084508E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 7.25413250E+04 3.55084508E+00 7.32867000E+04    4
NaALF4            J12/79NA 1.AL 1.F  4.   0.G   300.000  5000.000    125.96492 1   Chase (1985)
 1.42715530E+01 1.98001910E-03-8.81514840E-07 1.73221480E-10-1.25129150E-14    2
-2.26123470E+05-4.12755180E+01 4.30521450E+00 4.49680340E-02-7.43237870E-05    3
 5.80808610E-08-1.74995560E-11-2.24149880E+05 6.37184599E+00-2.21417721E+05    4
NaB02             J 6/71NA 1.B  1.0  2.   0.G   300.000  5000.000     65.79957 1   Chase (1985)
 7.49652500E+00 2.63098620E-03-1.09791360E-06 2.04939980E-10-1.41931460E-14    2
-8.05785910E+04-9.44630176E+00 4.06547490E+00 1.34549260E-02-1.38666930E-05    3
 6.63950420E-09-1.07286710E-12-7.97001570E+04 7.93481634E+00-7.79999032E+04    4
NaBr              J 9/64NA 1.BR 1.   0.   0.G   300.000  5000.000    102.89377 1   Chase (1985)
 4.44331350E+00 1.57836570E-04-2.79896190E-08 5.38490380E-12-3.80940540E-16    2
-1.86594890E+04 3.60858216E+00 3.90108900E+00 2.50254010E-03-3.88510880E-06    3
 2.83184970E-09-7.72205280E-13-1.85561610E+04 6.18879326E+00-1.73109142E+04    4
NaCN              J3/66 NA 1.C  1.N  1.   0.G   300.000  5000.000     49.00751 1   Chase (1985)
 5.79897750E+00 1.68279460E-03-6.74379240E-07 1.22345020E-10-8.29660910E-15    2
 9.49334440E+03-4.34426035E+00 4.97725580E+00 5.32259370E-03-7.55524410E-06    3
 6.18397940E-09-2.00714270E-12 9.67314900E+03-3.88207220E-01 1.13382134E+04    4
NaCL              J12/64NA 1.CL 1.   0.   0.G   300.000  5000.000     58.44247 1   Chase (1985)
 4.42829310E+00 1.56272410E-04-2.81083830E-08 4.71635710E-12-2.88325570E-16    2
-2.31709000E+04 2.30097464E+00 3.70322860E+00 3.19976080E-03-4.89245020E-06    3
 3.46392180E-09-9.13575210E-13-2.30282760E+04 5.77347954E+00-2.18187495E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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NaF               J12/68NA 1.F  1.   0.   0.G   200.000  6000.000     41.98817 1   Chase (1985)
 4.33376796E+00 2.56807777E-04-6.94232621E-08 1.19679617E-11-7.49308393E-16    2
-3.62797872E+04 1.30046354E+00 2.74871833E+00 8.03243289E-03-1.51563523E-05    3
 1.33592246E-08-4.45165244E-12-3.60002074E+04 8.68107812E+00-3.49332673E+04    4
NaF2-             J12/68NA 1.F  2.E  1.   0.G   300.000  5000.000     60.98712 1   Chase (1985)
 7.12231930E+00 4.18840550E-04-1.79722990E-07 3.40412290E-11-2.37519350E-15    2
-8.27557300E+04-1.07866746E+01 4.58268890E+00 1.06052110E-02-1.57205010E-05    3
 1.05672970E-08-2.64159200E-12-8.22344970E+04 1.48920754E+00-8.05160536E+04    4
NaH               J 3/63NA 1.H  1.   0.   0.G   300.000  5000.000     23.99771 1   Chase (1985)
 3.81305790E+00 8.56438000E-04-3.12268160E-07 5.85024710E-11-4.05139240E-15    2
 1.36830620E+04 4.84168212E-01 3.12039500E+00 1.39962170E-03 2.21412340E-06    3
-3.99507950E-09 1.67261780E-12 1.39400650E+04 4.39456127E+00 1.49450759E+04    4
NaI               L 6/72NA 1.I  1.   0.   0.G   300.000  5000.000    149.89424 1   Rice (1957)
 4.45845700E+00 1.42412780E-04-1.69262750E-08 3.89600870E-12-2.79663110E-16    2   Honig (1954)
-1.20668430E+04 4.47595877E+00 4.04062750E+00 1.96871110E-03-3.05454240E-06    3   Lewis (1961)
 2.25563230E-09-6.22868320E-13-1.19880410E+04 6.45980107E+00-1.07186481E+04    4
NaO               J12/67NA 1.O  1.   0.   0.G   300.000  5000.000     38.98917 1   Chase (1985)
 4.39241580E+00 2.13205740E-04-4.52205980E-08 7.97518210E-12-5.17359890E-16    2
 8.71189950E+03 2.38808971E+00 3.44210070E+00 4.16172410E-03-6.31183680E-06    3
 4.44791990E-09-1.17204860E-12 8.90114770E+03 6.95032541E+00 1.00648575E+04    4
NaO-              J12/67NA 1.O  1.E  1.   0.G   300.000  5000.000     38.98972 1   Chase (1985)
 4.38680080E+00 2.23446720E-04-4.82124720E-08 8.57208620E-12-5.60943340E-16    2
-1.59462680E+04 1.01363492E+00 3.41868550E+00 4.21173820E-03-6.31046460E-06    3
 4.38735150E-09-1.13726390E-12-1.57522340E+04 5.66855652E+00-1.45933736E+04    4
NaOH              J12/70NA 1.O  1.H  1.   0.G   300.000  5000.000     39.99711 1   Chase (1985)
 5.64693770E+00 1.22273850E-03-3.32710360E-07 4.06662980E-11-1.77906880E-15    2
-2.55082220E+04-5.03687458E+00 4.00503880E+00 9.99220430E-03-1.64342130E-05    3
 1.24765850E-08-3.46376100E-12-2.53004710E+04 2.30643612E+00-2.37844210E+04    4
NaOH+             J12/71NA 1.O  1.H  1.E -1.G   300.000  5000.000     39.99656 1   Chase (1985)
 5.66885470E+00 1.22539300E-03-3.40295630E-07 4.28532680E-11-1.95937600E-15    2
 7.98065140E+04-3.42468266E+00 4.35052040E+00 8.74650150E-03-1.46426730E-05    3
 1.13515010E-08-3.21100260E-12 7.99463990E+04 2.34484074E+00 8.15238108E+04    4
Na2               J12/83NA 2.   0.   0.   0.G   200.000  6000.000     45.97954 1   Chase (1985)
 5.96201900E+00-1.06049506E-03-4.39279769E-07 3.05174810E-10-3.39488816E-14    2
 1.49990927E+04-6.69613634E+00 4.11568261E+00 2.52904040E-03-5.62168645E-06    3
 6.46171665E-09-2.75128310E-12 1.57824616E+04 3.68672446E+00 1.70837638E+04    4
Na2C2N2           J3/66 NA 2.C  2.N  2.   0.G   300.000  5000.000     98.01502 1   Chase (1985)
 1.25727860E+01 3.39473180E-03-1.36169340E-06 2.47209590E-10-1.67732540E-14    2
-5.04910210E+03-3.10741978E+01 1.03680290E+01 1.33485470E-02-1.99103340E-05    3
 1.61564750E-08-5.12645500E-12-4.59375270E+03-2.05494428E+01-1.05562247E+03    4
Na2CL2            J12/64NA 2.CL 2.   0.   0.G   300.000  5000.000    116.88494 1   Chase (1985)
 9.82620010E+00 1.91847630E-04-8.16087430E-08 1.52981810E-11-1.05589940E-15    2
-7.10771490E+04-1.70361008E+01 7.95839530E+00 8.39623600E-03-1.38171160E-05    3
 1.02776660E-08-2.86449940E-12-7.07259390E+04-8.17532466E+00-6.80830721E+04    4
Na2F2             J12/68NA 2.F  2.   0.   0.G   300.000  5000.000     83.97634 1   Chase (1985)
 9.43355300E+00 6.36115880E-04-2.76247200E-07 5.29171900E-11-3.73103530E-15    2
-1.04801140E+05-1.97529921E+01 4.82121910E+00 1.98363960E-02-3.06176140E-05    3
 2.13370400E-08-5.53443140E-12-1.03890050E+05 2.36625455E+00-1.01801889E+05    4
Na2O              L10/74NA 2.O  1.   0.   0.G   300.000  5000.000     61.97894 1   Hildenbrand (1970)
 7.14705820E+00 3.98330990E-04-1.74089110E-07 3.35651620E-11-2.38108010E-15    2
-7.21912610E+03-9.63481051E+00 4.77871770E+00 9.94877160E-03-1.48144560E-05    3
 1.00032390E-08-2.51378740E-12-6.73602060E+03 1.79947629E+00-4.98135741E+03    4
Na2O2H2           J12/70NA 2.O  2.H  2.   0.G   300.000  5000.000     79.99422 1   Chase (1985)
 9.41607430E+00 5.51965220E-03-1.96596110E-06 3.26803440E-10-2.07124850E-14    2
-7.63663690E+04-1.88543496E+01 5.97129300E+00 1.40492750E-02-6.24451420E-06    3
-3.39357460E-09 2.89337690E-12-7.54129380E+04-9.37386378E-01-7.30686609E+04    4
Na2SO4            J 6/78NA 2.S  1.O  4.   0.G   300.000  5000.000    142.04314 1   Chase (1985)
 1.52061280E+01 4.29842640E-03-1.90084090E-06 3.71875300E-10-2.67804570E-14    2
-1.29673570E+05-4.76569217E+01 2.07274980E+00 5.45820470E-02-7.85435330E-05    3
 5.51042210E-08-1.52666760E-11-1.26769550E+05 1.66688263E+01-1.24317797E+05    4
Nb                J12/73NB 1.   0.   0.   0.G   300.000  5000.000     92.90638 1   Chase (1985)
 4.22059050E+00-1.81874390E-03 8.23739430E-07-1.18328990E-10 5.36370530E-15    2
 8.69607130E+04-1.18468643E+00 3.47550740E+00 2.05385640E-03-6.96702630E-06    3
 6.80205590E-09-2.25177180E-12 8.70877490E+04 2.24243697E+00 8.81660848E+04    4
NbO               J12/73NB 1.O  1.   0.   0.G   300.000  5000.000    108.90578 1   Chase (1985)
 3.88117290E+00 8.19781220E-04-4.25353900E-07 1.02649360E-10-8.04198010E-15    2
 2.26371320E+04 6.22364151E+00 2.92144850E+00 3.13240820E-03-1.49003690E-06    3
-9.93452600E-10 7.99840200E-13 2.29078860E+04 1.12362937E+01 2.39033917E+04    4
NbO2              J12/73NB 1.O  2.   0.   0.G   200.000  6000.000    124.90518 1   Chase (1985)
 6.05147948E+00 9.75153707E-04-3.82697108E-07 6.54150420E-11-4.07159079E-15    2
-2.61008645E+04-2.40015663E+00 3.57672681E+00 6.35895628E-03-5.96442209E-07    3
-6.34228956E-09 3.70832821E-12-2.53873185E+04 1.06257008E+01-2.40543339E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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Ne                L10/90NE 1.   0.   0.   0.G   200.000  6000.000     20.17970 1   McBride (1993)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-7.45375000E+02 3.35532272E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-7.45375000E+02 3.35532272E+00 0.00000000E+00    4
Ne+               L10/92NE 1.E -1.   0.   0.G   298.150  6000.000     20.17915 1   Moore, C.E. (1971)
 2.90399557E+00-3.63794635E-04 1.31873359E-07-2.14209210E-11 1.28778499E-15    2
 2.50143726E+05 2.56310321E+00 1.94106917E+00 4.40016552E-03-8.57047417E-06    3
 6.99691689E-09-2.11573625E-12 2.50294275E+05 6.99178683E+00 2.51005687E+05    4
Ni                J12/76NI 1.   0.   0.   0.G   300.000  5000.000     58.69340 1   Chase (1985)
 3.20614900E+00-2.09699230E-04-2.28364480E-08 1.50852110E-11-1.00044450E-15    2
 5.07081260E+04 3.53171623E+00 2.77666540E+00-7.52206380E-04 4.32561130E-06    3
-5.47312870E-09 2.11075650E-12 5.09090830E+04 6.16823253E+00 5.17319098E+04    4
NiCL              J 9/77NI 1.CL 1.   0.   0.G   300.000  5000.000     94.14610 1   Chase (1985)
 5.58365140E+00-1.43295780E-03 8.52077230E-07-1.48863930E-10 8.15516240E-15    2
 2.00565050E+04-1.63732144E+00 3.48977570E+00 3.18379300E-03-1.91489120E-06    3
-3.57363170E-10 4.60747680E-13 2.07259350E+04 9.54974436E+00 2.18905147E+04    4
NiCL2             J 9/77NI 1.CL 2.   0.   0.G   300.000  5000.000    129.59880 1   Chase (1985)
 7.38745300E+00 8.46375950E-04-4.31495420E-07 9.35908460E-11-7.19151390E-15    2
-1.12358570E+04-7.18895104E+00 4.56061770E+00 1.36137130E-02-2.36601330E-05    3
 1.96162640E-08-6.24172910E-12-1.06835710E+04 6.23619416E+00-8.89195306E+03    4
NiO               L 2/84NI 1.O  1.   0.   0.G   300.000  5000.000     74.69280 1   Pedley (1983)
 4.10461140E+00 4.86591600E-04-1.87867840E-07 3.55318550E-11-2.47151660E-15    2   Wagman (1982)
 3.64456450E+04 4.07692910E+00 2.99196820E+00 3.33092080E-03-1.53524710E-06    3
-1.56408330E-09 1.21285010E-12 3.67420940E+04 9.82153990E+00 3.77657540E+04    4
NiS               J12/76NI 1.S  1.   0.   0.G   300.000  5000.000     90.75940 1   Chase (1985)
 4.91604720E+00 3.13774510E-04-2.97018130E-07 8.01797240E-11-6.72574180E-15    2
 4.13210320E+04 1.81898797E+00 3.11681070E+00 4.01735280E-03-1.55839110E-06    3
-1.50635360E-09 9.36838810E-13 4.18968570E+04 1.14677351E+01 4.29883902E+04    4
O                 L 1/90O  1.   0.   0.   0.G   200.000  6000.000     15.99940 1   Moore, C.E. (1976)
 2.54363697E+00-2.73162486E-05-4.19029520E-09 4.95481845E-12-4.79553694E-16    2   Brix (1954)
 2.92260120E+04 4.92229457E+00 3.16826710E+00-3.27931884E-03 6.64306396E-06    3
-6.12806624E-09 2.11265971E-12 2.91222592E+04 2.05193346E+00 2.99687009E+04    4
O+                L 1/90O  1.E -1.   0.   0.G   298.150  6000.000     15.99885 1   Moore, C.E. (1971)
 2.48773317E+00 2.17660016E-05-1.08955806E-08 1.25909212E-12 1.37316720E-16    2   Moore, C.E. (1976)
 1.87939965E+05 4.46134078E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 1.87935291E+05 4.39337676E+00 1.88680666E+05    4
O-                TPIS89O  1.E  1.   0.   0.G   298.150  6000.000     15.99995 1   Gurvich (1989)
 2.54474868E+00-4.66695419E-05 1.84912310E-08-3.18159131E-12 1.98962894E-16    2
 1.14822713E+04 4.52131018E+00 2.90805921E+00-1.69804907E-03 2.98069956E-06    3
-2.43835127E-09 7.61229313E-13 1.14138341E+04 2.80339097E+00 1.22272740E+04    4
OD                J 6/77O  1.D  1.   0.   0.G   300.000  5000.000     18.01350 1   Chase (1985)
 2.78291070E+00 1.57395670E-03-5.70207870E-07 9.88644090E-11-6.50620140E-15    2
 3.57598130E+03 6.67567116E+00 4.03467510E+00-2.45613130E-03 3.96102010E-06    3
-1.85349960E-09 1.92953410E-13 3.27705070E+03 3.94185974E-01 4.40224516E+03    4
OH                TPIS78O  1.H  1.   0.   0.G   200.000  6000.000     17.00734 1   Gurvich (1978)
 2.83864607E+00 1.10725586E-03-2.93914978E-07 4.20524247E-11-2.42169092E-15    2
 3.94395852E+03 5.84452662E+00 3.99201543E+00-2.40131752E-03 4.61793841E-06    3
-3.88113333E-09 1.36411470E-12 3.61508056E+03-1.03925458E-01 4.73234213E+03    4
OH+               TPIS78O  1.H  1.E -1.   0.G   298.150  6000.000     17.00679 1   Gurvich (1978)
 2.68358997E+00 1.57006432E-03-5.39972805E-07 9.37643859E-11-5.70068055E-15    2
 1.54395744E+05 6.44375888E+00 3.50502572E+00 2.41313749E-04-1.42200949E-06    3
 2.64780232E-09-1.17038711E-12 1.54127124E+05 1.97907627E+00 1.55174989E+05    4
OH-               L 3/93O  1.H  1.E  1.   0.G   298.150  6000.000     17.00789 1   Gurvich (1989)
 2.83405701E+00 1.07058023E-03-2.62459398E-07 3.08376435E-11-1.31383862E-15    2
-1.80186974E+04 4.49464762E+00 3.43279956E+00 6.19656310E-04-1.89930992E-06    3
 2.37365946E-09-8.55103755E-13-1.82613086E+04 1.06053670E+00-1.72227709E+04    4
O2                TPIS89O  2.   0.   0.   0.G   200.000  6000.000     31.99880 1   McBride (1993)
 3.66096083E+00 6.56365523E-04-1.41149485E-07 2.05797658E-11-1.29913248E-15    2
-1.21597725E+03 3.41536184E+00 3.78245636E+00-2.99673415E-03 9.84730200E-06    3
-9.68129508E-09 3.24372836E-12-1.06394356E+03 3.65767573E+00 0.00000000E+00    4
O2+               TPIS89O  2.E -1.   0.   0.G   298.150  6000.000     31.99825 1   Gurvich (1989)
 3.31675922E+00 1.11522244E-03-3.83492556E-07 5.72784687E-11-2.77648381E-15    2
 1.39876823E+05 5.44726469E+00 4.61017167E+00-6.35951952E-03 1.42425624E-05    3
-1.20997923E-08 3.70956878E-12 1.39742229E+05-2.01326941E-01 1.40937762E+05    4
O2-               L 4/89O  2.E  1.   0.   0.G   298.150  6000.000     31.99935 1   Gurvich (1989)
 3.95666294E+00 5.98141823E-04-2.12133905E-07 3.63267581E-11-2.24989228E-15    2
-7.06287229E+03 2.27871017E+00 3.66442522E+00-9.28741138E-04 6.45477082E-06    3
-7.74703380E-09 2.93332662E-12-6.87076983E+03 4.35140681E+00-5.77639825E+03    4
O3                L 5/90O  3.   0.   0.   0.G   200.000  6000.000     47.99820 1   Gurvich (1989)
 1.23302914E+01-1.19324783E-02 7.98741278E-06-1.77194552E-09 1.26075824E-13    2
 1.26755831E+04-4.08823374E+01 3.40738221E+00 2.05379063E-03 1.38486052E-05    3
-2.23311542E-08 9.76073226E-12 1.58644979E+04 8.28247580E+00 1.70545228E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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P                 J12/82P  1.   0.   0.   0.G   200.000  6000.000     30.97376 1   Chase (1985)
 2.80721555E+00-5.30841988E-04 2.44543046E-07-2.05708252E-11-2.94546619E-16    2
 3.71892748E+04 3.67764723E+00 2.50004278E+00-4.38968637E-07 1.58131741E-09    3
-2.33900457E-12 1.20510940E-15 3.73073754E+04 5.38414719E+00 3.80527536E+04    4
P+                L12/66P  1.E -1.   0.   0.G   300.000  5000.000     30.97321 1   Moore, C.E. (1971)
 2.90215470E+00-5.88788990E-04 3.12981190E-07-5.97275390E-11 3.93049250E-15    2
 1.59944127E+05 3.83370632E+00 4.37904170E+00-6.46667230E-03 8.93409620E-06    3
-5.48580210E-09 1.20988570E-12 1.59647807E+05-3.29374038E+00 1.60734657E+05    4
PCL3              J 6/70P  1.CL 3.   0.   0.G   300.000  5000.000    137.33186 1   Chase (1985)
 9.45661160E+00 6.02784010E-04-2.58468780E-07 4.89042800E-11-3.40832850E-15    2
-3.77045574E+04-1.69296498E+01 5.25905370E+00 1.78805660E-02-2.73175850E-05    3
 1.88982400E-08-4.87384960E-12-3.68644304E+04 3.25232968E+00-3.47080119E+04    4
PF                J 6/77P  1.F  1.   0.   0.G   300.000  5000.000     49.97217 1   Chase (1985)
 4.28444030E+00 4.65131920E-05 1.29231550E-07-3.54596860E-11 2.93086420E-15    2
-7.67566495E+03 2.40196395E+00 2.67608630E+00 5.57221620E-03-7.28377960E-06    3
 4.58194390E-09-1.11881060E-12-7.28916135E+03 1.04341832E+01-6.29944377E+03    4
PF+               J 6/77P  1.F  1.E -1.   0.G   300.000  5000.000     49.97162 1   Chase (1985)
 4.08161840E+00 4.95069100E-04-2.03198080E-07 3.92348470E-11-2.78303370E-15    2
 1.07145847E+05 3.44441678E+00 3.94021220E+00-5.37845820E-04 3.93561060E-06    3
-4.67261940E-09 1.74458380E-12 1.07252597E+05 4.51850338E+00 1.08429826E+05    4
PF-               J 6/77P  1.F  1.E  1.   0.G   300.000  5000.000     49.97271 1   Chase (1985)
 4.30376910E+00 2.63926300E-04-9.87743030E-08 1.87118210E-11-1.21102520E-15    2
-2.10581444E+04 2.41229141E+00 3.59513760E+00 3.03129090E-03-4.40629140E-06    3
 3.15834750E-09-8.92062670E-13-2.09040944E+04 5.86990641E+00-1.97305817E+04    4
PF2               J 6/77P  1.F  2.   0.   0.G   300.000  5000.000     68.97057 1   Chase (1985)
 6.09265880E+00 1.03133240E-03-4.53710200E-07 8.70455830E-11-5.97140520E-15    2
-6.07553254E+04-3.78513004E+00 2.44285260E+00 1.51863310E-02-2.21969240E-05    3
 1.56489320E-08-4.32983720E-12-5.99609804E+04 1.40371170E+01-5.87248863E+04    4
PF2+              J 6/77P  1.F  2.E -1.   0.G   300.000  5000.000     68.97002 1   Chase (1985)
 6.07261540E+00 1.05882490E-03-4.67581660E-07 8.96122980E-11-6.04542170E-15    2
 5.47769396E+04-4.35167158E+00 2.47021360E+00 1.49226760E-02-2.15731390E-05    3
 1.50543860E-08-4.12671090E-12 5.55655406E+04 1.32636740E+01 5.68025058E+04    4
PF3               J12/69P  1.F  3.   0.   0.G   300.000  5000.000     87.96897 1   Chase (1985)
 8.43477330E+00 1.73939200E-03-7.51198080E-07 1.43442470E-10-1.00939790E-14    2
-1.18180783E+05-1.64636020E+01 2.36218780E+00 2.28200450E-02-2.76566420E-05    3
 1.44909620E-08-2.46023600E-12-1.16776903E+05 1.36864320E+01-1.15275206E+05    4
PF5               J12/69P  1.F  5.   0.   0.G   300.000  5000.000    125.96578 1   Chase (1985)
 1.28461840E+01 3.51044850E-03-1.51986040E-06 2.91019040E-10-2.05347080E-14    2
-1.96362263E+05-3.94755420E+01 1.05232490E+00 4.44540040E-02-5.39014290E-05    3
 2.84166860E-08-4.91432680E-12-1.93632313E+05 1.90890100E+01-1.91765100E+05    4
PH                J 6/67P  1.H  1.   0.   0.G   300.000  5000.000     31.98170 1   Chase (1985)
 3.07454420E+00 1.16989470E-03-3.03816540E-07 4.44363140E-11-2.70009750E-15    2
 2.74268316E+04 5.76804846E+00 3.68034330E+00-1.27560180E-03 2.59324420E-06    3
-8.43541070E-10-1.72086090E-13 2.73339656E+04 2.91864116E+00 2.83957262E+04    4
PH3               J 6/62P  1.H  3.   0.   0.G   300.000  5000.000     33.99758 1   Chase (1985)
 3.34487940E+00 6.57709410E-03-2.63367550E-06 4.77446600E-10-3.23543900E-14    2
-8.16176752E+02 3.95479617E+00 3.15819350E+00 2.49414920E-03 9.02552530E-06    3
-1.02279040E-08 3.28342500E-12-4.61237252E+02 6.23722477E+00 6.52312908E+02    4
PO                J 6/71P  1.O  1.   0.   0.G   300.000  5000.000     46.97316 1   Chase (1985)
 3.84279220E+00 7.23644560E-04-2.89341990E-07 5.30135540E-11-3.54953730E-15    2
-4.79945495E+03 4.55237735E+00 3.96130800E+00-2.12353990E-03 7.52012190E-06    3
-7.59509120E-09 2.56375910E-12-4.69896895E+03 4.58369215E+00-3.55964877E+03    4
PO2               J 9/62P  1.O  2.   0.   0.G   300.000  5000.000     62.97256 1   Chase (1985)
 5.69132780E+00 1.48068660E-03-6.54256920E-07 1.27932310E-10-9.20992770E-15    2
-3.97947254E+04-2.81972206E+00 2.33452730E+00 1.25021000E-02-1.43361950E-05    3
 7.67621660E-09-1.54016940E-12-3.89688654E+04 1.40544350E+01-3.78293636E+04    4
P2                J 6/61P  2.   0.   0.   0.G   300.000  5000.000     61.94752 1   Chase (1985)
 4.16117330E+00 3.96208000E-04-1.55803390E-07 2.90934740E-11-2.00424580E-15    2
 1.59468693E+04 2.24109239E+00 2.83911070E+00 4.82661930E-03-5.49474880E-06    3
 2.58005070E-09-3.22364530E-13 1.62597073E+04 8.84241009E+00 1.72771170E+04    4
P4                J 6/61P  4.   0.   0.   0.G   300.000  5000.000    123.89505 1   Chase (1985)
 9.22627890E+00 8.68941280E-04-3.77583380E-07 7.23796660E-11-5.10661090E-15    2
 4.09054959E+03-1.96417049E+01 3.53533000E+00 2.41252920E-02-3.64627590E-05    3
 2.49169060E-08-6.32985630E-12 5.23553359E+03 7.75589569E+00 7.08599199E+03    4
P4O10             J12/65P  4.O 10.   0.   0.G   300.000  5000.000    283.88905 1   Chase (1985)
 2.89396590E+01 1.24520960E-02-5.48543200E-06 1.07047430E-09-7.69568570E-14    2
-3.60148633E+05-1.23859447E+02-4.41428830E+00 1.37590810E-01-1.92685980E-04    3
 1.32720680E-07-3.63113780E-11-3.52629523E+05 4.01782260E+01-3.49287392E+05    4
Pb                J 3/83PB 1.   0.   0.   0.G   200.000  6000.000    207.20000 1   Chase (1985)
 4.16342379E+00-3.49637723E-03 2.28263170E-06-4.76749242E-10 3.22223800E-14    2
 2.21687499E+04-2.13525305E+00 2.50229005E+00-2.44053643E-05 9.17082578E-08    3
-1.42817771E-10 7.83762196E-14 2.27314919E+04 6.84009322E+00 2.34770299E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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PbBr              J12/73PB 1.BR 1.   0.   0.G   300.000  5000.000    287.10400 1   Chase (1985)
 4.72687660E+00-4.39183900E-04 3.32155820E-07-6.53072400E-11 4.27261120E-15    2
 7.09889590E+03 5.86735159E+00 4.19068400E+00 1.34111780E-03-2.09789940E-06    3
 1.55109080E-09-4.26179120E-13 7.23694690E+03 8.57477819E+00 8.53033705E+03    4
PbBr2             J12/73PB 1.BR 2.   0.   0.G   300.000  5000.000    367.00800 1   Chase (1985)
 6.94729060E+00 6.01990010E-05-2.65566850E-08 5.15960120E-12-3.68370500E-16    2
-1.46454410E+04 1.18015799E+00 6.39020910E+00 2.52890500E-03-4.19037430E-06    3
 3.13675230E-09-8.79767450E-13-1.45417920E+04 3.81752929E+00-1.25553875E+04    4
PbBr4             J12/73PB 1.BR 4.   0.   0.G   300.000  5000.000    526.81600 1   Chase (1985)
 1.28569730E+01 1.63239400E-04-7.19703900E-08 1.39757490E-11-9.97361870E-16    2
-5.87720950E+04-2.21457500E+01 1.13793660E+01 6.66258720E-03-1.09406480E-05    3
 8.10947390E-09-2.24955750E-12-5.84954310E+04-1.51401680E+01-5.48882380E+04    4
PbCL              J 6/73PB 1.CL 1.   0.   0.G   300.000  5000.000    242.65270 1   Chase (1985)
 4.70165350E+00-4.22551710E-04 3.26847790E-07-6.51621470E-11 4.29786020E-15    2
 3.77979910E+02 4.43744174E+00 3.89729120E+00 2.48674640E-03-3.91571440E-06    3
 2.84942830E-09-7.72665800E-13 5.68625790E+02 8.42847364E+00 1.81180238E+03    4
PbCL+             J 6/73PB 1.CL 1.E -1.   0.G   300.000  5000.000    242.65215 1   Chase (1985)
 4.45916970E+00 9.74073070E-05-4.88211340E-09-2.54722460E-12 6.24708770E-16    2
 8.83258470E+04 5.21310064E+00 3.96048080E+00 2.25113840E-03-3.55593020E-06    3
 2.61309650E-09-7.19012840E-13 8.84213700E+04 7.58774284E+00 8.96756515E+04    4
PbCL2             J 6/73PB 1.CL 2.   0.   0.G   300.000  5000.000    278.10540 1   Chase (1985)
 6.84016780E+00 2.06013080E-04-1.00234340E-07 1.92627720E-11-8.79414190E-16    2
-2.30163620E+04-9.63755109E-01 5.63994070E+00 5.46221340E-03-8.80568720E-06    3
 6.41972300E-09-1.75185910E-12-2.27923360E+04 4.72790485E+00-2.09339476E+04    4
PbCL2+            J 6/73PB 1.CL 2.E -1.   0.G   300.000  5000.000    278.10485 1   Chase (1985)
 6.84188370E+00 1.97924730E-04-9.65628220E-08 2.01064400E-11-1.32465790E-15    2
 9.60940180E+04-8.16043488E-01 5.56538760E+00 5.74684170E-03-9.24450410E-06    3
 6.72568880E-09-1.83138580E-12 9.63349850E+04 5.24905399E+00 9.81804864E+04    4
PbCL4             J12/73PB 1.CL 4.   0.   0.G   300.000  5000.000    349.01080 1   Chase (1985)
 1.26696730E+01 3.75122560E-04-1.64653700E-07 3.18488550E-11-2.26509470E-15    2
-7.03291510E+04-2.66238322E+01 9.62829790E+00 1.34564380E-02-2.15717310E-05    3
 1.56382150E-08-4.24149220E-12-6.97464870E+04-1.21348482E+01-6.64393967E+04    4
PbF               J12/73PB 1.F  1.   0.   0.G   300.000  5000.000    226.19840 1   Chase (1985)
 4.60521960E+00-3.26222170E-04 2.82982530E-07-5.71205940E-11 3.73978130E-15    2
-1.10869170E+04 3.74059421E+00 3.24544820E+00 4.69361660E-03-6.97800280E-06    3
 4.74593040E-09-1.19839280E-12-1.07770730E+04 1.04437320E+01-9.65366318E+03    4
PbF2              J12/73PB 1.F  2.   0.   0.G   300.000  5000.000    245.19681 1   Chase (1985)
 6.63545930E+00 4.11731090E-04-1.80046090E-07 3.47289840E-11-2.46452690E-15    2
-5.44250590E+04-2.94686193E+00 4.12956940E+00 1.05616260E-02-1.58081440E-05    3
 1.07257480E-08-2.70938900E-12-5.39161210E+04 9.14042487E+00-5.23352056E+04    4
PbF4              J12/73PB 1.F  4.   0.   0.G   300.000  5000.000    283.19361 1   Chase (1985)
 1.21277740E+01 9.84210460E-04-4.30061590E-07 8.29024210E-11-5.88002020E-15    2
-1.40203450E+05-2.97909440E+01 6.27453870E+00 2.45762820E-02-3.65675370E-05    3
 2.46632660E-08-6.18760080E-12-1.39009170E+05-1.52958550E+00-1.36323331E+05    4
PbI               J12/73PB 1.I  1.   0.   0.G   300.000  5000.000    334.10447 1   Chase (1985)
 4.71861120E+00-4.18822360E-04 3.09708470E-07-5.92033530E-11 3.87739700E-15    2
 1.15341100E+04 6.83919406E+00 4.30733950E+00 8.56682320E-04-1.31645540E-06    3
 9.71872390E-10-2.65267440E-13 1.16457440E+04 8.94132936E+00 1.29582187E+04    4
PbI2              J12/73PB 1.I  2.   0.   0.G   300.000  5000.000    461.00894 1   Chase (1985)
 6.97611080E+00 2.74745710E-05-1.22042160E-08 2.38624890E-12-1.71337680E-16    2
-2.47078980E+03 3.47173649E+00 6.71692250E+00 1.18498790E-03-1.97915550E-06    3
 1.49273780E-09-4.21896460E-13-2.42295050E+03 4.69675599E+00-3.82366018E+02    4
PbI4              J12/73PB 1.I  4.   0.   0.G   300.000  5000.000    714.81788 1   Chase (1985)
 1.29276610E+01 8.29982860E-05-3.67816670E-08 7.17642940E-12-5.14309570E-16    2
-3.08776290E+04-1.76557593E+01 1.21502660E+01 3.53870810E-03-5.87824340E-06    3
 4.40721590E-09-1.23740500E-12-3.07335650E+04-1.39781323E+01-2.69974873E+04    4
PbO               J12/71PB 1.O  1.   0.   0.G   300.000  5000.000    223.19940 1   Chase (1985)
 4.11362420E+00 5.37788570E-04-2.37633940E-07 4.24256880E-11-1.22940440E-15    2
 7.15192600E+03 5.15041319E+00 2.65398670E+00 6.66441150E-03-1.03123630E-05    3
 7.66632590E-09-2.21738640E-12 7.44375130E+03 1.21567130E+01 8.45424386E+03    4
PbS               J 6/73PB 1.S  1.   0.   0.G   300.000  5000.000    239.26600 1   Chase (1985)
 4.09115220E+00 8.38853590E-04-5.71572070E-07 1.61604760E-10-1.25118970E-14    2
 1.46016950E+04 6.70074801E+00 3.47745320E+00 3.97002950E-03-6.10966890E-06    3
 4.30086820E-09-1.13115490E-12 1.46847510E+04 9.47780941E+00 1.58519958E+04    4
Pb2               J 9/63PB 2.   0.   0.   0.G   300.000  5000.000    414.40000 1   Chase (1985)
 4.45983400E+00 2.40063810E-04-1.92598630E-08 3.64569370E-12-2.53809340E-16    2
 3.86540490E+04 8.32496049E+00 4.05012220E+00 2.02300010E-03-2.97013460E-06    3
 2.17859570E-09-5.97553270E-13 3.87316400E+04 1.02719920E+01 4.00068822E+04    4
S                 J 9/82S  1.   0.   0.   0.G   200.000  6000.000     32.06600 1   Chase (1985)
 2.87936498E+00-5.11050388E-04 2.53806719E-07-4.45455458E-11 2.66717362E-15    2
 3.25013791E+04 3.98140647E+00 2.31725616E+00 4.78018342E-03-1.42082674E-05    3
 1.56569538E-08-5.96588299E-12 3.25068976E+04 6.06242434E+00 3.33128471E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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S+                J 9/82S  1.E -1.   0.   0.G   298.150  6000.000     32.06545 1   Chase (1985)
 2.46524359E+00 1.14257212E-04-1.19572699E-07 4.38771359E-11-3.80523639E-15    2
 1.53485422E+05 5.60821364E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 1.53478145E+05 5.43627012E+00 1.54223520E+05    4
S-                J 9/82S  1.E  1.   0.   0.G   298.150  6000.000     32.06655 1   Chase (1985)
 2.72948060E+00-2.24894928E-04 8.58648854E-08-1.44256169E-11 8.87491196E-16    2
 7.65980069E+03 4.39902733E+00 2.51353070E+00 1.93516857E-03-5.38438357E-06    3
 5.40313356E-09-1.89053684E-12 7.64303006E+03 5.13282009E+00 8.44066578E+03    4
SCL               J 6/78S  1.CL 1.   0.   0.G   300.000  5000.000     67.51870 1   Chase (1985)
 4.59472600E+00-5.97717860E-05 4.52264950E-08-9.37184350E-12 8.07357270E-16    2
 1.74524260E+04 2.37985153E+00 3.70558800E+00 5.27186230E-03-1.13718200E-05    3
 1.04978270E-08-3.53184080E-12 1.75611590E+04 6.27945123E+00 1.88189067E+04    4
SCL2              J 6/78S  1.CL 2.   0.   0.G   300.000  5000.000    102.97140 1   Chase (1985)
 6.62714620E+00 4.27470190E-04-1.88168810E-07 3.57611550E-11-2.38494000E-15    2
-4.20002190E+03-4.23237025E+00 3.59663710E+00 1.43271930E-02-2.51991970E-05    3
 2.05728820E-08-6.39769080E-12-3.63758370E+03 1.00605557E+01-2.11344531E+03    4
SCL2+             J 6/78S  1.CL 2.E -1.   0.G   300.000  5000.000    102.97085 1   Chase (1985)
 6.58025700E+00 5.21764000E-04-2.50769790E-07 5.09881240E-11-3.27302920E-15    2
 1.06354860E+05-3.29493834E+00 3.59587270E+00 1.42916650E-02-2.50849980E-05    3
 2.04468930E-08-6.35046690E-12 1.06902830E+05 1.07558337E+01 1.08425944E+05    4
SD                J 6/77S  1.D  1.   0.   0.G   300.000  5000.000     34.08010 1   Chase (1985)
 3.34719880E+00 1.21296460E-03-4.77301380E-07 8.83236690E-11-6.07405910E-15    2
 1.56271470E+04 4.87764189E+00 4.72855970E+00-5.09398810E-03 9.91346050E-06    3
-7.32908130E-09 1.94616080E-12 1.53995790E+04-1.56847961E+00 1.66570071E+04    4
SF                J 6/76S  1.F  1.   0.   0.G   300.000  5000.000     51.06440 1   Chase (1985)
 4.36908850E+00 1.92044240E-04-6.66303650E-08 1.24485900E-11-7.65374940E-16    2
 2.20185260E+02 2.07596854E+00 3.42081750E+00 4.55111980E-03-7.93725640E-06    3
 6.50047110E-09-2.02896650E-12 3.96095030E+02 6.54700574E+00 1.56005789E+03    4
SF+               J 6/76S  1.F  1.E -1.   0.G   300.000  5000.000     51.06385 1   Chase (1985)
 4.28072480E+00 1.03674330E-04 5.54416650E-08-1.14332950E-11 5.58469060E-16    2
 1.17921920E+05 2.45939453E+00 2.66666480E+00 5.69754910E-03-7.60574220E-06    3
 4.91194550E-09-1.24145140E-12 1.18310330E+05 1.05150192E+01 1.19300559E+05    4
SF-               J12/76S  1.F  1.E  1.   0.G   300.000  5000.000     51.06495 1   Chase (1985)
 4.12706720E+00 6.25693400E-04-3.12469860E-07 7.17224760E-11-4.70614040E-15    2
-2.37348810E+04 2.55369406E+00 2.75979360E+00 6.86582200E-03-1.13145190E-05    3
 8.87463700E-09-2.67842700E-12-2.34863060E+04 8.99350676E+00-2.24419989E+04    4
SF2               J 6/76S  1.F  2.   0.   0.G   300.000  5000.000     70.06281 1   Chase (1985)
 6.11941960E+00 1.00514240E-03-4.46533130E-07 8.76240100E-11-6.32365120E-15    2
-3.77142410E+04-4.55717403E+00 2.41030560E+00 1.55901210E-02-2.31780180E-05    3
 1.65834970E-08-4.64657610E-12-3.69163730E+04 1.35066804E+01-3.56790061E+04    4
SF2+              J12/76S  1.F  2.E -1.   0.G   300.000  5000.000     70.06226 1   Chase (1985)
 6.12090000E+00 9.99848170E-04-4.39929320E-07 8.43681370E-11-5.77953780E-15    2
 8.24445850E+04-3.86307537E+00 2.42714900E+00 1.55175460E-02-2.30602590E-05    3
 1.64996120E-08-4.62464180E-12 8.32395570E+04 1.41278866E+01 8.44796050E+04    4
SF2-              J12/76S  1.F  2.E  1.   0.G   300.000  5000.000     70.06335 1   Chase (1985)
 6.58471230E+00 4.78860900E-04-2.14054400E-07 4.21757030E-11-3.05239100E-15    2
-5.00057050E+04-5.73334798E+00 3.29005030E+00 1.55386120E-02-2.72366040E-05    3
 2.21827990E-08-6.88621560E-12-4.93919250E+04 9.81747752E+00-4.79204012E+04    4
SF3               J 6/77S  1.F  3.   0.   0.G   300.000  5000.000     89.06121 1   Chase (1985)
 8.80768970E+00 1.36716760E-03-6.08083330E-07 1.18830220E-10-8.44709150E-15    2
-6.34404940E+04-1.67648869E+01 1.87777280E+00 3.12340350E-02-5.15713790E-05    3
 4.02473220E-08-1.21105940E-11-6.20679390E+04 1.63694361E+01-6.05016370E+04    4
SF3+              J12/76S  1.F  3.E -1.   0.G   300.000  5000.000     89.06066 1   Chase (1985)
 8.13850160E+00 2.12889140E-03-9.48368220E-07 1.86074360E-10-1.32717290E-14    2
 4.44867300E+04-1.54212422E+01 1.00185080E+00 2.97551550E-02-4.33567940E-05    3
 3.05549640E-08-8.46334790E-12 4.60441840E+04 1.94445008E+01 4.73387417E+04    4
SF3-              J12/76S  1.F  3.E  1.   0.G   300.000  5000.000     89.06176 1   Chase (1985)
 8.80958260E+00 1.36436780E-03-6.07573210E-07 1.19405320E-10-8.62593320E-15    2
-9.63202650E+04-1.74943707E+01 1.87887610E+00 3.12261740E-02-5.15517490E-05    3
 4.02267880E-08-1.21029320E-11-9.49470550E+04 1.56459843E+01-9.33806370E+04    4
SF4               J 6/76S  1.F  4.   0.   0.G   300.000  5000.000    108.05961 1   Chase (1985)
 1.11243830E+01 2.14579940E-03-9.54524440E-07 1.87461110E-10-1.35359530E-14    2
-9.55816690E+04-2.88756477E+01 1.28196450E+00 4.35698990E-02-7.01251680E-05    3
 5.36772440E-08-1.59143560E-11-9.35867010E+04 1.84198703E+01-9.17889260E+04    4
SF4+              J12/76S  1.F  4.E -1.   0.G   300.000  5000.000    108.05906 1   Chase (1985)
 1.13519410E+01 1.88756620E-03-8.39040620E-07 1.64149380E-10-1.17351950E-14    2
 4.62247670E+04-2.85715083E+01 1.96158130E+00 4.21320940E-02-6.91555650E-05    3
 5.37206660E-08-1.61058950E-11 4.80947400E+04 1.63799007E+01 5.00397986E+04    4
SF4-              J12/76S  1.F  4.E  1.   0.G   300.000  5000.000    108.06016 1   Chase (1985)
 1.20033260E+01 1.20077130E-03-5.73982740E-07 1.22993850E-10-9.29527340E-15    2
-1.10603080E+05-3.16592651E+01 4.07937620E+00 3.78395030E-02-6.69046570E-05    3
 5.48224340E-08-1.70928440E-11-1.09146420E+05 5.64178773E+00-1.06739135E+05    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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SF5               J12/77S  1.F  5.   0.   0.G   300.000  5000.000    127.05802 1   Chase (1985)
 1.36105630E+01 2.65231300E-03-1.16914630E-06 2.42451320E-10-1.83147180E-14    2
-1.14002930E+05-4.30151012E+01-1.71476620E+00 6.87160080E-02-1.14079330E-04    3
 8.93363790E-08-2.69404290E-11-1.10961780E+05 3.02724678E+01-1.09262883E+05    4
SF5+              J12/77S  1.F  5.E -1.   0.G   300.000  5000.000    127.05747 1   Chase (1985)
 1.36842160E+01 2.51770230E-03-1.08543930E-06 2.25337450E-10-1.72239170E-14    2
 1.60049080E+04-4.41997237E+01-1.71648610E+00 6.89400460E-02-1.14710510E-04    3
 8.99778650E-08-2.71663260E-11 1.90611490E+04 2.94445133E+01 2.07650756E+04    4
SF5-              J12/77S  1.F  5.E  1.   0.G   300.000  5000.000    127.05856 1   Chase (1985)
 1.43219100E+01 1.93130330E-03-8.62199360E-07 1.69723950E-10-1.22748600E-14    2
-1.57343150E+05-4.51592537E+01 1.84776490E+00 5.83763690E-02-1.01313140E-04    3
 8.19569770E-08-2.53195050E-11-1.54993260E+05 1.38538843E+01-1.52592788E+05    4
SF6               J 6/76S  1.F  6.   0.   0.G   300.000  5000.000    146.05642 1   Chase (1985)
 1.51629500E+01 4.38423180E-03-1.94863370E-06 3.82471960E-10-2.76050500E-14    2
-1.52268010E+05-5.44157194E+01-3.83880880E+00 8.32217210E-02-1.31816890E-04    3
 9.96361540E-08-2.92487670E-11-1.48364770E+05 3.71611426E+01-1.46791868E+05    4
SF6-              J 6/77S  1.F  6.E  1.   0.G   300.000  5000.000    146.05697 1   Chase (1985)
 1.54286460E+01 4.08453170E-03-1.81649030E-06 3.56673280E-10-2.57500000E-14    2
-1.66898840E+05-5.43961218E+01-3.26092720E+00 8.26953690E-02-1.32998120E-04    3
 1.01737680E-07-3.01463830E-11-1.63108600E+05 3.54233442E+01-1.61393505E+05    4
SH                J 6/77S  1.H  1.   0.   0.G   300.000  5000.000     33.07394 1   Chase (1985)
 3.00145370E+00 1.33949570E-03-4.67896630E-07 7.88040150E-11-5.02804530E-15    2
 1.59053200E+04 6.28462715E+00 4.44203220E+00-2.43591970E-03 1.90645760E-06    3
 9.91666300E-10-9.57407620E-13 1.55232580E+04-1.14449035E+00 1.67577318E+04    4
SN                J 6/61S  1.N  1.   0.   0.G   300.000  5000.000     46.07274 1   Chase (1985)
 3.84939760E+00 7.27567880E-04-2.93702030E-07 5.50136280E-11-3.81235510E-15    2
 3.04599620E+04 4.43127355E+00 3.94229710E+00-2.00355150E-03 7.35346440E-06    3
-7.51685600E-09 2.55910980E-12 3.05639490E+04 4.58030805E+00 3.17016142E+04    4
SO                J 6/77S  1.O  1.   0.   0.G   300.000  5000.000     48.06540 1   Chase (1985)
 4.01428730E+00 2.70228170E-04 8.28966670E-08-3.43237410E-11 3.11214440E-15    2
-7.10519560E+02 3.49973505E+00 3.14902330E+00 1.18393470E-03 2.57406860E-06    3
-4.44434190E-09 1.87351590E-12-4.04075710E+02 8.31987915E+00 6.02271219E+02    4
SOF2              J 6/72S  1.O  1.F  2.   0.G   300.000  5000.000     86.06221 1   Chase (1985)
 8.08742120E+00 2.10957160E-03-9.08669120E-07 1.73448340E-10-1.22141580E-14    2
-6.82381590E+04-1.38555915E+01 2.47490660E+00 2.09524260E-02-2.41642770E-05    3
 1.21203770E-08-1.93387310E-12-6.68976020E+04 1.41973405E+01-6.54188894E+04    4
SO2               J 6/61S  1.O  2.   0.   0.G   300.000  5000.000     64.06480 1   Chase (1985)
 5.24513640E+00 1.97042040E-03-8.03757690E-07 1.51499690E-10-1.05580040E-14    2
-3.75582270E+04-1.07404892E+00 3.26653380E+00 5.32379020E-03 6.84375520E-07    3
-5.28100470E-09 2.55904540E-12-3.69081480E+04 9.66465108E+00-3.57007867E+04    4
SO2CLF            J 6/71S  1.O  2.CL 1.F  1.G   300.000  5000.000    118.51590 1   Chase (1985)
 1.01182860E+01 3.14889940E-03-1.34715140E-06 2.55803100E-10-1.79382560E-14    2
-7.05092910E+04-2.31278508E+01 2.98175280E+00 2.64491670E-02-2.92001820E-05    3
 1.39576110E-08-2.03044870E-12-6.87614970E+04 1.27316812E+01-6.69282620E+04    4
SO2CL2            J 6/71S  1.O  2.CL 2.   0.G   300.000  5000.000    134.97020 1   Chase (1985)
 1.05509370E+01 2.67343010E-03-1.14282300E-06 2.16862000E-10-1.51991510E-14    2
-4.62950560E+04-2.43078570E+01 4.38516770E+00 2.32121570E-02-2.65321120E-05    3
 1.34999230E-08-2.28192810E-12-4.48029740E+04 6.57867880E+00-4.26726368E+04    4
SO2F2             J 6/71S  1.O  2.F  2.   0.G   300.000  5000.000    102.06161 1   Chase (1985)
 9.60788850E+00 3.71110260E-03-1.58991140E-06 3.02324640E-10-2.12285770E-14    2
-9.47547680E+04-2.28489419E+01 1.73246800E+00 2.85017600E-02-2.94537980E-05    3
 1.24013000E-08-1.17155330E-12-9.27813930E+04 1.69484101E+01-9.12343116E+04    4
SO3               J 9/65S  1.O  3.   0.   0.G   300.000  5000.000     80.06420 1   Chase (1985)
 7.07573760E+00 3.17633870E-03-1.35357600E-06 2.56309120E-10-1.79360440E-14    2
-5.02113760E+04-1.11875176E+01 2.57803850E+00 1.45563350E-02-9.17641730E-06    3
-7.92030220E-10 1.97094730E-12-4.89317530E+04 1.22651384E+01-4.75978348E+04    4
S2                J 9/77S  2.   0.   0.   0.G   300.000  5000.000     64.13200 1   Chase (1985)
 3.98860690E+00 5.57750510E-04-5.01892780E-08-1.54703190E-11 2.66617710E-15    2
 1.41980150E+04 4.49119159E+00 2.85857540E+00 5.17583550E-03-6.54934340E-06    3
 3.39986430E-09-4.01567660E-13 1.44124020E+04 9.89127849E+00 1.54434020E+04    4
S2CL              J 6/78S  2.CL 1.   0.   0.G   200.000  6000.000     99.58470 1   Chase (1985)
 6.62320418E+00 4.18284634E-04-1.75659120E-07 3.09718384E-11-1.75155922E-15    2
 7.37495900E+03-2.98511892E+00 2.97426932E+00 1.90782904E-02-3.76265413E-05    3
 3.40374979E-08-1.15684664E-11 7.98922980E+03 1.38424354E+01 9.45335323E+03    4
S2CL2             L 4/93S  2.CL 2.   0.   0.G   200.000  6000.000    135.03740 1   Chase (1985)
 9.46841020E+00 1.12186352E-03-6.92784280E-07 1.38654463E-10-9.29397839E-15    2
-5.05019524E+03-1.52950441E+01 3.47905708E+00 3.25370028E-02-6.63904620E-05    3
 6.21124845E-08-2.17112325E-11-4.02225567E+03 1.22791824E+01-2.01286666E+03    4
S2F2,thiothony    J 6/76S  2.F  2.   0.   0.G   200.000  6000.000    102.12881 1   Chase (1985)
 8.94018671E+00 1.10450187E-03-4.36227657E-07 7.46298478E-11-4.62043951E-15    2
-5.12574746E+04-1.66739136E+01 1.49372393E+00 3.42575635E-02-5.94656831E-05    3
 4.87690344E-08-1.53761684E-11-4.98103490E+04 1.87375139E+01-4.82786117E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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S2O               J 9/65S  2.0  1.   0.   0.G   300.000  5000.000     80.13140 1   Chase (1985)
 5.90375240E+00 1.23699750E-03-5.45707900E-07 1.06598420E-10-7.66882430E-15    2
-8.77520900E+03-2.26999836E+00 2.84142570E+00 1.21884100E-02-1.60002410E-05    3
 1.03092890E-08-2.64491200E-12-8.06030150E+03 1.29180736E+01-6.79363039E+03    4
S8                J 9/77S  8.   0.   0.   0.G   200.000  6000.000    256.52800 1   Chase (1985)
 2.07249521E+01 1.34686111E-03-5.37225946E-07 9.28122853E-11-5.81951340E-15    2
 5.53344324E+03-6.74805287E+01 4.19700496E+00 9.15503597E-02-1.91263611E-04    3
 1.80177196E-07-6.30393695E-11 8.12071691E+03 7.58043917E+00 1.20776811E+04    4
Si                J 3/83SI 1.   0.   0.   0.G   200.000  6000.000     28.08550 1   Chase (1985)
 2.58061157E+00-2.06044654E-04 1.93051677E-07-4.56485107E-11 3.36411716E-15    2
 5.33829933E+04 5.60657423E+00 3.76476150E+00-7.12070985E-03 1.57318301E-05    3
-1.53824969E-08 5.53194933E-12 5.32050782E+04 3.02168772E-01 5.41222513E+04    4
Si+               J 3/83SI 1.E -1.   0.   0.G   298.150  6000.000     28.08495 1   Chase (1985)
 2.64794579E+00-1.60109008E-04 6.54024155E-08-1.16224655E-11 7.55961272E-16    2
 1.48703413E+05 4.73171848E+00 4.24419073E+00-7.51160863E-03 1.33368333E-05    3
-1.09406149E-08 3.41357223E-12 1.48408792E+05-2.78917334E+00 1.49438151E+05    4
SiBr              J12/76SI 1.BR 1.   0.   0.G   300.000  5000.000    107.98950 1   Chase (1985)
 4.66816920E+00-1.01694130E-04 7.08389920E-08-1.43348560E-11 1.40767390E-15    2
 2.69334590E+04 3.22497259E+00 3.97197880E+00 4.77452790E-03-1.11306840E-05    3
 1.06812020E-08-3.67263830E-12 2.69863040E+04 6.11195719E+00 2.83037975E+04    4
SiBr2             J12/77SI 1.BR 2.   0.   0.G   300.000  5000.000    187.89350 1   Chase (1985)
 6.72247700E+00 3.80579290E-04-2.01385890E-07 4.43511720E-11-2.92396510E-15    2
-8.35929800E+03-1.81955711E+00 4.67197290E+00 1.02928970E-02-1.87140190E-05    3
 1.56379000E-08-4.94565210E-12-8.00391630E+03 7.72665519E+00-6.29024918E+03    4
SiBr3             J12/77SI 1.BR 3.   0.   0.G   300.000  5000.000    267.79750 1   Chase (1985)
 9.58549680E+00 4.79238460E-04-2.14605950E-07 4.23382690E-11-3.06707940E-15    2
-2.72445060E+04-1.27013080E+01 5.77296020E+00 1.83717870E-02-3.30193320E-05    3
 2.73678640E-08-8.60387870E-12-2.65545540E+04 5.18627029E+00-2.42584791E+04    4
SiBr4             J12/76SI 1.BR 4.   0.   0.G   300.000  5000.000    347.70150 1   Chase (1985)
 1.24560870E+01 6.28443840E-04-2.81289510E-07 5.54744140E-11-4.01759590E-15    2
-5.38505210E+04-2.58609090E+01 7.61089370E+00 2.32393840E-02-4.15457460E-05    3
 3.43052410E-08-1.07550760E-11-5.29682090E+04-3.09903931E+00-4.99704412E+04    4
SiC               J 3/67SI 1.C  1.   0.   0.G   300.000  5000.000     40.09650 1   Chase (1985)
 5.57990330E+00-1.34093440E-03 7.54830470E-07-1.65437780E-10 1.26633450E-14    2
 8.50461200E+04-5.65019631E+00-2.19246960E+00 4.13427000E-02-7.82741130E-05    3
 6.06941200E-08-1.67292070E-11 8.59531430E+04 2.87692430E+01 8.65575097E+04    4
SiC2              J 3/67SI 1.C  2.   0.   0.G   300.000  5000.000     52.10750 1   Chase (1985)
 5.70115230E+00 2.12206900E-03-1.14577690E-06 3.10387680E-10-2.77638970E-14    2
 7.20233910E+04-4.97373211E+00 3.88063330E+00 6.79477670E-03-5.02779620E-06    3
 1.05732320E-09 2.55131420E-13 7.25582490E+04 4.55056719E+00 7.39750561E+04    4
SiC4H12           J12/60SI 1.C  4.H 12.  0.G   298.150  5000.000     88.22478 1   Chase (1985)
 1.15637018E+01 3.28112064E-02-1.26370891E-05 2.26868511E-09-1.54269477E-13    2
-4.01381366E+04-3.36341195E+01 4.94618626E+00 4.11429743E-02-2.93233742E-07    3
-2.29003694E-08 1.09566773E-11-3.77310492E+04 3.18631099E+00 0.00000000E+00    4
SiCL              J12/76SI 1.CL 1.   0.   0.G   300.000  5000.000     63.53820 1   Chase (1985)
 4.39828940E+00 1.67407870E-04-5.36062470E-08 9.57315490E-12-4.45308920E-16    2
 2.25131450E+04 3.44495821E+00 3.73965330E+00 3.11647160E-03-5.24743830E-06    3
 4.20125430E-09-1.28872220E-12 2.26382610E+04 6.56734951E+00 2.38530893E+04    4
SiCL2             J12/77SI 1.CL 2.   0.   0.G   300.000  5000.000     98.99090 1   Chase (1985)
 6.63078890E+00 4.38532790E-04-1.98113510E-07 3.70058730E-11-2.67143940E-15    2
-2.23607190E+04-4.27487020E+00 3.71099610E+00 1.39663520E-02-2.47110540E-05    3
 2.02592190E-08-6.31937030E-12-2.18259490E+04 9.46158180E+00-2.02800229E+04    4
SiCL3             J12/77SI 1.CL 3.   0.   0.G   300.000  5000.000    134.44360 1   Chase (1985)
 9.35946310E+00 7.38348380E-04-3.29940490E-07 6.49899730E-11-4.70232410E-15    2
-4.99300680E+04-1.56480110E+01 4.26270270E+00 2.40508690E-02-4.21848820E-05    3
 3.43739300E-08-1.06744620E-11-4.89812050E+04 8.40523855E+00-4.69511053E+04    4
SiCL4             J12/70SI 1.CL 4.   0.   0.G   300.000  5000.000    169.89630 1   Chase (1985)
 1.20896550E+01 1.01907350E-03-4.41678650E-07 8.44815730E-11-5.94915800E-15    2
-8.35902500E+04-2.99269336E+01 6.10400100E+00 2.49331140E-02-3.67032630E-05    3
 2.44487480E-08-6.03701550E-12-8.23592730E+04-9.76400498E-01-7.97099719E+04    4
SiF               J12/76SI 1.F  1.   0.   0.G   300.000  5000.000     47.08390 1   Chase (1985)
 4.12278350E+00 4.68048910E-04-1.86776750E-07 3.52420930E-11-2.30150460E-15    2
-3.72586190E+03 3.38858659E+00 3.24535350E+00 2.97023310E-03-2.48579900E-06    3
 5.63048360E-10 1.44160340E-13-3.49442720E+03 7.88443459E+00-2.41558858E+03    4
SiF2              J12/77SI 1.F  2.   0.   0.G   300.000  5000.000     66.08231 1   Chase (1985)
 6.05621040E+00 1.07219520E-03-4.71297580E-07 9.01747640E-11-6.13709050E-15    2
-7.27270830E+04-4.35994749E+00 2.51482400E+00 1.45041570E-02-2.05947790E-05    3
 1.41301760E-08-3.81323260E-12-7.19424330E+04 1.30046349E+01-7.07038037E+04    4
SiF3              J12/77SI 1.F  3.   0.   0.G   300.000  5000.000     85.08071 1   Chase (1985)
 8.34881910E+00 1.87723690E-03-8.31771250E-07 1.62907180E-10-1.17385330E-14    2
-1.33399870E+05-1.48343890E+01 2.34802200E+00 2.46650330E-02-3.51093500E-05    3
 2.42326900E-08-6.59094160E-12-1.32068720E+05 1.45901830E+01-1.30537786E+05    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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SiF4              J 6/76SI 1.F  4.   0.   0.G   300.000  5000.000    104.07911 1   Chase (1985)
 1.04784730E+01 2.85867560E-03-1.26463140E-06 2.47468630E-10-1.78242960E-14    2
-1.97905500E+05-2.75074780E+01 2.18930680E+00 3.37020070E-02-4.67231790E-05    3
 3.15846380E-08-8.45061140E-12-1.96032890E+05 1.33004710E+01-1.94236568E+05    4
SiH               J12/76SI 1.H  1.   0.   0.G   300.000  5000.000     29.09344 1   Chase (1985)
 3.04531940E+00 1.55875260E-03-6.20726770E-07 1.15182700E-10-7.62897730E-15    2
 4.43311260E+04 6.04465545E+00 4.33629540E+00-5.05124220E-03 1.14230960E-05    3
-9.38906520E-09 2.77181490E-12 4.41507140E+04 1.88214679E-01 4.53027449E+04    4
SiH+              J12/71SI 1.H  1.E -1.   0.G   300.000  5000.000     29.09289 1   Chase (1985)
 2.98285950E+00 1.54552220E-03-5.90385550E-07 1.05174000E-10-6.82202340E-15    2
 1.37079540E+05 5.04035007E+00 3.72925880E+00-1.78816110E-03 4.24692570E-06    3
-2.55801300E-09 4.06337400E-13 1.36970710E+05 1.58387307E+00 1.38035768E+05    4
SiHBr3            J12/76SI 1.H  1.BR 3.   0.G   300.000  5000.000    268.80544 1   Chase (1985)
 1.02748310E+01 2.86661040E-03-1.21125810E-06 2.30049160E-10-1.62335040E-14    2
-3.98465760E+04-1.80340658E+01 4.33701100E+00 2.88729900E-02-4.69541200E-05    3
 3.75230380E-08-1.16349190E-11-3.86638340E+04 1.03216712E+01-3.64336173E+04    4
SiHCL3            J12/76SI 1.H  1.CL 3.   0.G   300.000  5000.000    135.45154 1   Chase (1985)
 9.93356350E+00 3.24812200E-03-1.37871710E-06 2.62660730E-10-1.85748860E-14    2
-6.30708490E+04-2.04720585E+01 2.67420420E+00 3.43803850E-02-5.49538560E-05    3
 4.31033320E-08-1.31570120E-11-6.16017230E+04 1.43335095E+01-5.96828537E+04    4
SiHF3             J 6/76SI 1.H  1.F  3.   0.G   300.000  5000.000     86.08865 1   Chase (1985)
 8.75488280E+00 4.55277560E-03-1.94775310E-06 3.73007940E-10-2.64739730E-14    2
-1.47656580E+05-1.88269773E+01 9.06548160E-01 3.32652670E-02-4.39288250E-05    3
 2.93283670E-08-7.86491880E-12-1.45841960E+05 1.99732657E+01-1.44426999E+05    4
SiHI3             J12/76SI 1.H  1.I  3.   0.G   300.000  5000.000    409.80685 1   Chase (1985)
 1.05336040E+01 2.58880000E-03-1.09219030E-06 2.07206870E-10-1.46098540E-14    2
-1.23973450E+04-1.60950342E+01 5.52112250E+00 2.48410540E-02-4.08339840E-05    3
 3.30683930E-08-1.03737740E-11-1.14071890E+04 7.78466951E+00-8.95727317E+03    4
SiH2              TPIS79SI 1.H  2.   0.   0.G   298.150  5000.000     30.10138 1   Gurvich (1979)
 5.85938550E+00 1.63825650E-03-8.43962520E-07 1.83233300E-10-1.41143650E-14    2
 2.71656990E+04-1.00646350E+01 5.31078530E+00-1.44699450E-02 5.14271460E-05    3
-5.47334740E-08 1.92882860E-11 2.82133940E+04-2.82242261E+00 2.95089590E+04    4
SiH2Br2           J12/76SI 1.H  2.BR 2.   0.G   300.000  5000.000    189.90938 1   Chase (1985)
 8.16926010E+00 5.02856010E-03-2.10975640E-06 3.98721550E-10-2.80358380E-14    2
-2.58424750E+04-1.13711914E+01 2.00074270E+00 3.02826310E-02-4.46873360E-05    3
 3.44114310E-08-1.05487200E-11-2.45075070E+04 1.85667366E+01-2.28968040E+04    4
SiH2CL2           J12/76SI 1.H  2.CL 2.   0.G   300.000  5000.000    101.00678 1   Chase (1985)
 7.91214040E+00 5.31278910E-03-2.23367290E-06 4.22748120E-10-2.97556840E-14    2
-4.14685030E+04-1.28867627E+01 1.02649380E+00 3.30135890E-02-4.79610620E-05    3
 3.62256760E-08-1.09204470E-11-3.99633870E+04 2.06288573E+01-3.85472871E+04    4
SiH2F2            J 6/76SI 1.H  2.F  2.   0.G   300.000  5000.000     68.09819 1   Chase (1985)
 7.09818570E+00 6.21464900E-03-2.62723520E-06 4.99090850E-10-3.52216410E-14    2
-9.79187450E+04-1.16725693E+01 1.93759980E-01 3.00798800E-02-3.58741360E-05    3
 2.26685580E-08-5.91859250E-12-9.62303270E+04 2.28607537E+01-9.51105435E+04    4
SiH2I2            J12/76SI 1.H  2.I  2.   0.G   300.000  5000.000    283.91032 1   Chase (1985)
 8.35730990E+00 4.81635860E-03-2.01614450E-06 3.80436990E-10-2.67205840E-14    2
-7.54176670E+03-1.02973549E+01 2.65628130E+00 2.86261760E-02-4.30037000E-05    3
 3.37080310E-08-1.04755470E-11-6.32526120E+03 1.72709251E+01-4.57921431E+03    4
SiH3              TPIS79SI 1.H  3.   0.   0.G   298.150  5000.000     31.10932 1   Gurvich (1979)
 4.12703760E+00 6.18388660E-03-2.61220960E-06 4.95796950E-10-3.49605200E-14    2
 2.34068010E+04 1.51802637E-01 3.05068070E+00 3.31032830E-03 1.10939970E-05    3
-1.44834900E-08 5.18803540E-12 2.40514240E+04 7.29481489E+00 2.51799610E+04    4
SiH3Br            J12/76SI 1.H  3.BR 1.   0.G   300.000  5000.000    111.01332 1   Chase (1985)
 6.13503630E+00 7.11129140E-03-2.97350750E-06 5.60618570E-10-3.93508470E-14    2
-1.18799000E+04-6.17826569E+00 1.00603350E+00 2.53078760E-02-3.03964330E-05    3
 2.10821500E-08-6.20553980E-12-1.06053600E+04 1.94675446E+01-9.41037333E+03    4
SiH3CL            J12/76SI 1.H  3.CL 1.   0.G   300.000  5000.000     66.56202 1   Chase (1985)
 5.99197180E+00 7.27189380E-03-3.04415900E-06 5.74396200E-10-4.03409290E-14    2
-1.95149300E+04-6.86764367E+00 5.83079850E-01 2.61617280E-02-3.08540730E-05    3
 2.08783950E-08-6.01536780E-12-1.81619790E+04 2.02365379E+01-1.70595010E+04    4
SiH3F             J 6/76SI 1.H  3.F  1.   0.G   300.000  5000.000     50.10772 1   Chase (1985)
 5.57361190E+00 7.74100750E-03-3.25027580E-06 6.14547920E-10-4.32237740E-14    2
-4.76884860E+04-6.21002302E+00 3.73697260E-01 2.33710360E-02-2.19259730E-05    3
 1.14386680E-08-2.62175980E-12-4.62686760E+04 2.04541297E+01-4.52908362E+04    4
SiH3I             J12/76SI 1.H  3.I  1.   0.G   300.000  5000.000    158.01379 1   Chase (1985)
 6.26866630E+00 6.96523050E-03-2.91027400E-06 5.48414670E-10-3.84800880E-14    2
-2.73735270E+03-5.82845156E+00 1.36593200E+00 2.45925750E-02-2.99917950E-05    3
 2.12151430E-08-6.34829710E-12-1.52583550E+03 1.86403979E+01-2.51567625E+02    4
SiH4              J 6/76SI 1.H  4.   0.   0.G   300.000  5000.000     32.11726 1   Chase (1985)
 4.20920380E+00 9.08226280E-03-3.79053960E-06 7.13698880E-10-5.00462860E-14    2
 2.13446270E+03-2.72768704E+00 1.59226390E+00 1.28410930E-02-1.94562780E-06    3
-4.31063720E-09 1.98748800E-12 3.10559420E+03 1.18336025E+01 4.12630413E+03    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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SiI                J12/76SI 1.I  1.   0.   0.G   300.000  5000.000    154.98997 1   Chase (1985)
 4.97495320E+00-4.08019210E-04 1.91996740E-07-3.88865530E-11 3.85524220E-15    2
 3.62617270E+04 2.30166920E+00 2.80447120E+00 1.22053060E-02-2.58769970E-05    3
 2.31709660E-08-7.57984720E-12 3.65294880E+04 1.18753077E+01 3.77217187E+04    4
SiI2               J12/77SI 1.I  2.   0.   0.G   200.000  6000.000    281.89444 1   Chase (1985)
 6.74311855E+00 3.61983156E-04-1.95278644E-07 4.35823201E-11-2.89986792E-15    2
 9.06975364E+03 1.29097213E-02 4.32155105E+00 1.44273380E-02-3.10517647E-05    3
 2.98319286E-08-1.05785473E-11 9.41218202E+03 1.08178567E+01 1.11215213E+04    4
SiN                J 3/67SI 1.N  1.   0.   0.G   300.000  5000.000     42.09224 1   Chase (1985)
 3.98586210E+00-8.79270560E-06 5.42695390E-07-1.79510170E-10 1.63370690E-14    2
 4.35248090E+04 3.17468002E+00 3.10519550E+00 1.48524490E-03 1.85610600E-06    3
-3.77348830E-09 1.68353310E-12 4.37857090E+04 7.88856052E+00 4.47872738E+04    4
SiO                J 9/67SI 1.O  1.   0.   0.G   300.000  5000.000     44.08490 1   Chase (1985)
 3.74788350E+00 8.19919430E-04-3.25253960E-07 5.73249620E-11-3.51089440E-15    2
-1.33174300E+04 3.66100339E+00 3.25282760E+00 4.18231260E-04 3.78062020E-06    3
-5.10244830E-09 1.94713170E-12-1.30903400E+04 6.66174329E+00-1.20776829E+04    4
SiO2               J 9/67SI 1.O  2.   0.   0.G   300.000  5000.000     60.08430 1   Chase (1985)
 5.86203950E+00 1.77197840E-03-7.51941940E-07 1.41805840E-10-9.88564170E-15    2
-3.87678160E+04-6.84718711E+00 3.26280580E+00 8.50165840E-03-5.73881440E-06    3
 1.28965730E-11 9.75449760E-13-3.80359710E+04 6.66807529E+00-3.67355093E+04    4
SiS                J12/71SI 1.S  1.   0.   0.G   300.000  5000.000     60.15150 1   Chase (1985)
 4.17357720E+00 3.92825950E-04-1.50051720E-07 2.32425570E-11-6.05688670E-16    2
 1.14177530E+04 2.86888232E+00 2.84306930E+00 5.11502810E-03-6.33160730E-06    3
 3.43873260E-09-6.26233850E-13 1.17189310E+04 9.44619192E+00 1.27444997E+04    4
Si2                J 3/67SI 2.   0.   0.   0.G   300.000  5000.000     56.17100 1   Chase (1985)
 5.04741390E+00 5.39900340E-04-4.30783760E-07 1.13552060E-10-9.62628710E-15    2
 6.91331850E+04-1.91029481E+00 3.81553930E+00-1.90965420E-04 5.92334160E-06    3
-5.76496030E-09 1.47750040E-12 6.97846550E+04 5.74071859E+00 7.09554076E+04    4
Si2C               J 3/67SI 2.C  1.   0.   0.G   300.000  5000.000     68.18200 1   Chase (1985)
 6.25109880E+00 1.32241760E-03-7.28052140E-07 2.32694240E-10-2.32851480E-14    2
 6.23009990E+04-7.28347851E+00 4.04389380E+00 7.34569570E-03-6.64125490E-06    3
 2.48850470E-09-1.81965550E-13 6.29354170E+04 4.18441209E+00 6.44137539E+04    4
Si2N               J 3/67SI 2.N  1.   0.   0.G   300.000  5000.000     70.17774 1   Chase (1985)
 6.67099120E+00 9.19178820E-04-3.95171300E-07 7.43971450E-11-5.02846910E-15    2
 4.56201540E+04-7.79827766E+00 3.66867350E+00 1.13018400E-02-1.36371190E-05    3
 7.16880500E-09-1.23783100E-12 4.63180830E+04 7.12270964E+00 4.78073289E+04    4
Si3                J 3/67SI 3.   0.   0.   0.G   300.000  5000.000     84.25650 1   Chase (1985)
 7.42133600E+00-1.17099480E-04 8.98207750E-08 7.19359640E-12-2.56708370E-15    2
 7.41466990E+04-1.03521110E+01 4.59791290E+00 1.07152740E-02-1.61004220E-05    3
 1.09692070E-08-2.78328750E-12 7.47663240E+04 3.45533009E+00 7.64915691E+04    4
Sr                 L 4/93SR 1.   0.   0.   0.G   200.000  6000.000     87.62000 1   Chase (1985)
 2.05239982E+00 1.19516449E-03-1.07453395E-06 3.57530976E-10-3.05613280E-14    2   Moore, C.E. (1971)
 1.91041043E+04 7.88029928E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 1.89791788E+04 5.55782092E+00 1.97245538E+04    4
SrBr               J12/74SR 1.BR 1.   0.   0.G   300.000  5000.000    167.52400 1   Chase (1985)
 4.34361580E+00 3.98959430E-04-2.59761260E-07 7.93207470E-11-6.60838300E-15    2
-1.20250730E+04 6.87371079E+00 4.09700710E+00 1.93210600E-03-3.50688920E-06    3
 2.99661940E-09-9.63316960E-13-1.20006440E+04 7.93438499E+00-1.07187613E+04    4
SrCL               J12/72SR 1.CL 1.   0.   0.G   300.000  5000.000    123.07270 1   Chase (1985)
 4.33444180E+00 3.89521120E-04-2.44613120E-07 7.32843650E-11-5.97333250E-15    2
-1.62087810E+04 5.52525593E+00 3.90361850E+00 2.46344280E-03-3.87769650E-06    3
 2.83033750E-09-7.73041200E-13-1.61397400E+04 7.51664683E+00-1.48954147E+04    4
SrCL2              J12/72SR 1.CL 2.   0.   0.G   300.000  5000.000    158.52540 1   Chase (1985)
 6.89643620E+00 1.17887180E-04-5.18540800E-08 1.00488310E-11-7.15843480E-16    2
-5.90069040E+04-1.35434839E+00 5.89071410E+00 4.49427890E-03-7.29894040E-06    3
 5.35881350E-09-1.47306310E-12-5.88164040E+04 3.42525071E+00-5.69149221E+04    4
SrF                J12/72SR 1.F  1.   0.   0.G   300.000  5000.000    106.61840 1   Chase (1985)
 4.24571640E+00 4.66335870E-04-2.69258960E-07 7.35600800E-11-5.72137600E-15    2
-3.67402990E+04 4.46607864E+00 3.27139470E+00 4.62133540E-03-6.90077500E-06    3
 4.72335820E-09-1.20468070E-12-3.65556300E+04 9.10702064E+00-3.54270622E+04    4
SrF+               J12/72SR 1.F  1.E -1.  0.G   300.000  5000.000    106.61785 1   Chase (1985)
 5.61355180E+00-2.18109170E-03 1.22152480E-06-1.63329710E-10 3.25845090E-15    2
 2.18821400E+04-3.90142038E+00 3.10937910E+00 5.02700350E-03-7.26893380E-06    3
 4.79485010E-09-1.16838470E-12 2.26072020E+04 9.07411032E+00 2.37024013E+04    4
SrF2               J12/72SR 1.F  2.   0.   0.G   300.000  5000.000    125.61681 1   Chase (1985)
 6.75478910E+00 2.77619640E-04-1.21588780E-07 2.34787800E-11-1.66751920E-15    2
-9.42336320E+04-3.64195385E+00 4.81355160E+00 8.38216020E-03-1.29995310E-05    3
 9.13543920E-09-2.39898770E-12-9.38505430E+04 5.66408025E+00-9.21407511E+04    4
SrI2               J 6/74SR 1.I  2.   0.   0.G   300.000  5000.000    341.42894 1   Chase (1985)
 7.46036780E+00 4.54034760E-05-2.00932740E-08 3.91555060E-12-2.80309800E-16    2
-3.53003330E+04-1.70876927E+00 7.04504070E+00 1.88416990E-03-3.11751490E-06    3
 2.32993910E-09-6.52321330E-13-3.52230130E+04 2.57821783E-01-3.30620353E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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SrO               J 6/74SR 1.O  1.   Ø.   Ø.G   300.ØØØ  5ØØØ.ØØØ    1Ø3.61940 1   Chase (1985)
 9.64Ø3Ø24ØE+ØØ-1.12851ØØE-Ø2 7.88423220E-Ø6-1.9Ø358770E-Ø9 1.51465470E-13    2
-4.74994870E+Ø3-2.57981700E+Ø1 2.73299970E+ØØ 6.73994180E-Ø3-1.Ø8ØØ4850E-Ø5    3
 8.17679370E-Ø9-2.36198710E-12-2.64435740E+Ø3 1.Ø5Ø12ØØE+Ø1-1.61Ø32207E+Ø3    4
SrOH              J12/75SR 1.O  1.H  1.   Ø.G   3ØØ.ØØØ  5ØØØ.ØØØ    1Ø4.62734 1   Chase (1985)
 5.35708400E+ØØ 1.73507350E-Ø3-6.83396470E-Ø7 1.41Ø7Ø68ØE-1Ø-1.Ø4150390E-14    2
-2.63891730E+Ø4-1.38738754E+ØØ 2.52764940E+ØØ 1.73648540E-Ø2-3.17357230E-Ø5    3
 2.69Ø96460E-Ø8-8.52700990E-12-2.6Ø126780E+Ø4 1.12603266E+Ø1-2.47184763E+Ø4    4
SrOH+             J 6/76SR 1.O  1.H  1.E -1.G   3ØØ.ØØØ  5ØØØ.ØØØ    1Ø4.62679 1   Chase (1985)
 5.49519810E+ØØ 1.42140660E-Ø3-4.32450190E-Ø7 6.23424290E-11-3.47974840E-15    2
 3.68741Ø70E+Ø4-2.77Ø68360E+ØØ 2.61Ø18Ø70E+ØØ 1.7Ø676770E-Ø2-3.12755560E-Ø5    3
 2.65708540E-Ø8-8.43Ø13950E-12 3.72752290E+Ø4 1.Ø2Ø4Ø867E+Ø1 3.85842705E+Ø4    4
SrO2H2            J12/75SR 1.O  2.H  2.   Ø.G   3ØØ.ØØØ  5ØØØ.ØØØ    121.63468 1   Chase (1985)
 9.Ø2326740E+ØØ 2.8Ø491Ø2ØE-Ø3-8.47910070E-Ø7 1.21324930E-1Ø-6.71541830E-15    2
-7.44850350E+Ø4-1.56Ø26680E+Ø1 3.365885ØØE+ØØ 3.37Ø994ØØE-Ø2-6.2Ø281710E-Ø5    3
 5.28432690E-Ø8-1.67960460E-11-7.37Ø93680E+Ø4 9.78559688E+ØØ-7.16590447E+Ø4    4
SrS               J 9/77SR 1.S  1.   Ø.   Ø.G   3ØØ.ØØØ  5ØØØ.ØØØ    119.68600 1   Chase (1985)
 8.98347ØØØE+ØØ-1.Ø9956910E-Ø2 8.65884170E-Ø6-2.29554820E-Ø9 1.96596830E-13    2
 1.Ø3Ø14190E+Ø4-2.ØØ762668E+Ø1 3.48633180E+ØØ 4.38413110E-Ø3-7.5Ø675530E-Ø6    3
 5.81928180E-Ø9-1.63532040E-12 1.18348540E+Ø4 8.35263069E+ØØ 1.3Ø135709E+Ø4    4
Ta                J12/72TA 1.   Ø.   Ø.   Ø.G   3ØØ.ØØØ  5ØØØ.ØØØ    18Ø.94790 1   Chase (1985)
 1.51Ø9Ø94ØE+ØØ 2.7Ø295Ø1ØE-Ø3-1.Ø7Ø55940E-Ø6 2.Ø2388530E-1Ø-1.39701730E-14    2
 9.35177620E+Ø4 1.29827Ø6ØE+Ø1 2.83816310E+ØØ-2.78785630E-Ø3 6.89733340E-Ø6    3
-4.55717510E-Ø9 9.41252680E-13 9.32787930E+Ø4 6.66893679E+ØØ 9.4Ø534557E+Ø4    4
TaO               J12/73TA 1.O  1.   Ø.   Ø.G   3ØØ.ØØØ  5ØØØ.ØØØ    196.94730 1   Chase (1985)
 3.49966Ø3ØE+ØØ 1.51125350E-Ø3-6.53845780E-Ø7 1.7784314Ø-1Ø-1.69194Ø5Ø-14    2
 2.19941510E+Ø4 8.52695899E+ØØ 2.93401Ø8ØE+ØØ 3.Ø5920380E-Ø3-1.93963640E-Ø6    3
 1.62888300E-1Ø 3.Ø1525350E-13 2.21544720E+Ø4 1.14546460E+Ø1 2.31485470E+Ø4    4
TaO2              J12/73TA 1.O  2.   Ø.   Ø.G   3ØØ.ØØØ  5ØØØ.ØØØ    212.94670 1   Chase (1985)
 5.97Ø16690E+ØØ 1.17921280E-Ø3-5.65174130E-Ø7 1.31137870E-1Ø-1.Ø5644370E-14    2
-2.61694810E+Ø4-1.Ø7399801E+ØØ 3.18Ø38260E+ØØ 9.47Ø28Ø5ØE-Ø3-8.73468680E-Ø6    3
 2.45226890E-Ø9 3.36534210E-13-2.54517620E+Ø4 1.31303530E+Ø1-2.41547719E+Ø4    4
Ti                J 6/79TI 1.   Ø.   Ø.   Ø.G   2ØØ.ØØØ  6ØØØ.ØØØ     47.88ØØØ 1   Chase (1985)
 3.Ø3774314E+ØØ-1.11117144E-Ø3 7.58571Ø9ØE-Ø7-1.27Ø73773E-1Ø 6.9Ø819279E-15    2
 5.61236728E+Ø4 4.73ØØ1888E+ØØ 4.14448119E+ØØ-6.8Ø469ØØ9E-Ø3 1.18867765E-Ø5    3
-9.75223462E-Ø9 3.Ø9Ø64423E-12 5.59438352E+Ø4-3.48187822E-Ø1 5.69642Ø9E+Ø4    4
Ti+               J 3/84TI 1.E -1.   Ø.   Ø.G   298.15Ø  6ØØØ.ØØØ     47.87945 1   Chase (1985)
 3.67371639E+ØØ-1.48559525E-Ø3 7.82266735E-Ø7-1.43853227E-1Ø 8.95284394E-15    2
 1.35855735E+Ø5 1.53150176E+ØØ 2.79511128E+ØØ 2.52231176E-Ø3-5.63121401E-Ø6    3
 4.16371169E-Ø9-1.Ø1443322E-12 1.35995999E+Ø5 5.61951576E+ØØ 1.36899469E+Ø5    4
Ti-               J 3/84TI 1.E  1.   Ø.   Ø.G   298.15Ø  6ØØØ.ØØØ     47.88Ø55 1   Chase (1985)
 2.58526Ø86E+ØØ-9.Ø8419479E-Ø5 3.64323275E-Ø8-6.31640Ø98E-12 3.97Ø35Ø41E-16    2
 5.45643467E+Ø4 7.45711Ø7ØE+ØØ 3.58958633E+ØØ-4.91444420E-Ø3 9.Ø6483220E-Ø6    3
-7.66228403E-Ø9 2.44724157E-12 5.43869787E+Ø4 2.76915652E+ØØ 5.53Ø48827E+Ø4    4
TiCL              J12/68TI 1.CL 1.   Ø.   Ø.G   3ØØ.ØØØ  5ØØØ.ØØØ     83.33270 1   Chase (1985)
 5.29697600E+ØØ-1.64Ø16920E-Ø4 1.57197610E-Ø7-3.85670890E-11 3.Ø7396630E-15    2
 1.68576740E+Ø4-4.94472671E-Ø1 2.85430890E+ØØ 7.95933450E-Ø3-9.82111620E-Ø6    3
 5.24199810E-Ø9-9.79861770E-13 1.74412160E+Ø4 1.17302246E+Ø1 1.85691235E+Ø4    4
TiCL2             J12/68TI 1.CL 2.   Ø.   Ø.G   3ØØ.ØØØ  5ØØØ.ØØØ    118.78540 1   Chase (1985)
 7.76248520E+ØØ-9.38724250E-Ø4 8.Ø1215180E-Ø7-1.9Ø48Ø3ØØE-1Ø 1.49615450E-14    2
-3.Ø9158Ø5ØE+Ø4-1.Ø7526Ø11E+Ø1 4.97234750E+ØØ 1.12773350E-Ø2-2.Ø5819160E-Ø5    3
 1.71866500E-Ø8-5.4Ø495ØØE-12-3.Ø3662850E+Ø4 2.55Ø9Ø638E+ØØ-2.85329650E+Ø4    4
TiCL3             J12/68TI 1.CL 3.   Ø.   Ø.G   3ØØ.ØØØ  5ØØØ.ØØØ    154.23810 1   Chase (1985)
 1.ØØØ81Ø3ØE+Ø1 4.19363740E-Ø4-2.15Ø48730E-Ø7 4.53370180E-11-3.45468380E-15    2
-6.80612500E+Ø4-1.95106532E+Ø1 2.88Ø1557ØE+ØØ 3.35589330E-Ø2-5.99574600E-Ø5    3
 4.88636640E-Ø8-1.5Ø9Ø9920E-11-6.67760230E+Ø4 1.39582088E+Ø1-6.48659962E+Ø4    4
TiCL4             J12/67TI 1.CL 4.   Ø.   Ø.G   3ØØ.ØØØ  5ØØØ.ØØØ    189.69080 1   Chase (1985)
 1.23860300E+Ø1 7.Ø9313160E-Ø4-3.17460780E-Ø7 6.26Ø3958ØE-11-4.53370380E-15    2
-9.56690780E+Ø4-2.84715956E+Ø1 6.94967570E+ØØ 2.60496590E-Ø2-4.65203020E-Ø5    3
 3.83848340E-Ø8-1.20279150E-11-9.46778310E+Ø4-2.92575094E+ØØ-9.17887862E+Ø4    4
TiO               J12/73TI 1.O  1.   Ø.   Ø.G   3ØØ.ØØØ  5ØØØ.ØØØ     63.87940 1   Chase (1985)
 4.13601760E+ØØ 7.39264580E-Ø4-4.54444640E-Ø7 1.3Ø436580E-1Ø-1.15225570E-14    2
 5.19834830E+Ø3 4.12237043E+ØØ 3.11988810E+ØØ 3.12Ø2487Ø-Ø3-1.32970730E-Ø6    3
-1.33383620E-Ø9 9.63158280E-13 5.48687190E+Ø3 9.44261203E+ØØ 6.54182283E+Ø3    4
TiOCL             J 9/63TI 1.O  1.CL 1.   Ø.G   3ØØ.ØØØ  5ØØØ.ØØØ     99.33210 1   Chase (1985)
 6.83199240E+ØØ 7.63593870E-Ø4-3.39530890E-Ø7 6.66670690E-11-4.81329460E-15    2
-3.15823110E+Ø4-7.75381613E+ØØ 3.40938560E+ØØ 1.51705540E-Ø2-2.44284830E-Ø5    3
 1.87345210E-Ø8-5.56806840E-12-3.08878460E+Ø4 8.69442617E+ØØ-2.93784839E+Ø4    4
TiOCL2            J 9/63TI 1.O  1.CL 2.   Ø.G   3ØØ.ØØØ  5ØØØ.ØØØ    134.78480 1   Chase (1985)
 9.33686550E+ØØ 7.59699870E-Ø4-3.38273780E-Ø7 6.64838630E-11-4.80337930E-15    2
-6.85726450E+Ø4-1.51441772E+Ø1 5.44Ø81400E+ØØ 1.77Ø5Ø490E-Ø2-2.95252410E-Ø5    3
 2.32473280E-Ø8-7.Ø4797770E-12-6.78Ø68540E+Ø4 3.45Ø77325E+ØØ-6.56159812E+Ø4    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

```
TiO2                J12/73TI 1.0  2.   0.   0.G   300.000  5000.000     79.87880 1   Chase (1985)
 5.84550610E+00 1.39382130E-03-6.64030620E-07 1.38573800E-10-9.88421840E-15    2
-3.87005930E+04-2.79599903E+00 3.01427170E+00 1.09421010E-02-1.28785880E-05    3
 7.11895290E-09-1.49275100E-12-3.80205010E+04 1.13643975E+01-3.67358715E+04    4
V                   J 6/73V  1.   0.   0.   0.G   300.000  5000.000     50.94150 1   Chase (1985)
 2.91778520E+00 4.62368900E-04-4.97320300E-07 1.67752330E-10-1.52025520E-14    2
 6.10642730E+04 5.10621469E+00 4.51736930E+00-7.92906600E-03 1.33808390E-05    3
-8.82829010E-09 1.89453070E-12 6.09014170E+04-1.96971791E+00 6.19975154E+04    4
VCL4                L 2/76V  1.CL 4.   0.   0.G   300.000  5000.000    192.75230 1   Nagarajan (1963)
 1.27186470E+01 1.66001760E-05 1.41614980E-07-3.47618330E-11 2.28897630E-15    2   Blankenship (1962)
-6.71879920E+04-2.88480103E+01 7.11664620E+00 2.54232170E-02-4.54990170E-05    3   Creighton (1966)
 3.75838860E-08-1.17803440E-11-6.61238930E+04-2.33095475E+00-6.32053523E+04    4
VN                  J12/73V  1.N  1.   0.   0.G   300.000  5000.000     64.94824 1   Chase (1985)
 4.18522800E+00 6.15147200E-04-3.57763350E-07 1.07488620E-10-9.72755050E-15    2
 6.15115400E+04 3.77618661E+00 2.72335900E+00 4.16429890E-03-2.19128120E-06    3
-1.23518720E-09 1.07918330E-12 6.19278930E+04 1.14173579E+01 6.29036613E+04    4
VO                  J12/73V  1.O  1.   0.   0.G   300.000  5000.000     66.94090 1   Chase (1985)
 3.91147020E+00 7.75477920E-04-4.22637860E-07 1.16088380E-10-1.00707240E-14    2
 1.40652040E+04 5.07185409E+00 2.94384410E+00 2.90592340E-03-9.95165750E-07    3
-1.40865920E-09 9.24385080E-13 1.43527460E+04 1.01864310E+01 1.53484728E+04    4
VO2                 J12/73V  1.O  2.   0.   0.G   300.000  5000.000     82.94030 1   Chase (1985)
 5.94701470E+00 1.16867790E-03-5.05363790E-07 9.67236110E-11-6.82458830E-15    2
-2.99838020E+04-2.73802511E+00 3.19378590E+00 9.29794570E-03-8.34224690E-06    3
 2.10491700E-09 4.45826450E-13-2.92754910E+04 1.12872190E+01-2.79793321E+04    4
Xe                  L12/91XE 1.   0.   0.   0.G   200.000  6000.000    131.29000 1   McBride (1993)
 2.50005322E+00-1.05136544E-07 6.75326897E-11-1.70944909E-14 1.47681049E-18    2
-7.45394186E+02 6.16412898E+00 2.50000000E+00-8.99141330E-14 2.52196860E-16    3
-2.92186662E-19 1.18949218E-22-7.45375000E+02 6.16441993E+00 0.00000000E+00    4
Xe+                 L10/92XE 1.E -1.   0.   0.G   298.150  6000.000    131.28945 1   Moore, C.E. (1971)
 2.58350579E+00-1.53488750E-04 8.09594639E-08-1.14289234E-11 4.82081406E-16    2
 1.40730117E+05 7.09057067E+00 2.50007477E+00-6.25614186E-07 1.86430963E-09    3
-2.35599457E-12 1.07219368E-15 1.40761095E+05 7.55040436E+00 1.41506477E+05    4
Zn                  L 7/93ZN 1.   0.   0.   0.G   200.000  6000.000     65.39000 1   Moore (1971)
 2.51233674E+00-2.92859430E-05 2.43130241E-08-8.39058754E-12 1.02676892E-15    2   Cox (1989)
 1.49341449E+04 5.05331145E+00 2.50000000E+00-4.89383187E-12 1.38012101E-14    3
-1.58679678E-17 6.38498776E-21 1.49380507E+04 5.11886101E+00 6.19742800E+03    4
Zn+                 L 7/93ZN 1.   0.   0.   0.G   200.000  6000.000     65.39000 1   Moore (1971)
 2.48069577E+00 3.36021020E-05-1.60287169E-08 1.43795031E-12 2.92898690E-16    2
 1.23956404E+05 5.91921683E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 1.23948976E+05 5.81200819E+00 6.19742800E+03    4
Zn-                 J12/78ZN 1.E  1.   0.   0.G   298.150  6000.000     65.39055 1   Chase (1985)
 2.50000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 1.24688733E+04 5.81202078E+00 2.50000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 1.24688733E+04 5.81202078E+00 6.19742800E+03    4
Zr                  L 7/93ZR 1.   0.   0.   0.G   200.000  6000.000     91.22400 1   Chase (1985)
 2.54294206E+00 6.22889707E-04-1.07432636E-07 2.38744516E-11-2.17632296E-15    2   Moore (1971)
 7.27918166E+04 7.57951451E+00 1.23655929E+00 1.28280820E-02-2.72138432E-05    3
 2.33237341E-08-7.09443491E-12 7.26245603E+04 1.19581447E+01 6.81561100E+03    4
ZrN                 J 6/63ZR 1.N  1.   0.   0.G   200.000  6000.000    105.23074 1   Chase (1985)
 4.14378922E+00 4.04307213E-04-1.44633107E-07 2.47606374E-11-1.54280202E-15    2
 8.44614200E+04 4.15937906E+00 3.07188717E+00 2.64300474E-03 3.18499428E-07    3
-3.63350581E-09 2.02679564E-12 8.47684947E+04 9.80588987E+00 8.86287000E+03    4
ZrO                 L 7/93ZR 1.O  1.   0.   0.G   200.000  6000.000    107.22340 1   Gurvich (1982)
 7.30529618E+00-2.91043337E-03 1.15742561E-06-1.76849844E-10 9.78260272E-15    2
 7.67802110E+03-1.42675735E+01 4.12291715E+00-1.31886296E-02 6.92922931E-05    3
-9.58720065E-08 4.10306470E-11 9.00749202E+03 5.56945394E+00 8.96949600E+03    4
ZrO2                J12/65ZR 1.O  2.   0.   0.G   300.000  5000.000    123.22280 1   Chase (1985)
 6.14185450E+00 9.77036950E-04-4.33371820E-07 8.49545890E-11-6.12666480E-15    2
-3.64461780E+04-2.70978912E+00 3.21037790E+00 1.16289760E-02-1.55753600E-05    3
 1.00442430E-08-2.54388900E-12-3.57756120E+04 1.17738677E+01-3.44205252E+04    4
AL(cr)              CODA89AL 1.   0.   0.   0.C   200.000   933.610     26.98154 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 1.01040191E+00 1.20769743E-02-2.62083556E-05    3
 2.64282413E-08-9.01916513E-12-6.54454196E+02-5.00471254E+00 0.00000000E+00    4
AL(L)               CODA89AL 1.   0.   0.   0.C   933.610  6000.000     26.98154 1   McBride (1993)
 3.81862551E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-9.49651808E+01-1.75229704E+01 3.81862551E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-9.49651808E+01-1.75229704E+01 0.00000000E+00    4
ALBr3(s)            J 9/79AL 1.BR 3.   0.   0.C   300.000   370.600    266.69354 1   Chase (1985)
 5.84479560E+00 2.09263340E-02 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-6.41705100E+04-1.78769010E+01 5.84479560E+00 2.09263340E-02 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-6.41705100E+04-1.78769010E+01-6.14977775E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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ALBr3(L)          J 9/79AL 1.BR 3.   0.   0.C   370.600  5000.000     266.69354 1   Chase (1985)
 1.50297500E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-6.47837290E+04-6.07991010E+01 1.50297500E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-6.47837290E+04-6.07991010E+01 0.00000000E+00    4
ALCL3(s)          J 9/79AL 1.CL 3.   0.   0.C   300.000   465.700     133.33964 1   Chase (1985)
 7.80933750E+00 1.05709850E-02-3.28592480E-09 0.00000000E+00 0.00000000E+00    2
-8.76667830E+04-3.45017220E+01 7.80933750E+00 1.05709850E-02-3.28592480E-09    3
 0.00000000E+00 0.00000000E+00-8.76667830E+04-3.45017220E+01-8.48686125E+04    4
ALCL3(L)          J 9/79AL 1.CL 3.   0.   0.C   465.700  5000.000     133.33964 1   Chase (1985)
 1.50966790E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-8.56620790E+04-6.52184190E+01 1.50966790E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-8.56620790E+04-6.52184190E+01 0.00000000E+00    4
ALF3(a)           J 9/79AL 1.F  3.   0.   0.C   300.000   728.000      83.97675 1   Chase (1985)
-3.08352720E+00 7.03503170E-02-1.22494050E-04 7.62413620E-08 1.58436870E-12    2
-1.82940320E+05 9.35706830E+00-3.08352720E+00 7.03503170E-02-1.22494050E-04    3
 7.62413620E-08 1.58436870E-12-1.82940320E+05 9.35706830E+00-1.81663648E+05    4
ALF3(b)           J 9/79AL 1.F  3.   0.   0.C   728.000  2523.000      83.97675 1   Chase (1985)
 1.04194700E+01 2.33765010E-03-8.80830770E-07 2.85578830E-10-3.46072630E-14    2
-1.84922050E+05-5.23714020E+01 9.50345050E+00 5.13025090E-03-3.71167640E-06    3
 1.20523570E-09 0.00000000E+00-1.84695550E+05-4.77361470E+01 0.00000000E+00    4
ALF3(L)           J 9/79AL 1.F  3.   0.   0.C  2523.000  5000.000      83.97675 1   Chase (1985)
 1.50966790E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.79986860E+05-8.00491030E+01 1.50966790E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.79986860E+05-8.00491030E+01 0.00000000E+00    4
ALI3(s)           J 9/79AL 1.I  3.   0.   0.C   300.000   464.140     407.69495 1   Chase (1985)
 8.52416000E+00 1.12577990E-02 1.64430050E-07 0.00000000E+00 0.00000000E+00    2
-3.94766660E+04-2.83445950E+01 8.52416000E+00 1.12577990E-02 1.64430050E-07    3
 0.00000000E+00 0.00000000E+00-3.94766660E+04-2.83445950E+01-3.64333629E+04    4
ALI3(L)           J 9/79AL 1.I  3.   0.   0.C   464.140  5000.000     407.69495 1   Chase (1985)
 1.45934560E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-3.91633320E+04-5.62483220E+01 1.45934560E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-3.91633320E+04-5.62483220E+01 0.00000000E+00    4
ALN(s)            J12/79AL 1.N  1.   0.   0.C   300.000  3000.000      40.98828 1   Chase (1985)
 4.08412120E+00 3.18814960E-03-1.90297650E-06 5.25234110E-10-5.51330660E-14    2
-3.97818430E+04-2.21901450E+01-1.54500310E+00 2.76322490E-02-4.35394640E-05    3
 3.30926660E-08-9.80105240E-12-3.86886140E+04 4.64928220E+00-3.82449879E+04    4
AL2O3(a)          J12/79AL 2.O  3.   0.   0.C   300.000  2327.000     101.96128 1   Chase (1985)
 1.18336660E+01 3.77088780E-03-1.78631910E-07-5.60088070E-10 1.40768250E-13    2
-2.05711310E+05-6.35998350E+01-4.91383090E+00 7.93984430E-02-1.32379180E-04    3
 1.04467500E-07-3.15663300E-11-2.02626220E+05 1.54780730E+01-2.01540284E+05    4
AL2O3(L)          J12/79AL 2.O  3.   0.   0.C  2327.000  6000.000     101.96128 1   Chase (1985)
 2.31482410E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.11405200E+05-1.38602050E+02 2.31482410E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.11405200E+05-1.38602050E+02 0.00000000E+00    4
AL2SiO5(an)       J 9/67AL 2.SI 1.O  5.   0.C   300.000  3000.000     162.04558 1   Chase (1985)
 1.73517420E+01 8.74381350E-03-3.70847180E-06 1.06882830E-09-1.17639500E-13    2
-3.17941510E+05-9.17387440E+01-9.28663420E+00 1.34767200E-01-2.32370000E-04    3
 1.87609190E-07-5.73814830E-11-3.13276640E+05 3.27158590E+01-3.11764784E+05    4
AL6Si2O13(s)      J 9/67AL 6.SI 2.O 13.   0.C   300.000  3000.000     426.05243 1   Chase (1985)
 4.52383640E+01 2.76614240E-02-1.46755120E-05 3.88858480E-09-3.66604820E-13    2
-8.36864170E+05-2.37395650E+02-1.10346710E+01 2.66756430E-01-4.15247630E-04    3
 3.13769720E-07-9.24975970E-11-8.25658700E+05 3.22547910E+01-8.20184486E+05    4
B(b)              J6/83 B  1.   0.   0.   0.C   200.000  2350.000      10.81100 1   McBride (1993)
 1.83494094E+00 1.79198702E-03-7.97879498E-07 2.02764512E-10-1.92028345E-14    2
-7.83202899E+02-1.06433298E+01-1.15931693E+00 1.13777145E-02-1.06985988E-05    3
 2.76106443E-09 7.31746996E-13-7.13339210E+01 4.36439895E+00 0.00000000E+00    4
B(L)              J6/83 B  1.   0.   0.   0.C  2350.000  6000.000      10.81100 1   McBride (1993)
 3.81862551E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 3.36099275E+03-2.07326473E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
BN(s)             J 6/66B  1.N  1.   0.   0.C   200.000  6000.000      24.81774 1   Chase (1985)
 2.68739930E+00 4.24674311E-03-1.92817705E-06 3.60170748E-10-2.36706055E-14    2
-3.14630126E+04-1.54187735E+01-6.92827700E-01 1.17984401E-02-3.39339835E-06    3
-7.14136993E-09 4.77162137E-12-3.04539002E+04 2.41361166E+00 2.62755200E+03    4
B2O3(L)           J 6/71B  2.O  3.   0.   0.C   300.000  5000.000      69.62020 1   Chase (1985)
 1.56001140E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.56844550E+05-8.31264440E+01 3.14332740E+01-2.15780390E-01 6.40579860E-04    3
-7.05724200E-07 2.65091500E-10-1.54901390E+05-1.28038800E+02-1.50730324E+05    4
B3O3H3(cr)        J 3/65B  3.H  3.O  3.   0.C   298.150  2000.000      83.45502 1   Chase (1985)
-1.28470517E+01 9.19581322E-02-8.10609436E-05 3.27322840E-08-5.01611948E-12    2
-1.51109722E+05 7.01536150E+01 8.15951373E+00-7.06683350E-03 9.24924694E-05    3
-1.02833905E-07 3.50150571E-11-1.54569630E+05-2.75254035E+01 0.00000000E+00    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

```
Ba(cr)            SRD 93BA 1.   0.   0.   0.C   298.150  1000.000    137.32700 1   Alcock (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2   McBride (1993)
 0.00000000E+00 0.00000000E+00 2.77334443E+00 2.03752236E-03 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-9.17433810E+02-8.90970626E+00 0.00000000E+00    4
Ba(L)             SRD 93BA 1.   0.   0.   0.C  1000.000  6000.000    137.32700 1   Alcock (1993)
 4.81086679E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2   McBride (1993)
-9.92062381E+02-2.00027571E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
BaBr2(s)          J12/74BA 1.BR 2.   0.   0.C   300.000  1130.000    297.13500 1   Chase (1985)
 8.21359240E+00 3.11437150E-03-2.40116290E-07 0.00000000E+00 0.00000000E+00    2
-9.36849820E+04-2.97718080E+01 8.49822320E+00 2.51392240E-03 2.43906580E-07    3
-2.96954400E-10 1.28749890E-13-9.37822410E+04-3.13127320E+01-9.11351313E+04    4
BaBr2(L)          J12/74BA 1.BR 2.   0.   0.C  1130.000  5000.000    297.13500 1   Chase (1985)
 1.26109310E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-9.29364180E+04-5.39166730E+01 1.26109310E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-9.29364180E+04-5.39166730E+01 0.00000000E+00    4
BaCL2(a)          J12/72BA 1.CL 2.   0.   0.C   300.000  1198.000    208.23240 1   Chase (1985)
 1.10964040E+01-1.11350020E-03-8.18019370E-07-2.36513760E-10 1.83268400E-12    2
-1.06937770E+05-4.89267460E+01 7.72024720E+00 6.92241780E-03-1.09609270E-05    3
 9.69916210E-09-2.61984430E-12-1.05792020E+05-3.07683050E+01-1.03261458E+05    4
BaCL2(b)          J12/72BA 1.CL 2.   0.   0.C  1198.000  1235.000    208.23240 1   Chase (1985)
 1.48955920E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.09941350E+05-7.52727020E+01 1.48955920E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.09941350E+05-7.52727020E+01 0.00000000E+00    4
BaCL2(L)          J12/72BA 1.CL 2.   0.   0.C  1235.000  5000.000    208.23240 1   Chase (1985)
 1.30839670E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.05780590E+05-6.08186470E+01 1.30839670E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.05780590E+05-6.08186470E+01 0.00000000E+00    4
BaF2(a)           J12/72BA 1.F  2.   0.   0.C   300.000  1480.000    175.32381 1   Chase (1985)
-2.84392880E+00-2.19972130E-02 4.42010610E-05 5.58246900E-09-1.39069120E-11    2
-1.37899190E+05 4.44729320E+01 4.32032900E+00 2.76261470E-02-5.94303480E-05    3
 6.06301470E-08-2.21107930E-11-1.47452460E+05-1.91219160E+01-1.45352145E+05    4
BaF2(b,c)         J12/72BA 1.F  2.   0.   0.C  1480.000  1641.000    175.32381 1   Chase (1985)
 1.29480940E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.50331750E+05-6.53836630E+01 1.29480940E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.50331750E+05-6.53836630E+01 0.00000000E+00    4
BaF2(L)           J12/72BA 1.F  2.   0.   0.C  1641.000  5000.000    175.32381 1   Chase (1985)
 1.20065520E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.45977150E+05-5.67012820E+01 1.20065520E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.45977150E+05-5.67012820E+01 0.00000000E+00    4
BaO(s)            J 6/74BA 1.O  1.   0.   0.C   300.000  2286.000    153.32640 1   Chase (1985)
 5.59705660E+00 1.72428640E-03-6.02495130E-07 1.74000170E-10-1.85947910E-14    2
-6.77196870E+04-2.38485210E+01 3.92000670E+00 8.91156480E-03-1.25312820E-05    3
 9.18687030E-09-2.61290690E-12-6.73943690E+04-1.58424680E+01-6.59233196E+04    4
BaO(L)            J 6/74BA 1.O  1.   0.   0.C  2286.000  5000.000    153.32640 1   Chase (1985)
 8.05167150E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-6.32237370E+04-3.68186010E+01 8.05167150E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-6.32237370E+04-3.68186010E+01 0.00000000E+00    4
BaO2H2(s)         J12/75BA 1.O  2.H  2.   0.C   300.000   681.150    171.34168 1   Chase (1985)
-1.54291680E-01 7.51087380E-02-1.49150720E-04 1.34625140E-07-4.27154090E-11    2
-1.16035520E+05-3.10750780E+00-1.54291680E-01 7.51087380E-02-1.49150720E-04    3
 1.34625140E-07-4.27154090E-11-1.16035520E+05-3.10750780E+00-1.13815035E+05    4
BaO2H2(L)         J12/75BA 1.O  2.H  2.   0.C   681.150  5000.000    171.34168 1   Chase (1985)
 1.69588330E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.17974980E+05-8.33516110E+01 1.69588330E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.17974980E+05-8.33516110E+01 0.00000000E+00    4
BaS(s)            J 9/77BA 1.S  1.   0.   0.C   300.000  3000.000    169.39300 1   Chase (1985)
 5.90966310E+00 1.15935610E-03-1.92798100E-07 6.66090070E-11-8.32804110E-15    2
-5.76245380E+04-2.47107370E+01 5.36586760E+00 1.24182840E-03 3.98045900E-06    3
-6.62154280E-09 2.96788980E-12-5.74362700E+04-2.16381020E+01-5.57577584E+04    4
Be(a)             SRD 93BE 1.   0.   0.   0.C   298.150  1543.000      9.01218 1   Alcock (1993)
 8.06036468E-01 5.37325946E-03-4.86241757E-06 2.39834017E-09-4.37186552E-13    2   McBride (1993)
-4.10525129E+02-4.79961716E+00-1.34774902E+00 1.92340834E-02-3.54163423E-05    3
 3.08895143E-08-1.00814744E-11-1.96446005E+02 4.40835822E+00 0.00000000E+00    4
Be(b)             SRD 93BE 1.   0.   0.   0.C  1543.000  1563.000      9.01218 1   Alcock (1993)
 3.60815009E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2   McBride (1993)
-8.52229192E+02-2.00291024E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
Be(L)             SRD 93BE 1.   0.   0.   0.C  1563.000  6000.000      9.01218 1   Alcock (1993)
 3.54560882E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2   McBride (1993)
 2.07475580E+02-1.89534126E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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BeAL2O4(s)          J12/79BE 1.AL 2.O  4.   0.C   300.000  2146.000    126.97286 1   Chase (1985)
 2.02655590E+01-1.04666490E-02 2.30439540E-05-1.54936830E-08 3.60249400E-12    2
-2.83363010E+05-1.07472220E+02-8.05473800E+00 1.13572400E-01-1.87827280E-04    3
 1.48068570E-07-4.48072780E-11-2.77980440E+05 2.71357190E+01-2.76722007E+05    4
BeAL2O4(L)          J12/79BE 1.AL 2.O  4.   0.C  2146.000  5000.000    126.97286 1   Chase (1985)
 2.96362910E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.80569820E+05-1.71169540E+02 2.96362910E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.80569820E+05-1.71169540E+02 0.00000000E+00    4
BeBr2(s)            J 6/75BE 1.BR 2.   0.   0.C   300.000  1500.000    168.82018 1   Chase (1985)
-2.27183290E+00 3.71850840E-02-4.33216390E-05 2.30580060E-08-4.57496410E-12    2
-4.29712510E+04 1.67088690E+01 5.85510580E+00 7.29917640E-03 1.26780450E-06    3
-9.17810970E-09 4.83067700E-12-4.48404830E+04-2.34448860E+01-4.27750136E+04    4
BeCL2(s)            J 6/65BE 1.CL 2.   0.   0.C   300.000   688.000     79.91758 1   Chase (1985)
 3.00657450E+00 1.95395590E-02-4.89136050E-06-2.96041580E-08 2.35348610E-11    2
-6.07221000E+04-1.25797720E+01 3.00657450E+00 1.95395590E-02-4.89136050E-06    3
-2.96041580E-08 2.35348610E-11-6.07221000E+04-1.25797720E+01-5.90478272E+04    4
BeCL2(L)            J 6/65BE 1.CL 2.   0.   0.C   688.000  5000.000     79.91758 1   Chase (1985)
 1.46037190E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-6.44984170E+04-7.64487840E+01 1.46037190E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-6.44984170E+04-7.64487840E+01 0.00000000E+00    4
BeF2(Lqz)           J 6/70BE 1.F  2.   0.   0.C   300.000   500.000     47.00899 1   Chase (1985)
 2.05937700E+01-6.63969300E-02-1.20323980E-04 8.98005550E-07-9.66692640E-10    2
-1.26937080E+05-9.17851130E+01 2.05937700E+01-6.63969300E-02-1.20323980E-04    3
 8.98005550E-07-9.66692640E-10-1.26937080E+05-9.17851130E+01-1.23492663E+05    4
BeF2(hqz)           J 6/70BE 1.F  2.   0.   0.C   500.000   825.000     47.00899 1   Chase (1985)
 5.69655760E+00 4.02583580E-03 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.25288840E+05-2.70913890E+01 5.69655760E+00 4.02583580E-03 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.25288840E+05-2.70913890E+01 0.00000000E+00    4
BeF2(L)             J 6/70BE 1.F  2.   0.   0.C   825.000  2000.000     47.00899 1   Chase (1985)
 6.04896390E+00 4.33284980E-03 1.87544030E-07-3.60194820E-10 9.13388220E-14    2
-1.25113610E+05-2.90262480E+01 7.74233610E+00-6.96800650E-04 2.67434060E-06    3
 3.12625420E-09-2.54562790E-12-1.25465300E+05-3.74403040E+01 0.00000000E+00    4
BeI2(s)             J12/75BE 1.I  2.   0.   0.C   300.000   753.000    262.82112 1   Chase (1985)
 2.67722950E+00 2.69230920E-02-2.88952040E-05 4.00766040E-09 6.40517020E-12    2
-2.44469680E+04-7.55309190E+00 2.67722950E+00 2.69230920E-02-2.88952040E-05    3
 4.00766040E-09 6.40517020E-12-2.44469680E+04-7.55309190E+00-2.26964492E+04    4
BeI2(L)             J12/75BE 1.I  2.   0.   0.C   753.000  5000.000    262.82112 1   Chase (1985)
 1.35871960E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.59933120E+04-6.33135730E+01 1.35871960E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.59933120E+04-6.33135730E+01 0.00000000E+00    4
BeO(a)              J12/74BE 1.O  1.   0.   0.C   200.000  2373.001     25.01158 1   Chase (1985)
 3.22375488E+00 4.89276244E-03-3.05832591E-06 9.91401433E-10-1.23442571E-13    2
-7.45140761E+04-1.85239582E+01-3.06995225E+00 3.22099414E-02-4.85141436E-05    3
 3.51263133E-08-9.82600858E-12-7.33202340E+04 1.14094979E+01 2.83503400E+03    4
BeO(b)              J12/74BE 1.O  1.   0.   0.C  2373.001  2821.220     25.01158 1   Chase (1985)
 1.23933471E+01-1.03223075E-02 6.52733591E-06-1.73093889E-09 1.70986494E-13    2
-7.81759610E+04-7.05417631E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 2.83503400E+03    4
BeO(L)              J12/74BE 1.O  1.   0.   0.C  2821.220  6000.000     25.01158 1   Chase (1985)
 9.56123164E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-7.42016413E+04-5.80635442E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 2.83503400E+03    4
BeO2H2(b)           J12/75BE 1.O  2.H  2.   0.C   300.000  1000.000     43.02686 1   Chase (1985)
-7.01683250E+00 8.30056540E-02-1.41520290E-04 1.14216650E-07-3.51055350E-11    2
-1.09507110E+05 2.66160610E+01-7.01683250E+00 8.30056540E-02-1.41520290E-04    3
 1.14216650E-07-3.51055350E-11-1.09507110E+05 2.66160610E+01-1.08951020E+05    4
BeS(s)              J 9/77BE 1.S  1.   0.   0.C   300.000  3000.000     41.07818 1   Chase (1985)
 3.47870360E+00 6.51062330E-03-4.13140450E-06 1.24499300E-09-1.38219470E-13    2
-2.95665300E+04-1.73913260E+01-2.87300050E+00 3.80787040E-02-6.25067050E-05    3
 4.89042780E-08-1.46385810E-11-2.85551820E+04 1.18429220E+01-2.81817977E+04    4
Be2C(s)             BAR 73BE 2.C  1.   0.   0.C   300.000  2400.000     30.03536 1   Barin (1973)
 4.43741700E+00 2.56945380E-03 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.55073240E+04-2.40861210E+01 4.43741700E+00 2.56945380E-03 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.55073240E+04-2.40861210E+01-1.40701050E+04    4
Be2C(L)             BAR 73BE 2.C  1.   0.   0.C  2400.000  5000.000     30.03536 1   Barin (1973)
 1.10708970E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.49696410E+04-6.57751160E+01 1.10708970E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.49696410E+04-6.57751160E+01-1.40701050E+04    4
Br2(cr)             L 1/93BR 2.   0.   0.   0.C   200.000   265.900    159.80800 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 9.12545994E+00-8.26160881E-02 6.99861517E-04    3
-2.40843064E-06 3.21106016E-09-3.30408820E+03-3.01727996E+01 0.00000000E+00    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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Br2(L)              L 1/93BR 2.   0.   0.   0.C   265.900   332.503    159.80800 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 1.04252937E+01 1.11181227E-01-1.06856988E-03    3
 3.25976572E-06-3.27490398E-09-3.50620403E+03-4.90757083E+01 0.00000000E+00    4
Br2(L)              L 1/93BR 2.   0.   0.   0.C   332.503  6000.000    159.80800 1   McBride (1993)
 9.05669727E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.69988017E+03-3.32936281E+01 9.05669727E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.69988017E+03-3.32936281E+01 0.00000000E+00    4
C(gr)               X 4/83C  1.   0.   0.   0.C   200.000  5000.000     12.01100 1   McBride (1993)
 1.45571829E+00 1.71702216E-03-6.97562786E-07 1.35277032E-10-9.67590652E-15    2   TRC(4/83)tc-,uc-,
-6.95138814E+02-8.52583033E+00-3.10872072E-01 4.40353686E-03 1.90394118E-06    3      vc-1000to1002
-6.38546966E-09 2.98964248E-12-1.08650794E+02 1.11382953E+00 0.00000000E+00    4
C6H6(L)             X10/86C  6.H  6.   0.   0.C   278.680   500.000     78.11364 1   TRC(10/86)tc-,
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2      uc-,vc-3201
 0.00000000E+00 0.00000000E+00 6.36690229E+01-6.00534398E-01 2.66792810E-03    3   TRC(4/83)p-3200
-5.06308828E-06 3.63955562E-09-1.67085472E+03-2.43891797E+02 5.90293355E+03    4
C7H8(L)             X10/86C  7.H  8.   0.   0.C   178.150   500.000     92.14052 1   TRC(10/86)tc-,
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2      uc-,vc-3201
 0.00000000E+00 0.00000000E+00 2.93676022E+01-1.94722686E-01 9.74773096E-04    3   TRC(4/83)p-3200
-1.91472689E-06 1.48097019E-09-4.16318442E+03-1.12019966E+02 1.46490894E+03    4
C8H18(L),n-octa     X10/76C  8.H 18.   0.   0.C   220.000   300.000    114.23092 1   TRC(10/76)tc-,
 7.14133930E+01-5.02079500E-01 1.83419900E-03-2.04501650E-06 0.00000000E+00    2      uc-,vc-1492
-4.12437250E+04-2.77222400E+02 7.14133930E+01-5.02079500E-01 1.83419900E-03    3   TRC(10/82) p-1490
-2.04501650E-06 0.00000000E+00-4.12437250E+04-2.77222400E+02-3.01032790E+04    4
Jet-A(L)            L 6/88C 12.H 23.   0.   0.C   220.000   550.000    167.31462 1   Gracia-Salcedo (1988)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 1.90496130E+01-1.69185320E-02 6.30220350E-04    3
-1.33365770E-06 9.43356380E-10-4.48039640E+04-6.76902000E+01-3.64987440E+04    4
Ca(a)               SRD 93CA 1.   0.   0.   0.C   298.150   716.000     40.07800 1   Alcock (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2   McBride (1993)
 0.00000000E+00 0.00000000E+00 3.03325649E+00-1.41800064E-03 7.24487574E-06    3
-6.68790594E-09 2.49903889E-12-8.93310508E+02-1.20114288E+01 0.00000000E+00    4
Ca(b)               SRD 93CA 1.   0.   0.   0.C   716.000  1115.000     40.07800 1   Alcock (1993)
 5.70111768E+00-5.81056490E-03 4.02212518E-06 0.00000000E+00 0.00000000E+00    2   McBride (1993)
-1.51676361E+03-2.60758134E+01 5.70111768E+00-5.81056490E-03 4.02212518E-06    3
 0.00000000E+00 0.00000000E+00-1.51676361E+03-2.60758134E+01 0.00000000E+00    4
Ca(L)               SRD 93CA 1.   0.   0.   0.C  1115.000  6000.000     40.07800 1   Alcock (1993)
 4.57032345E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2   McBride (1993)
-9.82243308E+02-2.11988643E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
CaBr2(s)            J 6/74CA 1.BR 2.   0.   0.C   300.000  1015.000    199.88600 1   Chase (1985)
 6.62997070E+00 4.02839100E-03 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-8.39396740E+04-2.25238430E+01 5.26933940E+00 2.36978050E-02-4.97999090E-05    3
 4.67072240E-08-1.52160970E-11-8.44473670E+04-1.96594450E+01-8.21778817E+04    4
CaBr2(L)            J 6/74CA 1.BR 2.   0.   0.C  1015.000  5000.000    199.88600 1   Chase (1985)
 1.35871960E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-8.54287380E+04-6.31516590E+01 1.35871960E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-8.54287380E+04-6.31516590E+01 0.00000000E+00    4
CaCO3(cal)          BAR 89CA 1.C  1.O  3.   0.C   298.150  1200.000    100.08720 1   Barin (1989)
 1.44388162E+01-1.39777807E-03 2.04333103E-06 0.00000000E+00 0.00000000E+00    2
-1.50400710E+05-7.28445489E+01-1.76968953E+00 6.18884685E-02-8.82380139E-05    3
 4.61909015E-08-2.98729740E-12-1.46691812E+05 6.32412532E+00 0.00000000E+00    4
CaCL2(s)            J 6/70CA 1.CL 2.   0.   0.C   300.000  1045.000    110.98340 1   Chase (1985)
 8.73324080E+00 2.39551410E-04 9.44673770E-07 4.58518630E-10-5.97495290E-14    2
-9.83080800E+04-3.72366670E+01 6.35546750E+00 1.37843100E-02-2.44214030E-05    3
 1.95512800E-08-4.95341690E-12-9.80417830E+04-2.68141460E+01-9.57136949E+04    4
CaCL2(L)            J 6/70CA 1.CL 2.   0.   0.C  1045.000  5000.000    110.98340 1   Chase (1985)
 1.23321410E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-9.80239520E+04-5.80474680E+01 1.23321410E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-9.80239520E+04-5.80474680E+01 0.00000000E+00    4
CaF2(a)             J12/68CA 1.F  2.   0.   0.C   200.000  1424.000     78.07481 1   Chase (1985)
 1.03439908E+00 2.18402489E-02-2.04796113E-05 1.03381996E-08-1.91843768E-12    2
-1.48010445E+05-2.08048925E+00-3.91537176E-01 5.74664742E-02-1.30834259E-04    3
 1.32738284E-07-4.81641634E-11-1.48963614E+05-1.91796873E+00 1.16566240E+04    4
CaF2(b)             J12/68CA 1.F  2.   0.   0.C  1424.000  1691.000     78.07481 1   Chase (1985)
 1.42866105E+01-1.10249437E-03 1.41775401E-06-2.81232082E-10 0.00000000E+00    2
-1.55453320E+05-7.91866360E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 1.16566240E+04    4
CaF2(L)             J12/68CA 1.F  2.   0.   0.C  1691.000  6000.000     78.07481 1   Chase (1985)
 1.20168140E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.47908292E+05-6.04927984E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 1.16566240E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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CaO(s)            J 6/73CA 1.O  1.   0.   0.C   300.000  3200.000     56.07740 1   Chase (1985)
 5.65575170E+00 1.01654390E-03-2.55768990E-07 5.45143950E-11-4.25799500E-15    2
-7.82383810E+04-2.82233720E+01 1.69376880E+00 1.81496630E-02-2.83726090E-05    3
 2.05135390E-08-5.51757680E-12-7.74827690E+04-9.37100810E+00-7.63838127E+04    4
CaO(L)            J 6/73CA 1.O  1.   0.   0.C  3200.000  5000.000     56.07740 1   Chase (1985)
 7.54844210E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-7.11792920E+04-3.80839480E+01 7.54844210E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-7.11792920E+04-3.80839480E+01 0.00000000E+00    4
CaO2H2(s)         J12/75CA 1.O  2.H  2.   0.C   300.000  1000.000     74.09268 1   Chase (1985)
-7.40227670E-01 6.75664680E-02-1.31912810E-04 1.19890680E-07-4.06130450E-11    2
-1.20435430E+05-1.00970750E+00-7.40227670E-01 6.75664680E-02-1.31912810E-04    3
 1.19890680E-07-4.06130450E-11-1.20435430E+05-1.00970750E+00-1.18600700E+05    4
CaS(s)            J 9/77CA 1.S  1.   0.   0.C   300.000  3000.000     72.14400 1   Chase (1985)
 5.65305190E+00 1.36258740E-03-7.27811760E-07 2.49897630E-10-3.09681260E-14    2
-5.87103410E+04-2.59063950E+01 4.64755580E+00 4.93155160E-03-5.53089030E-06    3
 3.06639590E-09-6.07856100E-13-5.84770470E+04-2.09227100E+01-5.69152785E+04    4
CaSO4(s)          BAR 73CA 1.S  1.O  4.   0.C   300.000  5000.000    136.14160 1   Barin (1973)
 8.44419050E+00 1.18762150E-02 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.75532420E+05-3.88201340E+01 8.44419050E+00 1.18762150E-02 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.75532420E+05-3.88201340E+01-1.72486926E+05    4
Cr(cr)            J 6/73CR 1.   0.   0.   0.C   200.000   311.500     51.99610 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 7.84826024E+00-1.16276020E-01 8.12369251E-04    3
-2.30807086E-06 2.35328142E-09-8.98013946E+02-2.75733139E+01 0.00000000E+00    4
Cr(cr)            J 6/73CR 1.   0.   0.   0.C   311.500  2130.000     51.99610 1   McBride (1993)
 4.59782637E+00-4.81791132E-03 5.84129754E-06-2.07036847E-09 2.82102268E-13    2
-1.31489668E+03-2.24454748E+01 1.82863471E+00 4.19562267E-03-2.82735082E-06    3
-9.15990578E-10 1.55203040E-12-7.05502663E+02-8.69806103E+00 0.00000000E+00    4
Cr(L)             J 6/73CR 1.   0.   0.   0.C  2130.000  6000.000     51.99610 1   McBride (1993)
 4.73028477E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 5.75359221E+02-2.45318309E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
CrN(s)            J12/73CR 1.N  1.   0.   0.C   300.000  2500.000     66.00284 1   Chase (1985)
 5.69445390E+00 5.30116900E-04 2.27058290E-07-8.14832540E-11 1.08037960E-14    2
-1.58360020E+04-2.81317040E+01 9.71529040E+00-2.37753720E-02 5.25610150E-05    3
-4.83907470E-08 1.62707570E-11-1.63234220E+04-4.57300500E+01-1.41071233E+04    4
Cr2N(s)           J12/73CR 2.N  1.   0.   0.C   300.000  2500.000    117.99894 1   Chase (1985)
 8.09841850E+00 1.85336110E-03 1.42273060E-06-5.58963900E-10 6.93071100E-14    2
-1.76848010E+04-3.91474720E+01 2.03033880E+00 3.40064410E-02-6.15249460E-05    3
 5.31425480E-08-1.67695210E-11-1.67683130E+04-1.16006980E+01-1.50979548E+04    4
Cr2O3(s)          J12/73CR 2.O  3.   0.   0.C   300.000  2603.000    151.99040 1   Chase (1985)
 1.40122350E+01 1.38239780E-03-2.37792260E-07 1.69950850E-10-3.77058570E-14    2
-1.40982170E+05-7.11015690E+01 2.93327730E+01-1.02073850E-01 2.36011030E-04    3
-2.25780190E-07 7.77992890E-11-1.42404060E+05-1.35742810E+02-1.36519668E+05    4
Cr2O3(L)          J12/73CR 2.O  3.   0.   0.C  2603.000  5000.000    151.99040 1   Chase (1985)
 1.88711050E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.33694980E+05-9.99614700E+01 1.88711050E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.33694980E+05-9.99614700E+01 0.00000000E+00    4
Cs(cr)            CODA89CS 1.   0.   0.   0.C   100.000   301.590    132.90543 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 3.31157194E+00-9.67974793E-03 1.19926576E-04    3
-5.20608084E-07 8.33415927E-10-9.80844435E+02-8.10866871E+00 0.00000000E+00    4
Cs(L)             CODA89CS 1.   0.   0.   0.C   301.590  2000.000    132.90543 1   McBride (1993)
 5.11512955E+00-3.83970291E-03 2.01555257E-06 3.64202599E-10-5.43974501E-14    2
-1.13841767E+03-1.70567624E+01 3.20358130E+00 6.53560206E-03-1.88609302E-05    3
 1.88262490E-08-6.10371782E-12-8.61341855E+02-8.43100388E+00 0.00000000E+00    4
CsCL(a)           J 6/68CS 1.CL 1.   0.   0.C   300.000   743.000    168.35813 1   Chase (1985)
 5.54534000E+00 2.38058340E-03 8.35703300E-07-9.95716400E-10 3.80548030E-13    2
-5.50265350E+04-2.01642600E+01 5.54534000E+00 2.38058340E-03 8.35703300E-07    3
-9.95716400E-10 3.80548030E-13-5.50265350E+04-2.01642600E+01-5.32617875E+04    4
CsCL(b)           J 6/68CS 1.CL 1.   0.   0.C   743.000   918.000    168.35813 1   Chase (1985)
 8.16107370E+00-1.76235680E-03-2.25085160E-07 3.93073170E-09-2.34523410E-12    2
-5.54804310E+04-3.39413960E+01 8.16107370E+00-1.76235680E-03-2.25085160E-07    3
 3.93073170E-09-2.34523410E-12-5.54804310E+04-3.39413960E+01 0.00000000E+00    4
CsCL(L)           J 6/68CS 1.CL 1.   0.   0.C   918.000  5000.000    168.35813 1   Chase (1985)
 9.30974520E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-5.50311610E+04-4.08101330E+01 9.30974520E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-5.50311610E+04-4.08101330E+01 0.00000000E+00    4
CsF(s)            J 6/68CS 1.F  1.   0.   0.C   300.000   976.000    151.90383 1   Chase (1985)
 5.64899930E+00 1.87113980E-03 6.62423820E-07-6.30848710E-10 1.86923390E-13    2
-6.84851020E+04-2.21499590E+01 5.64899930E+00 1.87113980E-03 6.62423820E-07    3
-6.30848710E-10 1.86923390E-13-6.84851020E+04-2.21499590E+01-6.67129928E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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CsF(L)            J 6/68CS 1.F  1.   0.   0.C   976.000  5000.000    151.90383 1   Chase (1985)
 8.90716170E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-6.80668170E+04-3.99127740E+01 8.90716170E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-6.80668170E+04-3.99127740E+01 0.00000000E+00    4
CsOH(a)           J 6/71CS 1.O  1.H  1.   0.C   298.150   410.000    149.91277 1   Chase (1985)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 5.88946051E+00 6.13189982E-03 8.60763952E-06    3
-1.20614689E-08 0.00000000E+00-5.22010341E+04-2.37840127E+01 0.00000000E+00    4
CsOH(b)           J 6/71CS 1.O  1.H  1.   0.C   410.000   493.000    149.91277 1   Chase (1985)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 4.92104624E+00 1.00655116E-02 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-5.18660681E+04-1.87438113E+01 0.00000000E+00    4
CsOH(c)           J 6/71CS 1.O  1.H  1.   0.C   493.000   588.000    149.91277 1   Chase (1985)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 1.00644544E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-5.24488650E+04-4.41931478E+01 0.00000000E+00    4
CsOH(L)           J 6/71CS 1.O  1.H  1.   0.C   588.000  6000.000    149.91277 1   Chase (1985)
 9.81284300E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-5.17524722E+04-4.16559605E+01 9.81284300E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-5.17524722E+04-4.16559605E+01 0.00000000E+00    4
Cs2SO4(II)        J 6/79CS 2.S  1.O  4.   0.C   300.000   940.000    361.87446 1   Chase (1985)
-2.97893070E+00 1.26508840E-01-2.95532060E-04 3.32073080E-07-1.31049910E-10    2
-1.76233520E+05 1.51857470E+01-2.97893070E+00 1.26508840E-01-2.95532060E-04    3
 3.32073080E-07-1.31049910E-10-1.76233520E+05 1.51857470E+01-1.73515408E+05    4
Cs2SO4(I)         J 6/79CS 2.S  1.O  4.   0.C   940.000  1278.000    361.87446 1   Chase (1985)
-2.72327220E-02 3.13540360E-02-1.13005310E-05 3.32831080E-09 0.00000000E+00    2
-1.70211630E+05 2.48399880E+01 4.73498360E+00 1.86196000E-02 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.71541390E+05 1.37370460E-01 0.00000000E+00    4
Cs2SO4(L)         J 6/79CS 2.S  1.O  4.   0.C  1278.000  5000.000    361.87446 1   Chase (1985)
 2.48591980E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.77761980E+05-1.16657440E+02 2.48591980E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.77761980E+05-1.16657440E+02 0.00000000E+00    4
Cu(cr)            CODA89CU 1.   0.   0.   0.C   200.000  1358.000     63.54600 1   McBride (1993)
 3.42008910E+00-1.61201394E-03 3.05145917E-06-2.11162788E-09 6.99858397E-13    2
-9.90295636E+02-1.51932294E+01 1.76672074E+00 7.34699432E-03-1.54712960E-05    3
 1.50539591E-08-5.24861335E-12-7.43882087E+02-7.70454044E+00 0.00000000E+00    4
Cu(L)             CODA89CU 1.   0.   0.   0.C  1358.000  6000.000     63.54600 1   McBride (1993)
 3.94491076E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.10634669E+02-1.83585676E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
CuF(s)            J12/77CU 1.F  1.   0.   0.C   300.000  2000.000     82.54440 1   Chase (1985)
 5.32155060E+00 4.85498320E-03-3.54400480E-06 1.11090230E-09-1.24537160E-13    2
-3.55217150E+04-2.39026430E+01 4.44212880E+00 7.96690760E-03-7.28073110E-06    3
 2.76377730E-09-2.73188420E-13-3.53361680E+04-1.95851700E+01-3.37166351E+04    4
CuF2(s)           J12/77CU 1.F  2.   0.   0.C   300.000  1109.000    101.54281 1   Chase (1985)
 2.35576760E+00 1.49135080E-02-6.39951930E-06 0.00000000E+00 0.00000000E+00    2
-6.56106220E+04-7.16267570E+00 4.38736760E+00 1.43971090E-02-8.62134970E-06    3
-1.98304460E-09 2.68967400E-12-6.66855850E+04-1.95805610E+01-6.48164029E+04    4
CuF2(L)           J12/77CU 1.F  2.   0.   0.C  1109.000  5000.000    101.54281 1   Chase (1985)
 1.20775070E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-6.34879980E+04-5.67303700E+01 1.20775070E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-6.34879980E+04-5.67303700E+01 0.00000000E+00    4
CuO(s)            J12/77CU 1.O  1.   0.   0.C   300.000  2000.000     79.54540 1   Chase (1985)
 5.02581240E+00 2.54240770E-03-1.37682940E-06 5.34928310E-10-7.96642810E-14    2
-2.04332810E+04-2.43766950E+01 8.84038660E-01 2.41588520E-02-4.38941420E-05    3
 3.75861810E-08-1.20882750E-11-1.97883820E+04-5.47238800E+00-1.87702523E+04    4
CuO2H2(s)         J 6/66CU 1.O  2.H  2.   0.C   300.000  1500.000     97.56068 1   Chase (1985)
 8.67307870E+00 1.03857620E-02-4.69948410E-06-5.02925130E-10 5.35931600E-13    2
-5.72303820E+04-3.93661610E+01 1.04511850E+01 1.34582050E-03 8.66023390E-06    3
-6.80923490E-09 7.44358590E-13-5.74068650E+04-4.72388030E+01-5.41676188E+04    4
CuSO4(s)          J 6/66CU 1.S  1.O  4.   0.C   300.000  2000.000    159.60960 1   Chase (1985)
 1.13145360E+01 1.40503520E-02-1.00635680E-05 3.72042210E-09-5.28059140E-13    2
-9.69982080E+04-5.62546900E+01 3.30191660E+00 3.70123210E-02-2.89908040E-05    3
 4.53140450E-09 2.63884450E-12-9.49936210E+04-1.54658780E+01-9.26100033E+04    4
Cu2O(s)           J12/77CU 2.O  1.   0.   0.C   300.000  1516.720    143.09140 1   Chase (1985)
 1.47556410E+01-1.58766570E-02 1.49711930E-05-4.48402640E-09 4.05560050E-13    2
-2.50650680E+04-7.05418770E+01 3.38324660E+00 2.29541760E-02-3.95423040E-05    3
 3.40204010E-08-1.10438090E-11-2.22731570E+04-1.35307130E+01-2.05315380E+04    4
Cu2O(L)           J12/77CU 2.O  1.   0.   0.C  1516.720  5000.000    143.09140 1   Chase (1985)
 1.20171200E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.92523870E+04-5.68868660E+01 1.20171200E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.92523870E+04-5.68868660E+01 0.00000000E+00    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

```
Cu2O5S(s)          J 6/66CU 2.0  5.S  1.   0.C   300.000  1500.000     239.15500 1   Chase (1985)
 1.60116340E+01 1.94246680E-02-1.84482510E-05 1.11872040E-08-2.61119830E-12    2
-1.17616200E+05-7.87274890E+01 2.52571780E+00 7.22059580E-02-9.78556650E-05    3
 6.54324990E-08-1.67444530E-11-1.14786460E+05-1.31961120E+01-1.11567236E+05    4
Fe(a)              J 3/78FE 1.   0.   0.   0.C   200.000  1042.000      55.84700 1   McBride (1993)
 4.69080173E+03-9.90659991E+00 2.69427446E-03 5.54445321E-06-3.01659823E-09    2
-1.41547586E+06-2.49294387E+04 2.41337476E+00-1.57780744E-03 2.14701339E-05    3
-3.80171438E-08 2.20426984E-11-7.74380998E+02-1.06560296E+01 0.00000000E+00    4
Fe(a)              J 3/78FE 1.   0.   0.   0.C  1042.000  1184.000      55.84700 1   McBride (1993)
 6.59678809E+02-1.14058217E+00 4.96306997E-04 0.00000000E+00 0.00000000E+00    2
-2.52106802E+05-3.65665236E+03 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
Fe(c)              J 3/78FE 1.   0.   0.   0.C  1184.000  1665.000      55.84700 1   McBride (1993)
 6.10109990E+01-1.60945061E-01 1.68369493E-04-7.74563702E-08 1.33091290E-11    2
-1.65335454E+04-3.13710668E+02 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
Fe(d)              J 3/78FE 1.   0.   0.   0.C  1665.000  1809.000      55.84700 1   McBride (1993)
-4.35904698E+02 7.68489448E-01-4.46898892E-04 8.67070913E-08 0.00000000E+00    2
 1.87925534E+05 2.45057619E+03 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
Fe(L)              J 3/78FE 1.   0.   0.   0.C  1809.000  6000.000      55.84700 1   McBride (1993)
 5.53538332E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.27428941E+03-2.94772271E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
FeC5O5(L)          J 3/78FE 1.C  5.O  5.   0.C   300.000  5000.000     195.89900 1   Chase (1985)
 2.81184500E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.00524830E+05-1.19665410E+02 2.81184500E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.00524830E+05-1.19665410E+02-9.21413141E+04    4
FeCL2(s)           J12/70FE 1.CL 2.   0.   0.C   300.000   950.000     126.75240 1   Chase (1985)
 7.11222710E+00 1.10869530E-02-1.70727420E-05 1.35158170E-08-4.13650360E-12    2
-4.36009850E+04-2.89940550E+01 7.11222710E+00 1.10869530E-02-1.70727420E-05    3
 1.35158170E-08-4.13650360E-12-4.36009850E+04-2.89940550E+01-4.11137739E+04    4
FeCL2(L)           J12/70FE 1.CL 2.   0.   0.C   950.000  5000.000     126.75240 1   Chase (1985)
 1.22888630E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-4.11098210E+04-5.31930570E+01 1.22888630E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-4.11098210E+04-5.31930570E+01 0.00000000E+00    4
FeCL3(s)           J 6/65FE 1.CL 3.   0.   0.C   200.000   577.000     162.20510 1   Chase (1985)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00-7.39556855E+00 2.02608434E-01-8.44505923E-04    3
 1.59286602E-06-1.07989321E-09-5.00144664E+04 2.44450935E+01 1.97062370E+04    4
FeCL3(L)           J 6/65FE 1.CL 3.   0.   0.C   577.000  6000.000     162.20510 1   Chase (1985)
 1.61031270E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-4.84135278E+04-6.75758990E+01 1.61031270E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-4.84135278E+04-6.75758990E+01 1.97062370E+04    4
FeO(s)             J 6/65FE 1.O  1.   0.   0.C   300.000  1650.000      71.84640 1   Chase (1985)
 5.83164890E+00 1.42751560E-03-9.32081430E-08-6.59977630E-12-2.25121430E-14    2
-3.45669020E+04-2.64469900E+01 5.31954750E+00 2.20965910E-03 1.07217750E-06    3
-2.79297290E-09 1.33207330E-12-3.44071650E+04-2.36860340E+01-3.27183475E+04    4
FeO(L)             J 6/65FE 1.O  1.   0.   0.C  1650.000  5000.000      71.84640 1   Chase (1985)
 8.20224820E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-3.38486150E+04-4.00791290E+01 8.20224820E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-3.38486150E+04-4.00791290E+01 0.00000000E+00    4
Fe(OH)2(s)         J 6/66FE 1.O  2.H  2.   0.C   300.000  1500.000      89.86168 1   Chase (1985)
 7.40318080E+00 1.19817420E-02-1.49576110E-06-5.05263590E-09 2.00371110E-12    2
-7.15922660E+04-3.46732670E+01 1.00912180E+01 4.45231410E-03 4.06668550E-06    3
-4.00945250E-09 2.39471640E-13-7.22776880E+04-4.84000340E+01-6.90429813E+04    4
Fe(OH)3(s)         J 6/66FE 1.O  3.H  3.   0.C   300.000  1500.000     106.86902 1   Chase (1985)
 8.02239260E+00 1.64201350E-02-1.23693780E-07-6.81928380E-09 2.32769070E-12    2
-1.03213360E+05-3.79340200E+01 4.41168360E+00 3.26824620E-02-2.23938150E-05    3
 2.86467920E-09 2.26223210E-12-1.02718340E+05-2.13310140E+01-1.00141482E+05    4
FeS(a)             J 9/77FE 1.S  1.   0.   0.C   300.000   411.000      87.91300 1   Chase (1985)
 1.89776270E+01-1.09542820E-01 2.21860160E-04 0.00000000E+00 0.00000000E+00    2
-1.49952420E+04-7.81254350E+01 1.89776270E+01-1.09542820E-01 2.21860160E-04    3
 0.00000000E+00 0.00000000E+00-1.49952420E+04-7.81254350E+01-1.22458515E+04    4
FeS(b)             J 9/77FE 1.S  1.   0.   0.C   411.000   598.000      87.91300 1   Chase (1985)
 8.70285050E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.46897380E+04-4.20821020E+01 8.70285050E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.46897380E+04-4.20821020E+01 0.00000000E+00    4
FeS(c)             J 9/77FE 1.S  1.   0.   0.C   598.000  1463.000      87.91300 1   Chase (1985)
-2.68304830E+00 3.67651040E-02-5.21822740E-05 3.16071700E-08-6.41260410E-12    2
-1.14986840E+04 1.62391240E+01 9.37241760E+00 9.41620590E-04-1.58298640E-05    3
 1.83808810E-08-5.77070670E-12-1.45816850E+04-4.51415160E+01 0.00000000E+00    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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FeS(L)              J 9/77FE 1.S  1.   0.   0.C  1463.000  5000.000     87.91300 1   Chase (1985)
 7.52328060E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.01642370E+04-3.19709300E+01 7.52328060E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.01642370E+04-3.19709300E+01 0.00000000E+00    4
FeSO4(s)            J 6/66FE 1.S  1.0  4.   0.C   300.000  2000.000    151.91060 1   Chase (1985)
 1.16089290E+01 1.38046970E-02-9.81263800E-06 3.60878110E-09-5.09762790E-13    2
-1.16191860E+05-5.64778170E+01 3.50576840E+00 3.70297010E-02-2.90335310E-05    3
 4.57785890E-09 2.62020870E-12-1.14162500E+05-1.52232410E+01-1.11717626E+05    4
FeS2(s)             J 9/77FE 1.S  2.   0.   0.C   300.000  1400.000    119.97900 1   Chase (1985)
-8.85153200E+01 3.27489310E-01-4.10574390E-04 2.29281460E-07-4.77644150E-11    2
-4.65124760E+02 4.41730450E+02 4.03456630E-01 4.26746840E-02-8.40306260E-05    3
 7.63014410E-08-2.54323160E-11-2.20459270E+04-5.54563930E+00-2.06325071E+04    4
Fe2O3(s)            J 6/65FE 2.O  3.   0.   0.C   300.000  2500.000    159.69220 1   Chase (1985)
 4.04975300E+01-4.61315960E-02 3.18264060E-05-8.92263310E-09 8.46554170E-13    2
-1.13176270E+05-2.16350880E+02-7.70378430E+00 1.36474710E-01-3.29056550E-04    3
 3.81504780E-07-1.63102850E-10-1.00800760E+05 2.52920850E+01-9.92620367E+04    4
Fe2S3O12(s)         J 6/66FE 2.S  3.O 12.   0.C   300.000  2000.000    399.88480 1   Chase (1985)
 3.91144380E+01 1.17963270E-02-3.38710140E-08-2.29703990E-09 6.41019860E-13    2
-3.24782620E+05-1.94004290E+02 1.11169550E+01 8.37067780E-02-4.13650750E-05    3
-2.52792220E-08 2.10414350E-11-3.17297820E+05-4.92887500E+01-3.10668274E+05    4
Fe3O4(s)            J 6/65FE 3.O  4.   0.   0.C   300.000  5000.000    231.53860 1   Chase (1985)
 2.41337200E+01 4.15922260E-05-2.63314920E-08 6.60350940E-12-5.69246800E-16    2
-1.41210520E+05-1.20064120E+02 3.61981480E+01-1.74379760E-01 5.24756730E-04    3
-5.42382190E-07 1.79962020E-10-1.41387300E+05-1.55566830E+02-1.34696136E+05    4
H2O(s)              L 8/89H   2.O  1.   0.   0.C   200.000   273.150     18.01528 1   Gordon (1982)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 5.29677970E+00-6.75749247E-02 5.16942109E-04    3
-1.43853360E-06 1.52564794E-09-3.62266557E+04-1.79220428E+01-3.59742186E+04    4
H2O(L)              L 8/89H   2.O  1.   0.   0.C   273.150   600.000     18.01528 1   Cox (1989)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2   Keenan (1969)
 0.00000000E+00 0.00000000E+00 7.25575005E+01-6.62445402E-01 2.56198746E-03    3   Stimson (1969)
-4.36591923E-06 2.78178981E-09-4.18865499E+04-2.88280137E+02-3.43772513E+04    4
H2SO4(L)            J 9/77H   2.S  1.O  4.   0.C   300.000  1000.000     98.07948 1   Chase (1985)
 9.94215250E+00 2.17863690E-02 3.49744580E-06-3.35488570E-09 1.16995860E-12    2
-1.01859790E+05-4.43986950E+01 9.94215250E+00 2.17863690E-02 3.49744580E-06    3
-3.35488570E-09 1.16995860E-12-1.01859790E+05-4.43986950E+01-9.79023828E+04    4
Hg(cr)              J12/61HG 1.   0.   0.   0.C   200.000   234.290     200.59000 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 2.43103385E+00 4.24646658E-03 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.17886806E+03-7.11248114E+00 0.00000000E+00    4
Hg(L)               J12/61HG 1.   0.   0.   0.C   234.290  2000.000     200.59000 1   McBride (1993)
 3.03653487E+00 3.16006666E-04 6.43901172E-08-2.92306991E-11 4.86860918E-15    2
-8.88170502E+02-8.17243018E+00 3.79685248E+00-2.09026109E-03 2.22267107E-06    3
-1.08605655E-10-4.28087248E-13-1.05834631E+03-1.19626936E+01 0.00000000E+00    4
HgBr2(s)            J 3/62HG 1.BR 2.   0.   0.C   300.000   514.000     360.39800 1   Chase (1985)
 8.28297140E+00 1.63023640E-03 3.42298790E-06 7.09619920E-10-4.33538620E-12    2
-2.29524380E+04-2.73452760E+01 8.28297140E+00 1.63023640E-03 3.42298790E-06    3
 7.09619920E-10-4.33538620E-12-2.29524380E+04-2.73452760E+01-2.03808119E+04    4
HgBr2(L)            J 3/62HG 1.BR 2.   0.   0.C   514.000  5000.000     360.39800 1   Chase (1985)
 1.22787990E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.25008980E+04-4.68512120E+01 1.22787990E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.25008980E+04-4.68512120E+01 0.00000000E+00    4
HgO(s)              J 6/62HG 1.O  1.   0.   0.C   300.000  1000.000     216.58940 1   Chase (1985)
 3.41708660E+00 7.11605700E-03-1.48969960E-06-4.49135480E-09 2.59379240E-12    2
-1.22332700E+04-1.30371850E+01 3.41708660E+00 7.11605700E-03-1.48969960E-06    3
-4.49135480E-09 2.59379240E-12-1.22332700E+04-1.30371850E+01-1.09189916E+04    4
I2(cr)              TPIS89I   2.   0.   0.   0.C   200.000   386.750     253.80894 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00-1.05757713E+01 2.26905653E-01-1.12461645E-03    3
 2.41678452E-06-1.84901377E-09-8.99721615E+02 3.88598964E+01 0.00000000E+00    4
I2(L)               TPIS89I   2.   0.   0.   0.C   386.750  6000.000     253.80894 1   McBride (1993)
 9.56821268E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.20451948E+03-3.63733927E+01 9.56821268E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.20451948E+03-3.63733927E+01 0.00000000E+00    4
K(cr)               CODA89K   1.   0.   0.   0.C   200.000   336.860     39.09830 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00-2.08951123E+00 6.16320193E-02-2.40731903E-04    3
 3.27255823E-07 0.00000000E+00-6.36098059E+02 9.11736910E+00 0.00000000E+00    4
K(L)                CODA89K   1.   0.   0.   0.C   336.860  2200.000     39.09830 1   McBride (1993)
 4.64954931E+00-2.79174106E-03 1.80836337E-06 3.41244868E-11-4.48782184E-15    2
-1.01467797E+03-1.71767347E+01 4.22910563E+00-7.06885543E-04-2.12965848E-06    3
 3.36227270E-09-1.05902602E-12-9.45117514E+02-1.52340054E+01 0.00000000E+00    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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KCN(s)              J 3/66K  1.C  1.N  1.   0.C   300.000   895.000     65.11604 1   Chase (1985)
 8.17997280E+00-1.40107820E-03 3.42377250E-06-3.49617380E-09 1.30527800E-12    2
-1.60482010E+04-3.09445250E+01 8.17997280E+00-1.40107820E-03 3.42377250E-06    3
-3.49617380E-09 1.30527800E-12-1.60482010E+04-3.09445250E+01-1.36476597E+04    4
KCN(L)              J 3/66K  1.C  1.N  1.   0.C   895.000  5000.000     65.11604 1   Chase (1985)
 9.05813050E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.52267170E+04-3.54540830E+01 9.05813050E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.52267170E+04-3.54540830E+01 0.00000000E+00    4
KCL(s)              J 3/66K  1.CL 1.   0.   0.C   300.000  1044.000     74.55100 1   Chase (1985)
 3.91571690E+00-2.09272710E-03 4.73101820E-06 7.01525370E-09-5.51460980E-12    2
-5.27470660E+04-1.01448000E+01 5.39343110E+00 2.65352420E-03 9.60756550E-07    3
-5.02518430E-09 4.07212280E-12-5.42483890E+04-2.15968140E+01-5.25219178E+04    4
KCL(L)              J 3/66K  1.CL 1.   0.   0.C  1044.000  5000.000     74.55100 1   Chase (1985)
 8.85180640E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-5.33694780E+04-4.00100590E+01 8.85180640E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-5.33694780E+04-4.00100590E+01 0.00000000E+00    4
KF(s)               J 6/69K  1.F  1.   0.   0.C   300.000  1131.000     58.09670 1   Chase (1985)
 9.46277820E+00-6.40575120E-03 6.39132620E-08 7.59495890E-09-3.35981040E-12    2
-7.12491070E+04-4.48318040E+01 4.98439720E+00 3.59431900E-03-1.76964010E-06    3
-4.81061410E-10 1.02807300E-12-7.00181490E+04-2.13845040E+01-6.83883952E+04    4
KF(L)               J 6/69K  1.F  1.   0.   0.C  1131.000  5000.000     58.09670 1   Chase (1985)
 8.65554690E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-6.92680250E+04-4.11799320E+01 8.65554690E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-6.92680250E+04-4.11799320E+01 0.00000000E+00    4
KHF2(a)             J 6/71K  1.H  1.F  2.   0.C   300.000   469.850     78.10305 1   Chase (1985)
-9.12984980E+00 8.66188890E-02 4.39044120E-05-6.68675990E-07 8.04541630E-10    2
-1.12582590E+05 4.10828000E+01-9.12984980E+00 8.66188890E-02 4.39044120E-05    3
-6.68675990E-07 8.04541630E-10-1.12582590E+05 4.10828000E+01-1.12008733E+05    4
KHF2(b)             J 6/71K  1.H  1.F  2.   0.C   469.850   511.950     78.10305 1   Chase (1985)
 1.20573780E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.14571260E+05-5.41701400E+01 1.20573780E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.14571260E+05-5.41701400E+01 0.00000000E+00    4
KHF2(L)             J 6/71K  1.H  1.F  2.   0.C   511.950  6000.000     78.10305 1   Chase (1985)
 1.25807370E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.14043090E+05-5.58799150E+01 1.25807370E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.14043090E+05-5.58799150E+01 0.00000000E+00    4
KOH(a)              J12/70K  1.O  1.H  1.   0.C   300.000   516.000     56.10564 1   Chase (1985)
 6.44009770E+00 1.13101680E-03 1.50732720E-05-1.49061190E-08 1.05563250E-11    2
-5.31618980E+04-2.80988530E+01 6.44009770E+00 1.13101680E-03 1.50732720E-05    3
-1.49061190E-08 1.05563250E-11-5.31618980E+04-2.80988530E+01-5.10828208E+04    4
KOH(b)              J12/70K  1.O  1.H  1.   0.C   516.000   679.000     56.10564 1   Chase (1985)
 9.46071400E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-5.32916480E+04-4.33693260E+01 9.46071400E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-5.32916480E+04-4.33693260E+01 0.00000000E+00    4
KOH(L)              J12/70K  1.O  1.H  1.   0.C   679.000  5000.000     56.10564 1   Chase (1985)
 9.99564690E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-5.26207310E+04-4.53343920E+01 9.99564690E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-5.26207310E+04-4.53343920E+01 0.00000000E+00    4
KO2(s)              J 6/71K  1.O  2.   0.   0.C   300.000  1500.000     71.09710 1   Chase (1985)
-1.04945450E+01 6.88589880E-02-8.14023070E-05 4.29476920E-08-8.49658320E-12    2
-3.24899890E+04 5.96859130E+01 3.87754870E+00 3.01570310E-02-5.11822510E-05    3
 4.16338720E-08-1.30729560E-11-3.63407270E+04-1.44190320E+01-3.42203377E+04    4
K2CO3(s)            J 3/66K  2.C  1.O  3.   0.C   300.000  1174.000    138.20580 1   Chase (1985)
 2.28243410E+01-1.35809930E-02 8.74098900E-06 1.14944250E-08-6.75881490E-12    2
-1.45778440E+05-1.10486650E+02 8.43986320E+00 1.88362560E-02-4.68274830E-07    3
-1.05196100E-08 6.43184120E-12-1.41667440E+05-3.48944240E+01-1.38335773E+05    4
K2CO3(L)            J 3/66K  2.C  1.O  3.   0.C  1174.000  5000.000    138.20580 1   Chase (1985)
 2.51614690E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.47401380E+05-1.31107300E+02 2.51614690E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.47401380E+05-1.31107300E+02 0.00000000E+00    4
K2O(s)              J 6/63K  2.O  1.   0.   0.C   298.150  2000.000     94.19600 1   Chase (1985)
 7.18702640E+00 9.11492365E-03-4.18066880E-06 1.79898267E-09-2.83941251E-13    2
-4.60009426E+04-3.17449802E+01 4.43039872E-01 6.20637705E-02-1.36231073E-04    3
 1.36376972E-07-4.90163860E-11-4.56125862E+04-4.75903470E+00 0.00000000E+00    4
K2O2(s)             J 9/63K  2.O  2.   0.   0.C   298.150  2000.000    110.19540 1   Chase (1985)
 1.04816299E+01 6.90861807E-03 4.86567038E-07-2.54902723E-10 4.08386186E-14    2
-6.31814318E+04-4.84772902E+01 8.82674208E+00 1.32621264E-02-1.11439578E-05    3
 1.09588563E-08-4.24101605E-12-6.27735254E+04-4.02514321E+01 0.00000000E+00    4
K2S(1)              J 3/78K  2.S  1.   0.   0.C   300.000  1050.000    110.26260 1   Chase (1985)
-7.48493370E+01 9.36197960E-02 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-9.72179390E+03 4.49673930E+02 3.13644310E+01-1.88106630E-01 5.60057270E-04    3
-6.97035550E-07 3.12490940E-10-4.99974060E+04-1.28104550E+02-4.52887377E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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K2S(2)            J 3/78K  2.S  1.   0.   0.C  1050.000  1100.000    110.26260 1   Chase (1985)
 1.56428160E+02-1.26644440E-01 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.31144190E+05-9.27942750E+02 1.56428160E+02-1.26644440E-01 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.31144190E+05-9.27942750E+02 0.00000000E+00    4
K2S(3)            J 3/78K  2.S  1.   0.   0.C  1100.000  1221.000    110.26260 1   Chase (1985)
 1.71198670E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-5.45249530E+04-9.16665110E+01 1.71198670E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-5.45249530E+04-9.16665110E+01 0.00000000E+00    4
K2S(L)            J 3/78K  2.S  1.   0.   0.C  1221.000  5000.000    110.26260 1   Chase (1985)
 1.21429270E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-4.65203490E+04-5.47160430E+01 1.21429270E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-4.65203490E+04-5.47160430E+01 0.00000000E+00    4
K2SO4(a)          J 6/78K  2.S  1.0  4.   0.C   300.000   857.000    174.26020 1   Chase (1985)
 1.70265260E+00 8.47097140E-02-1.76325730E-04 1.92828030E-07-7.64708900E-11    2
-1.75980870E+05-7.56319510E+00 1.70265260E+00 8.47097140E-02-1.76325730E-04    3
 1.92828030E-07-7.64708900E-11-1.75980870E+05-7.56319510E+00-1.72921009E+05    4
K2SO4(b)          J 6/78K  2.S  1.0  4.   0.C   857.000  1342.000    174.26020 1   Chase (1985)
-2.90198660E+02 1.05696310E+00-1.34752990E-03 7.67665760E-07-1.63374400E-10    2
-1.05542140E+05 1.45300940E+03 1.38071770E+01 9.67305900E-03 4.56585510E-08    3
 0.00000000E+00 0.00000000E+00-1.75853260E+05-5.84412960E+01 0.00000000E+00    4
K2SO4(L)          J 6/78K  2.S  1.0  4.   0.C  1342.000  5000.000    174.26020 1   Chase (1985)
 2.42304990E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.76955190E+05-1.17402220E+02 2.42304990E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.76955190E+05-1.17402220E+02 0.00000000E+00    4
Li(cr)            TPIS82LI 1.   0.   0.   0.C   200.000   453.690      6.94100 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 6.10909942E-01 1.41041217E-02-1.74958170E-05    3
-3.33741023E-08 7.76629665E-11-6.25121208E+02-3.26449947E+00 0.00000000E+00    4
Li(L)             TPIS82LI 1.   0.   0.   0.C   453.690  3000.000      6.94100 1   McBride (1993)
 3.89314223E+00-8.42787696E-04 4.45546328E-07-3.65337454E-11 3.89279220E-15    2
-8.22019556E+02-1.78183077E+01 4.62266638E+00-4.06164205E-03 5.91666170E-06    3
-4.24960085E-09 1.23517473E-12-9.58811267E+02-2.12778501E+01 0.00000000E+00    4
LiALO2(s)         J12/79LI 1.AL 1.0  2.   0.C   300.000  1973.000     65.92134 1   Chase (1985)
 8.54408940E+00 6.48867910E-03-4.08639690E-06 1.54714660E-09-2.24950380E-13    2
-1.45981500E+05-4.45906180E+01-5.28411560E+00 7.84525870E-02-1.45415780E-04    3
 1.24629580E-07-4.01137050E-11-1.43818310E+05 1.85767330E+01-1.42964183E+05    4
LiALO2(L)         J12/79LI 1.AL 1.0  2.   0.C  1973.000  5000.000     65.92134 1   Chase (1985)
 1.50966790E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.41658390E+05-8.09937670E+01 1.50966790E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.41658390E+05-8.09937670E+01 0.00000000E+00    4
LiCL(s)           J 6/62LI 1.CL 1.   0.   0.C   300.000   883.000     42.39370 1   Chase (1985
 4.10952450E+00 8.19810030E-03-1.15418740E-05 1.05853860E-08-3.64570220E-12    2
-5.06082660E+04-1.82988940E+01 4.10952450E+00 8.19810030E-03-1.15418740E-05    3
 1.05853860E-08-3.64570220E-12-5.06082660E+04-1.82988940E+01-4.91014060E+04    4
LiCL(L)           J 6/62LI 1.CL 1.   0.   0.C   883.000  2000.000     42.39370 1   Chase (1985)
 8.21494770E+00 5.63913610E-04-1.73503310E-06 7.65950080E-10-1.23784770E-13    2
-5.00073220E+04-3.88089610E+01 1.03830280E+01-4.71796990E-03-1.61383170E-06    3
 8.08071740E-09-4.44594930E-12-5.05391200E+04-4.99219600E+01 0.00000000E+00    4
LiF(s)            J12/68LI 1.F  1.   0.   0.C   300.000  1121.300     25.93940 1   Chase (1985)
 5.54057380E+00-1.34210800E-04 1.78256060E-06 8.89964440E-10-9.12966540E-13    2
-7.59003650E+04-2.74472760E+01 1.76943250E+00 1.75052240E-02-2.80387510E-05    3
 2.28933850E-08-6.96336580E-12-7.52992780E+04-9.94780570E+00-7.41994361E+04    4
LiF(L)            J12/68LI 1.F  1.   0.   0.C  1121.300  5000.000     25.93940 1   Chase (1985)
 7.71954010E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-7.43043470E+04-3.88154870E+01 7.71954010E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-7.43043470E+04-3.88154870E+01 0.00000000E+00    4
LiH(s)            J 9/67LI 1.H  1.   0.   0.C   300.000   961.800      7.94894 1   Chase (1985)
 3.86118120E-01 1.21279570E-02-8.69003360E-06 5.63115550E-09-1.26934830E-12    2
-1.14869910E+04-3.06545750E+00 3.86118120E-01 1.21279570E-02-8.69003360E-06    3
 5.63115550E-09-1.26934830E-12-1.14869910E+04-3.06545750E+00-1.08990681E+04    4
LiH(L)            J 9/67LI 1.H  1.   0.   0.C   961.800  5000.000      7.94894 1   Chase (1985)
 7.49811910E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.15818260E+04-4.00472780E+01 7.49811910E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.15818260E+04-4.00472780E+01 0.00000000E+00    4
LiOH(s)           J 6/71LI 1.O  1.H  1.   0.C   300.000   744.300     23.94834 1   Chase (1985)
 6.32277970E-01 2.53405380E-02-2.78979500E-05 8.69258930E-09 4.14998940E-12    2
-5.94126800E+04-4.83826970E+00 6.32277970E-01 2.53405380E-02-2.78979500E-05    3
 8.69258930E-09 4.14998940E-12-5.94126800E+04-4.83826970E+00-5.83252001E+04    4
LiOH(L)           J 6/71LI 1.O  1.H  1.   0.C   744.300  5000.000     23.94834 1   Chase (1985)
 1.04742180E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-6.01856710E+04-5.38971400E+01 1.04742180E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-6.01856710E+04-5.38971400E+01 0.00000000E+00    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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Li2O(s)           J 3/64LI 2.0  1.   0.   0.C   300.000  1843.000     29.88140 1   Chase (1985)
 4.27747760E+00 7.85216720E-03-5.22250900E-07-1.78644260E-09 5.39610350E-13    2
-7.33962780E+04-2.17654970E+01-3.17272390E-01 3.61493560E-02-5.54559210E-05    3
 4.17964370E-08-1.18040480E-11-7.31061960E+04-2.28883300E+00-7.20069902E+04    4
Li2O(L)           J 3/64LI 2.0  1.   0.   0.C  1843.000  5000.000     29.88140 1   Chase (1985)
 1.20769310E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-7.13379210E+04-6.51749740E+01 1.20769310E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-7.13379210E+04-6.51749740E+01 0.00000000E+00    4
Li2SO4(a)         J12/78LI 2.S  1.0  4.   0.C   200.000   848.000    109.94560 1   Chase (1985)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00-4.13873597E+00 1.06940568E-01-2.09346052E-04    3
 2.12892822E-07-8.01625106E-11-1.74806776E+05 1.29835773E+01 1.86362240E+04    4
Li2SO4(b)         J12/78LI 2.S  1.0  4.   0.C   848.000  1132.000    109.94560 1   Chase (1985)
 2.61026513E+01-8.29304728E-04 3.90810735E-07 0.00000000E+00 0.00000000E+00    2
-1.80422445E+05-1.38008099E+02 2.57954812E+01-2.84625052E-04 1.53301129E-07    3
 0.00000000E+00 0.00000000E+00-1.80308445E+05-1.36312168E+02 1.86362240E+04    4
Li2SO4(L)         J12/78LI 2.S  1.0  4.   0.C  1132.000  6000.000    109.94560 1   Chase (1985)
 2.46579132E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.78097798E+05-1.27626158E+02 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 1.86362240E+04    4
Li3N(s)           J 3/78LI 3.N  1.   0.   0.C   300.000  1300.000     34.82974 1   Chase (1985)
 5.44225030E+00 1.34777370E-02-1.94223220E-06-2.49601090E-11 0.00000000E+00    2
-2.20157760E+04-2.74572750E+01 2.92255580E+00 2.85987020E-02-3.53369470E-05    3
 3.18619850E-08-1.10935010E-11-2.16780290E+04-1.63310570E+01-1.97900194E+04    4
Mg(cr)            SRD 93MG 1.   0.   0.   0.C   298.150   923.000     24.30500 1   Alcock (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2   McBride (1993)
 0.00000000E+00 0.00000000E+00 1.47884944E+00 9.27430526E-03-1.95050788E-05    3
 1.98215527E-08-7.04927374E-12-7.16649299E+02-6.57222695E+00 0.00000000E+00    4
Mg(L)             SRD 93MG 1.   0.   0.   0.C   923.000  6000.000     24.30500 1   Alcock (1993)
 4.12531827E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2   McBride (1993)
-6.58934341E+02-1.93786894E+01 4.12531827E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-6.58934341E+02-1.93786894E+01 0.00000000E+00    4
MgAL2O4(s)        J12/79MG 1.AL 2.O  4.   0.C   300.000  2408.000    142.26568 1   Chase (1985)
 1.46976790E+01 9.33047970E-03-3.55225980E-06 1.15505300E-09-1.43345310E-13    2
-2.81664110E+05-7.66686850E+01-6.39126250E+00 1.17188600E-01-2.13251780E-04    3
 1.82774050E-07-5.88319910E-11-2.78271410E+05 2.01327010E+01-2.76518945E+05    4
MgAL2O4(L)        J12/79MG 1.AL 2.O  4.   0.C  2408.000  5000.000    142.26568 1   Chase (1985)
 2.64191880E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.68835360E+05-1.41985810E+02 2.64191880E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.68835360E+05-1.41985810E+02 0.00000000E+00    4
MgBr2(s)          J 6/74MG 1.BR 2.   0.   0.C   300.000   984.000    184.11300 1   Chase (1985)
 5.19664220E+00 2.06702530E-02-3.72539390E-05 3.19375640E-08-9.95070160E-12    2
-6.52526160E+04-2.02889100E+01 5.19664220E+00 2.06702530E-02-3.72539390E-05    3
 3.19375640E-08-9.95070160E-12-6.52526160E+04-2.02889100E+01-6.30552290E+04    4
MgBr2(L)          J 6/74MG 1.BR 2.   0.   0.C   984.000  5000.000    184.11300 1   Chase (1985)
 1.25807370E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-6.39629820E+04-5.62554600E+01 1.25807370E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-6.39629820E+04-5.62554600E+01 0.00000000E+00    4
MgCO3(s)          J12/66MG 1.C  1.0  3.   0.C   300.000  1000.000     84.31420 1   Chase (1985)
 1.34919240E+00 3.69341120E-02-4.44929520E-05 3.18159060E-08-9.75453000E-12    2
-1.35416850E+05-9.06187320E+00 1.34919240E+00 3.69341120E-02-4.44929520E-05    3
 3.18159060E-08-9.75453000E-12-1.35416850E+05-9.06187320E+00-1.33707806E+05    4
MgCL2(s)          J12/65MG 1.CL 2.   0.   0.C   300.000   987.000     95.21040 1   Chase (1985)
 5.44912960E+00 1.67452240E-02-2.59569070E-05 1.91115730E-08-5.10590140E-12    2
-7.93438940E+04-2.42610840E+01 5.44912960E+00 1.67452240E-02-2.59569070E-05    3
 1.91115730E-08-5.10590140E-12-7.93438940E+04-2.42610840E+01-7.71689336E+04    4
MgCL2(L)          J12/65MG 1.CL 2.   0.   0.C   987.000  5000.000     95.21040 1   Chase (1985)
 1.10710480E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-7.62946180E+04-4.89725880E+01 1.10710480E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-7.62946180E+04-4.89725880E+01 0.00000000E+00    4
MgF2(s)           J 6/75MG 1.F  2.   0.   0.C   300.000  1536.000     62.30181 1   Chase (1985)
-2.10224270E+00 3.50242280E-02-3.97498930E-05 2.04618590E-08-3.95344100E-12    2
-1.35393080E+05 1.10445550E+01 1.60361100E+00 3.17944860E-02-5.26857980E-05    3
 4.15877060E-08-1.26194950E-11-1.36720340E+05-9.73231710E+00-1.35218306E+05    4
MgF2(L)           J 6/75MG 1.F  2.   0.   0.C  1536.000  5000.000     62.30181 1   Chase (1985)
 1.14167670E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.34084100E+05-5.74250690E+01 1.14167670E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.34084100E+05-5.74250690E+01 0.00000000E+00    4
MgI2(s)           J12/74MG 1.I  2.   0.   0.C   300.000   907.000    278.11394 1   Chase (1985)
 6.70171590E+00 1.16970220E-02-1.68363080E-05 1.31438090E-08-4.00999570E-12    2
-4.65277610E+04-2.54320430E+01 6.70171590E+00 1.16970220E-02-1.68363080E-05    3
 1.31438090E-08-4.00999570E-12-4.65277610E+04-2.54320430E+01-4.41344148E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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MgI2(L)           J12/74MG 1.I  2.   0.   0.C   967.000  5000.000    278.11394 1   Chase (1985)
 1.20775070E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-4.55256600E+04-5.18835260E+01 1.20775070E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-4.55256600E+04-5.18835260E+01 0.00000000E+00    4
MgO(s)            J12/74MG 1.O  1.   0.   0.C   300.000  3105.000     40.30440 1   Chase (1985)
 5.04486810E+00 1.68982010E-03-7.56176950E-07 2.02868930E-10-2.05912710E-14    2
-7.40292850E+04-2.63288920E+01-4.54039530E-01 2.78732690E-02-4.90622470E-05    3
 4.04741510E-08-1.26703440E-11-7.30579480E+04-6.35520200E-01-7.23138995E+04    4
MgO(L)            J12/74MG 1.O  1.   0.   0.C  3105.000  5000.000     40.30440 1   Chase (1985)
 8.05167150E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-6.98794510E+04-4.43438250E+01 8.05167150E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-6.98794510E+04-4.43438250E+01 0.00000000E+00    4
MgO2H2(s)         J12/75MG 1.O  2.H  2.   0.C   300.000  1000.000     58.31968 1   Chase (1985)
-4.16642480E+00 7.68449870E-02-1.37207670E-04 1.14268590E-07-3.59258370E-11    2
-1.12384340E+05 1.35926370E+01-4.16642480E+00 7.68449870E-02-1.37207670E-04    3
 1.14268590E-07-3.59258370E-11-1.12384340E+05 1.35926370E+01-1.11214407E+05    4
MgS(s)            J 9/77MG 1.S  1.   0.   0.C   300.000  3000.000     56.37100 1   Chase (1985)
 5.35012290E+00 1.34336550E-03-6.29050000E-07 1.98198580E-10-2.25916480E-14    2
-4.32385480E+04-2.48378310E+01 4.09728770E+00 6.92978580E-03-9.20292860E-06    3
 5.63293350E-09-1.21703300E-12-4.30407590E+04-1.89960010E+01-4.15818955E+04    4
MgSO4(s)          L 7/76MG 1.S  1.O  4.   0.C   300.000  1400.000    120.36860 1   Parker (1971)
-6.44769200E+01 2.63753170E-01-3.24918840E-04 1.82572340E-07-3.86907670E-11    2   Chase (1985)
-1.40661070E+05 3.21883890E+02 2.15340590E+00 4.87565320E-02-7.36650300E-05    3
 5.94277870E-08-1.84337080E-11-1.56809620E+05-1.30284440E+01-1.54542596E+05    4
MgSO4(L)          L 7/76MG 1.S  1.O  4.   0.C  1400.000  5000.000    120.36860 1   Chase (1985)
 1.91227200E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.60928760E+05-1.01804650E+02 1.91227200E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.60928760E+05-1.01804650E+02 0.00000000E+00    4
MgSiO3(I)         J12/67MG 1.SI 1.O  3.   0.C   300.000   903.000    100.38870 1   Chase (1985)
 1.33777790E+00 4.44532220E-02-6.59737530E-05 4.74142570E-08-1.23310980E-11    2
-1.88172260E+05-1.01789360E+01 1.33777790E+00 4.44532220E-02-6.59737530E-05    3
 4.74142570E-08-1.23310980E-11-1.88172260E+05-1.01789360E+01-1.86292592E+05    4
MgSiO3(II)        J12/67MG 1.SI 1.O  3.   0.C   903.000  1258.000    100.38870 1   Chase (1985)
 1.44738860E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.91621720E+05-7.66594640E+01 1.44738860E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.91621720E+05-7.66594640E+01 0.00000000E+00    4
MgSiO3(III)       J12/67MG 1.SI 1.O  3.   0.C  1258.000  1850.000    100.38870 1   Chase (1985)
 1.47255010E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.91741990E+05-7.82992980E+01 1.47255010E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.91741990E+05-7.82992980E+01 0.00000000E+00    4
MgSiO3(L)         J12/67MG 1.SI 1.O  3.   0.C  1850.000  5000.000    100.38870 1   Chase (1985)
 1.76130310E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.88025790E+05-9.51257310E+01 1.76130310E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.88025790E+05-9.51257310E+01 0.00000000E+00    4
MgTiO3(s)         J 6/67MG 1.TI 1.O  3.   0.C   300.000  1953.000    120.18320 1   Chase (1985)
 1.02882240E+01 1.03437300E-02-7.40121790E-06 2.79288240E-09-3.95324480E-13    2
-1.92811680E+05-5.29580880E+01-1.57777430E-01 6.20183970E-02-1.04805960E-04    3
 8.49409250E-08-2.63672950E-11-1.91077380E+05-4.66165350E+00-1.89138441E+05    4
MgTiO3(L)         J 6/67MG 1.TI 1.O  3.   0.C  1953.000  5000.000    120.18320 1   Chase (1985)
 1.96259490E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.90918120E+05-1.06562040E+02 1.96259490E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.90918120E+05-1.06562040E+02 0.00000000E+00    4
MgTi2O5(s)        J 6/67MG 1.TI 2.O  5.   0.C   300.000  1963.000    200.06200 1   Chase (1985)
 1.67766080E+01 1.22377910E-02-6.30131600E-06 2.40194880E-09-3.54129300E-13    2
-3.07546550E+05-8.32933900E+01 1.27163110E+00 9.26637940E-02-1.63695020E-04    3
 1.39033730E-07-4.45132320E-11-3.05116130E+05-1.24221020E+01-3.01810872E+05    4
MgTi2O5(L)        J 6/67MG 1.TI 2.O  5.   0.C  1963.000  5000.000    200.06200 1   Chase (1985)
 3.14015190E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-3.04100010E+05-1.68586490E+02 3.14015190E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-3.04100010E+05-1.68586490E+02 0.00000000E+00    4
Mg2SiO4(s)        J12/67MG 2.SI 1.O  4.   0.C   300.000  2171.000    140.69310 1   Chase (1985)
 1.57526790E+01 6.80046500E-03-1.62039510E-06 7.73681120E-12 6.33375730E-14    2
-2.67299550E+05-8.14579920E+01 1.34289820E+00 6.68665880E-02-9.64456250E-05    3
 6.64239600E-08-1.71839900E-11-2.64469010E+05-1.23991620E+01-2.61825552E+05    4
Mg2SiO4(L)        J12/67MG 2.SI 1.O  4.   0.C  2171.000  5000.000    140.69310 1   Chase (1985)
 2.46582440E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.66925490E+05-1.34615100E+02 2.46582440E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.66925490E+05-1.34615100E+02 0.00000000E+00    4
Mg2TiO4(s)        J 6/67MG 2.TI 1.O  4.   0.C   300.000  2013.000    160.48760 1   Chase (1985)
 1.47725770E+01 1.08241470E-02-4.99075600E-06 1.74079440E-09-2.53981950E-13    2
-2.65390780E+05-7.39337100E+01-5.04411560E-02 8.80864240E-02-1.56837890E-04    3
 1.34018470E-07-4.31237870E-11-2.63078650E+05-6.25375070E+00-2.60319690E+05    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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Mg2TiO4(L)          J 6/67MG 2.TI 1.O  4.   0.C  2013.000  5000.000    160.48760 1   Chase (1985)
 2.74763290E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.61535590E+05-1.47458370E+02 2.74763290E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.61535590E+05-1.47458370E+02 0.00000000E+00    4
Mo(cr)              J 3/78MO 1.   0.   0.   0.C   200.000  2896.000     95.94000 1   McBride (1993)
 5.38432823E+00-6.01622180E-03 6.01482526E-06-2.32962338E-09 3.52007808E-13    2
-1.62657220E+03-2.62488891E+01 1.32884141E+00 9.82553689E-03-2.10929825E-05    3
 2.09509528E-08-7.60703244E-12-6.84364789E+02-6.29286538E+00 0.00000000E+00    4
Mo(L)               J 3/78MO 1.   0.   0.   0.C  2896.000  6000.000     95.94000 1   McBride (1993)
 4.52894999E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 2.02140667E+03-2.28074752E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
NH4CL(a)            BAR 73N  1.H  4.CL 1.   0.C   298.150   458.000     53.49120 1   Barin (1973)
 4.67493830E+00 1.92734250E-02 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-4.00827510E+04-2.09591330E+01 4.67493830E+00 1.92734250E-02 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-4.00827510E+04-2.09591330E+01-3.78322780E+04    4
NH4CL(b)            BAR 73N  1.H  4.CL 1.   0.C   458.000   793.200     53.49120 1   Barin (1973)
 4.16668500E+00 1.34360490E-02 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-3.87626930E+04-1.41344020E+01 4.16668500E+00 1.34360490E-02 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-3.87626930E+04-1.41344020E+01-3.78322780E+04    4
Na(cr)              CODA89NA 1.   0.   0.   0.C   200.000   371.010     22.98977 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 1.23954242E+00 2.00562189E-02-7.36418252E-05    3
 1.02712149E-07 0.00000000E+00-8.13320916E+02-4.50651391E+00 0.00000000E+00    4
Na(L)               CODA89NA 1.   0.   0.   0.C   371.010  2300.000     22.98977 1   McBride (1993)
 4.59858543E+00-2.42459406E-03 1.32453794E-06-4.12375317E-11 6.40167081E-15    2
-9.98535534E+02-1.86257127E+01 4.32382419E+00-1.41145451E-03-1.31068846E-07    3
 9.17457679E-10-2.35065070E-13-9.36522263E+02-1.72722638E+01 0.00000000E+00    4
NaAlO2(a)           J 3/63NA 1.AL 1.O  2.   0.C   300.000   740.000     81.97011 1   Chase (1985)
-8.05047800E-01 5.84349680E-02-1.18844150E-04 1.19700420E-07-4.62247930E-11    2
-1.37816650E+05-5.33352820E-02-8.05047800E-01 5.84349680E-02-1.18844150E-04    3
 1.19700420E-07-4.62247930E-11-1.37816650E+05-5.33352820E-02-1.36294676E+05    4
NaAlO2(b)           J 3/63NA 1.AL 1.O  2.   0.C   740.000  3000.000     81.97011 1   Chase (1985)
 1.19662150E+01-2.28172770E-03 3.77137410E-06-1.29326700E-09 1.41350220E-13    2
-1.40048180E+05-6.00064550E+01 1.05423430E+01 8.84839070E-04 1.39067630E-06    3
-5.13913930E-10 0.00000000E+00-1.39580600E+05-5.23713620E+01 0.00000000E+00    4
NaBr(s)             J 9/64NA 1.BR 1.   0.   0.C   300.000  1020.000    102.89377 1   Chase (1985)
 6.62464480E+00 1.23829830E-04 4.09902760E-07 2.06836510E-10-1.80764850E-14    2
-4.55603720E+04-2.76058000E+01 4.87664610E+00 6.83189280E-03-1.06411630E-05    3
 9.16139280E-09-2.88162970E-12-4.51486440E+04-1.89825450E+01-4.34682858E+04    4
NaBr(L)             J 9/64NA 1.BR 1.   0.   0.C  1020.000  5000.000    102.89377 1   Chase (1985)
 7.49811910E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-4.30497700E+04-3.01704510E+01 7.49811910E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-4.30497700E+04-3.01704510E+01 0.00000000E+00    4
NaCN(s)             J 3/66NA 1.C  1.N  1.   0.C   300.000   835.000     49.00751 1   Chase (1985)
 7.99677320E+00 1.91545500E-03-5.34215910E-06 6.80916420E-09-3.14149110E-12    2
-1.33402940E+04-3.17039330E+01 7.99677320E+00 1.91545500E-03-5.34215910E-06    3
 6.80916420E-09-3.14149110E-12-1.33402940E+04-3.17039330E+01-1.09061445E+04    4
NaCN(L)             J 3/66NA 1.C  1.N  1.   0.C   835.000  5000.000     49.00751 1   Chase (1985)
 9.56136000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.33864070E+04-4.02873090E+01 9.56136000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.33864070E+04-4.02873090E+01 0.00000000E+00    4
NaCL(s)             J 9/64NA 1.CL 1.   0.   0.C   300.000  1073.800     58.44247 1   Chase (1985)
 2.21349270E+00 1.58599020E-03 5.04863830E-06 2.60205490E-09-3.64870960E-12    2
-4.92632030E+04-2.60256600E+00 5.02407780E+00 5.19490660E-03-7.28337300E-06    3
 6.06719790E-09-1.20134240E-12-5.11233350E+04-2.12272010E+01-4.94474351E+04    4
NaCL(L)             J 9/64NA 1.CL 1.   0.   0.C  1073.800  5000.000     58.44247 1   Chase (1985)
 1.23584880E+01-6.30712010E-03 3.20047230E-06-6.77173620E-10 5.10156120E-14    2
-5.14232650E+04-6.05855300E+01 1.23584880E+01-6.30712010E-03 3.20047230E-06    3
-6.77173620E-10 5.10156120E-14-5.14232650E+04-6.05855300E+01 0.00000000E+00    4
NaF(s)              J12/68NA 1.F  1.   0.   0.C   300.000  1269.000     41.98817 1   Chase (1985)
 7.83420260E+00-9.48391800E-04-5.48439860E-06 8.68430220E-09-2.92858600E-12    2
-7.18104050E+04-3.88157100E+01 3.69775520E+00 1.05205720E-02-1.72356560E-05    3
 1.41259110E-08-3.95145290E-12-7.06471830E+04-1.73936330E+01-6.92033173E+04    4
NaF(L)              J12/68NA 1.F  1.   0.   0.C  1269.000  3500.000     41.98817 1   Chase (1985)
 1.09632610E+01-3.20684590E-03 1.16116620E-06-1.62992970E-10 5.24561410E-15    2
-7.06739430E+04-5.63756950E+01 1.09632610E+01-3.20684590E-03 1.16116620E-06    3
-1.62992970E-10 5.24561410E-15-7.06739430E+04-5.63756950E+01 0.00000000E+00    4
NaI(s)              J 9/63NA 1.I  1.   0.   0.C   300.000   933.000    149.89424 1   Chase (1985)
 5.49959840E+00 3.56680530E-03-3.99656300E-06 3.18410730E-09-9.53087220E-13    2
-3.63903560E+04-2.03992510E+01 5.49959840E+00 3.56680530E-03-3.99656300E-06    3
 3.18410730E-09-9.53087220E-13-3.63903560E+04-2.03992510E+01-3.46215846E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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NaI(L)            J 9/63NA 1.I  1.   0.   0.C   933.000  5000.000    149.89424 1   Chase (1985)
 7.80005680E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-3.47595680E+04-3.08188810E+01 7.80005680E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-3.47595680E+04-3.08188810E+01 0.00000000E+00    4
NaOH(a)           J12/70NA 1.0  1.H  1.   0.C   300.000   596.000     39.99711 1   Chase (1985)
 8.58794940E+00-3.54060130E-03-4.55333940E-05 1.84184830E-07-1.50189730E-10    2
-5.35118510E+04-3.94075850E+01 8.58794940E+00-3.54060130E-03-4.55333940E-05    3
 1.84184830E-07-1.50189730E-10-5.35118510E+04-3.94075850E+01-5.12178981E+04    4
NaOH(L)           J12/70NA 1.0  1.H  1.   0.C   596.000  2500.000     39.99711 1   Chase (1985)
 9.49723210E+00 2.27179720E-03-2.39779340E-06 7.83984770E-10-8.19764720E-14    2
-5.29068240E+04-4.52999000E+01 9.05567750E+00 4.30250410E-03-2.42591320E-06    3
-3.54796640E-09 2.68894200E-12-5.29424450E+04-4.35151400E+01 0.00000000E+00    4
NaO2(s)           J 6/63NA 1.O  2.   0.   0.C   300.000  2000.000     54.98857 1   Chase (1985)
 6.67531770E+00 6.42345130E-03-1.54377730E-06 6.83577740E-10-1.10739220E-13    2
-3.35725460E+04-2.58486080E+01 7.27988820E+00 4.41607210E-03 1.24139210E-06    3
-1.29211710E-09 4.82594790E-13-3.37265610E+04-2.88998070E+01-3.13511405E+04    4
Na2CO3(1)         J 3/66NA 2.C  1.O  3.   0.C   300.000   723.150    105.98874 1   Chase (1985)
 6.78356590E+00 3.88297010E-02-9.82624550E-05 1.65430840E-07-8.32945150E-11    2
-1.39170100E+05-3.04632930E+01 6.78356590E+00 3.88297010E-02-9.82624550E-05    3
 1.65430840E-07-8.32945150E-11-1.39170100E+05-3.04632930E+01-1.36002267E+05    4
Na2CO3(2)         J 3/66NA 2.C  1.O  3.   0.C   723.150  1123.150    105.98874 1   Chase (1985)
 8.28177550E+00 1.12753890E-02 1.99632940E-06 0.00000000E+00 0.00000000E+00    2
-1.37612660E+05-3.13725800E+01 1.18483410E+01-3.51389860E-03 2.06155690E-05    3
-7.39651750E-09 0.00000000E+00-1.38141870E+05-4.80643680E+01 0.00000000E+00    4
Na2CO3(L)         J 3/66NA 2.C  1.O  3.   0.C  1123.150  5000.000    105.98874 1   Chase (1985)
 2.27962950E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.42292180E+05-1.16221210E+02 2.27962950E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.42292180E+05-1.16221210E+02 0.00000000E+00    4
Na2O(c)           J 6/68NA 2.O  1.   0.   0.C   300.000  1243.200     61.97894 1   Chase (1985)
 2.41689560E+01-2.52797440E-02-4.73906580E-06 3.18363870E-08-1.45702650E-11    2
-5.80482360E+04-1.25180650E+02 5.26545830E+00 1.11168720E-02-6.38753820E-07    3
-9.69932070E-09 5.37200710E-12-5.23143450E+04-2.41870240E+01-5.02726131E+04    4
Na2O(a)           J 6/68NA 2.O  1.   0.   0.C  1243.200  1405.200     61.97894 1   Chase (1985)
-1.49065900E+02 2.27990380E-01 3.83912680E-05-1.70999190E-07 6.13959260E-11    2
 1.16147950E+04 8.46892680E+02-1.49065900E+02 2.27990380E-01 3.83912680E-05    3
-1.70999190E-07 6.13959260E-11 1.16147950E+04 8.46892680E+02 0.00000000E+00    4
Na2O(L)           J 6/68NA 2.O  1.   0.   0.C  1405.200  5000.000     61.97894 1   Chase (1985)
 1.25807370E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-4.85948570E+04-6.06615490E+01 1.25807370E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-4.85948570E+04-6.06615490E+01 0.00000000E+00    4
Na2O2(a)          J 6/68NA 2.O  2.   0.   0.C   300.000   785.000     77.97834 1   Chase (1985)
 4.58152780E+00 3.24559100E-02-5.11542010E-05 4.26639790E-08-1.39916370E-11    2
-6.41610530E+04-2.24554530E+01 4.58152780E+00 3.24559100E-02-5.11542010E-05    3
 4.26639790E-08-1.39916370E-11-6.41610530E+04-2.24554530E+01-6.17267448E+04    4
Na2O2(b)          J 6/68NA 2.O  2.   0.   0.C   785.000  5000.000     77.97834 1   Chase (1985)
 1.36626800E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-6.56325710E+04-6.68415510E+01 1.36626800E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-6.56325710E+04-6.68415510E+01 0.00000000E+00    4
Na2S(1)           J 3/78NA 2.S  1.   0.   0.C   300.000  1276.000     78.04554 1   Chase (1985)
 4.46755600E+02-1.05851110E+00 8.11700930E-04-1.88778780E-07 0.00000000E+00    2
-1.77483940E+05-2.34626590E+03 9.70755990E+00-3.11261830E-04 5.51211610E-06    3
-6.04350720E-09 2.30175490E-12-4.69503790E+04-4.38376130E+01-4.40320621E+04    4
Na2S(2)           J 3/78NA 2.S  1.   0.   0.C  1276.000  1445.000     78.04554 1   Chase (1985)
-5.67935490E+05 1.68041210E+03-1.86226790E+00 9.16205880E-04-1.68848790E-07    2
 1.53328050E+08 2.91086870E+06-5.67935490E+05 1.68041210E+03-1.86226790E+00    3
 9.16205880E-04-1.68848790E-07 1.53328050E+08 2.91086870E+06 0.00000000E+00    4
Na2S(L)           J 3/78NA 2.S  1.   0.   0.C  1445.000  5000.000     78.04554 1   Chase (1985)
 1.10710480E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-4.27909300E+04-4.86158890E+01 1.10710480E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-4.27909300E+04-4.86158890E+01 0.00000000E+00    4
Na2SO4(V)         J 6/78NA 2.S  1.O  4.   0.C   200.000   458.000    142.04314 1   Chase (1985)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 5.83393186E+00 3.08201992E-02 5.97986350E-05    3
-2.59779078E-07 2.47853998E-10-1.70156075E+05-2.52886427E+01 2.32172790E+04    4
NaSO4(IV)         J 6/78NA 2.S  1.O  4.   0.C   458.000   514.000    142.04314 1   Chase (1985)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 9.71967784E+00 2.18820420E-02-6.19770747E-06    3
 0.00000000E+00 0.00000000E+00-1.70712819E+05-4.36063369E+01 2.32172790E+04    4
NaSO4(I)          J 6/78NA 2.S  1.O  4.   0.C   514.000  1157.000    142.04314 1   Chase (1985)
 1.61157389E+01 8.20925891E-03-2.33305547E-07 0.00000000E+00 0.00000000E+00    2
-1.71129101E+05-7.46990748E+01 1.54854389E+01 1.92613777E-02-3.32257332E-05    3
 3.56283302E-08-1.30577214E-11-1.71322923E+05-7.35127015E+01 2.32172790E+04    4
NaSO4(L)          J 6/78NA 2.S  1.O  4.   0.C  1157.000  6000.000    142.04314 1   Chase (1985)
 2.36977729E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.71658912E+05-1.16358482E+02 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 2.32172790E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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Na3ALF6(a)          J12/79NA 3.AL 1.F  6.   0.C   300.000   836.000    209.94126 1   Chase (1985)
 2.25929580E+00 1.55696660E-01-3.61618440E-04 4.04790800E-07-1.65055520E-10    2
-4.04059930E+05-1.77985450E+01 2.25929580E+00 1.55696660E-01-3.61618440E-04    3
 4.04790800E-07-1.65055520E-10-4.04059930E+05-1.77985450E+01-3.98938949E+05    4
Na3ALF6(b)          J12/79NA 3.AL 1.F  6.   0.C   836.000  1285.000    209.94126 1   Chase (1985)
 9.55439570E+00 3.52015420E-02-1.46209940E-05 4.40206690E-09 0.00000000E+00    2
-3.99075520E+05-2.82161770E+01 1.65936570E+01 1.69116940E-02 1.03166000E-06    3
 0.00000000E+00 0.00000000E+00-4.01086890E+05-6.49107920E+01 0.00000000E+00    4
Na3ALF6(L)          J12/79NA 3.AL 1.F  6.   0.C  1285.000  5000.000    209.94126 1   Chase (1985)
 4.75676230E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-4.12965380E+05-2.53758800E+02 4.75676230E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-4.12965380E+05-2.53758800E+02 0.00000000E+00    4
Na5AL3F14(s)        J12/79NA 5.AL 3.F 14.   0.C   300.000  1010.000    461.87110 1   Chase (1985)
 6.08053760E+01 1.01490150E-02 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-9.31943650E+05-2.94919480E+02 1.37281710E+01 2.32983000E-01-4.16721720E-04    3
 3.53732680E-07-1.12767740E-10-9.23255820E+05-7.39137540E+01-9.11843310E+05    4
Na5AL3F14(L)        J12/79NA 5.AL 3.F 14.   0.C  1010.000  5000.000    461.87110 1   Chase (1985)
 1.17130100E+02 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-9.56128840E+05-6.47053090E+02 1.17130100E+02 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-9.56128840E+05-6.47053090E+02 0.00000000E+00    4
Nb(cr)              J12/73NB 1.   0.   0.   0.C   200.000  2750.000     92.90638 1   McBride (1993)
 4.21499986E+00-2.90686491E-03 3.12396990E-06-1.27909749E-09 2.09229406E-13    2
-1.28682102E+03-1.91976179E+01 1.91200557E+00 6.92396275E-03-1.56081201E-05    3
 1.61804090E-08-6.04602043E-12-7.69037196E+02-8.00990261E+00 0.00000000E+00    4
Nb(L)               J12/73NB 1.   0.   0.   0.C  2750.000  6000.000     92.90638 1   McBride (1993)
 4.02573333E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 1.42704047E+03-1.85790552E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
NbO(s)              J12/73NB 1.0  1.   0.   0.C   300.000  2210.000    108.90578 1   Chase (1985)
 5.12365530E+00 8.93758600E-04 3.09308450E-07-1.64337020E-10 2.85698350E-14    2
-5.21109100E+04-2.40995200E+01 2.98212600E+00 1.02175450E-02-1.51788950E-05    3
 1.13084670E-08-3.13828580E-12-5.17033690E+04-1.39185970E+01-5.04733489E+04    4
NbO(L)              J12/73NB 1.0  1.   0.   0.C  2210.000  5000.000    108.90578 1   Chase (1985)
 7.54844210E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-4.45871380E+04-3.58173400E+01 7.54844210E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-4.45871380E+04-3.58173400E+01 0.00000000E+00    4
NbO2(I)             J12/73NB 1.0  2.   0.   0.C   200.000  1090.000    124.90518 1   Chase (1985)
 5.28902716E+00 5.20386062E-03 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-9.72972461E+04-2.48908597E+01-1.54841792E+00 5.45536428E-02-1.20674626E-04    3
 1.23777770E-07-4.56154808E-11-9.67311630E+04 3.47268215E+00 9.27174400E+03    4
NbO2(II)            J12/73NB 1.0  2.   0.   0.C  1090.000  1200.000    124.90518 1   Chase (1985)
 1.11714100E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.00205998E+05-5.99819441E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 9.27174400E+03    4
NbO2(III)           J12/73NB 1.0  2.   0.   0.C  1200.000  2175.000    124.90518 1   Chase (1985)
 9.98885082E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-9.87869274E+04-5.15975088E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 9.27174400E+03    4
NbO2(L)             J12/73NB 1.0  2.   0.   0.C  2175.000  6000.000    124.90518 1   Chase (1985)
 1.13223750E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-9.06165758E+04-5.67553462E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 9.27174400E+03    4
Nb2O5(s)            J12/72NB 2.0  5.   0.   0.C   300.000  1785.000    265.80976 1   Chase (1985)
 1.70548920E+01 4.91405580E-03 4.72946440E-07-1.83760710E-09 5.06219220E-13    2
-2.34230270E+05-8.32247990E+01 8.50534880E+00 3.44012140E-02-3.76987480E-05    3
 1.98637200E-08-3.96102670E-12-2.32232290E+05-4.06849200E+01-2.28463075E+05    4
Nb2O5(L)            J12/72NB 2.0  5.   0.   0.C  1785.000  5000.000    265.80976 1   Chase (1985)
 2.91369870E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.37360250E+05-1.59333960E+02 2.91369870E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.37360250E+05-1.59333960E+02 0.00000000E+00    4
Ni(cr)              J12/76NI 1.   0.   0.   0.C   200.000   631.000     58.69340 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 3.92097614E+00-2.34184719E-02 1.34230145E-04    3
-2.75971639E-07 1.98530861E-10-8.62387206E+02-1.56856186E+01 0.00000000E+00    4
Ni(cr)              J12/76NI 1.   0.   0.   0.C   631.000  1728.000     58.69340 1   McBride (1993)
 9.58208572E+00-1.78945122E-02 1.97185112E-05-9.11957952E-09 1.58728609E-12    2
-2.61782185E+03-4.74612393E+01 4.85484877E+02-2.30395380E+00 4.10622634E-03    3
-3.23350101E-06 9.49617381E-10-8.11709085E+04-2.25428960E+03 0.00000000E+00    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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Ni(L)             J12/76NI 1.   0.   0.   0.C  1728.000  6000.000     58.69340 1   McBride (1993)
 4.67989094E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-3.22238346E+02-2.33517797E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
NiS(b)            J12/76NI 1.S  1.   0.   0.C   300.000   652.000     90.75940 1   Chase (1985)
 2.51505130E+00 1.98108790E-02-4.47517130E-05 5.35527360E-08-2.47391510E-11    2
-1.18972750E+04-1.22988050E+01 2.51505130E+00 1.98108790E-02-4.47517130E-05    3
 5.35527360E-08-2.47391510E-11-1.18972750E+04-1.22988050E+01-1.05681072E+04    4
NiS(a)            J12/76NI 1.S  1.   0.   0.C   652.000  1249.000     90.75940 1   Chase (1985)
-2.16882770E+00 2.04672610E-02-1.52390680E-05 4.52420390E-09 0.00000000E+00    2
-9.25397310E+03 1.60189760E+01 1.59778550E+00 1.62791590E-02-2.39592640E-05    3
 1.96652470E-08-5.99935920E-12-1.06051920E+04-4.99884140E+00 0.00000000E+00    4
NiS(L)            J12/76NI 1.S  1.   0.   0.C  1249.000  5000.000     90.75940 1   Chase (1985)
 9.23426080E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.10536520E+04-4.57697360E+01 9.23426080E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.10536520E+04-4.57697360E+01 0.00000000E+00    4
NiS2(s)           J 3/77NI 1.S  2.   0.   0.C   300.000  1280.000    122.82540 1   Chase (1985)
 5.27426400E+00 9.08709310E-03-5.82010990E-06 1.70500810E-09 0.00000000E+00    2
-1.75287250E+04-2.33922190E+01 7.74493490E+00 2.53517140E-03-9.97675870E-08    3
 1.07829500E-10-4.19129410E-14-1.82225390E+04-3.62243880E+01-1.58013948E+04    4
NiS2(L)           J 3/77NI 1.S  2.   0.   0.C  1280.000  5000.000    122.82540 1   Chase (1985)
 1.09452410E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.23449250E+04-4.97206240E+01 1.09452410E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.23449250E+04-4.97206240E+01 0.00000000E+00    4
Ni3S2(1)          J12/76NI 3.S  2.   0.   0.C   300.000   829.000    240.21220 1   Chase (1985)
 6.92383000E+00 4.04466800E-02-7.30739570E-05 7.10070760E-08-2.62218590E-11    2
-2.93621960E+04-3.27350520E+01 6.92383000E+00 4.04466800E-02-7.30739570E-05    3
 7.10070760E-08-2.62218590E-11-2.93621960E+04-3.27350520E+01-2.60177884E+04    4
Ni3S2(2)          J12/76NI 3.S  2.   0.   0.C   829.000  1062.000    240.21220 1   Chase (1985
 2.26855850E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.93134790E+04-1.11689780E+02 2.26855850E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.93134790E+04-1.11689780E+02 0.00000000E+00    4
Ni3S2(L)          J12/76NI 3.S  2.   0.   0.C  1062.000  5000.000    240.21220 1   Chase (1985)
 2.30680390E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.73444020E+04-1.12118110E+02 2.30680390E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.73444020E+04-1.12118110E+02 0.00000000E+00    4
Ni3S4(s)          J 3/77NI 3.S  4.   0.   0.C   300.000  1100.000    304.34420 1   Chase (1985)
 1.46738180E+01 1.72757180E-02 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-4.13600010E+04-6.63291620E+01 1.46711930E+01 1.72771640E-02-2.75692840E-09    3
 1.02338580E-11-6.29839560E-15-4.13584790E+04-6.63129390E+01-3.62163568E+04    4
P(cr)             TPIS89P  1.   0.   0.   0.C   195.400   317.300     30.97376 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 8.02469681E-01 1.85779347E-02-8.34080748E-05    3
 2.11104876E-07-2.09658894E-10-6.46362570E+02-2.91281027E+00 0.00000000E+00    4
P(L)              TPIS89P  1.   0.   0.   0.C   317.300  6000.000     30.97376 1   McBride (1993)
 3.14149601E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-8.62148564E+02-1.27227472E+01 3.14149601E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-8.62148564E+02-1.27227472E+01 0.00000000E+00    4
P4O10(s)          J12/65P  4.0 10.   0.   0.C   300.000  1500.000    283.88905 1   Chase (1985)
-4.33006250E+01 2.15673760E-01-1.76863440E-04 6.76428520E-08-9.91087100E-12    2
-3.53461393E+05 2.26054720E+02 3.95560990E-01 1.13338170E-01-1.24099820E-04    3
 9.77156010E-08-3.41078390E-11-3.66256443E+05-3.80906970E+00-3.62020394E+05    4
Pb(cr)            TPIS91PB 1.   0.   0.   0.C   200.000   600.650    207.20000 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 3.36014248E+00-4.31525514E-03 2.10404411E-05    3
-3.35897357E-08 1.91850988E-11-9.38593007E+02-1.07408687E+01 0.00000000E+00    4
Pb(L)             TPIS91PB 1.   0.   0.   0.C   600.650  3600.000    207.20000 1   McBride (1993)
 4.18191355E+00-9.84150979E-04 3.55339809E-07-1.75808349E-11-3.23884419E-15    2
-7.56065769E+02-1.51099545E+01 3.40679935E+00 2.03221927E-03-4.17417470E-06    3
 3.08397022E-09-8.16531438E-13-5.92027769E+02-1.13377955E+01 0.00000000E+00    4
PbBr2(s)          J12/73PB 1.BR 2.   0.   0.C   300.000   644.000    367.00800 1   Chase (1985)
 1.05575540E+01-7.06173930E-03 1.01876020E-05 1.30528760E-08-1.63730940E-11    2
-3.63048010E+04-3.91990320E+01 1.05575540E+01-7.06173930E-03 1.01876020E-05    3
 1.30528760E-08-1.63730940E-11-3.63048010E+04-3.91990320E+01-3.33628636E+04    4
PbBr2(L)          J12/73PB 1.BR 2.   0.   0.C   644.000  5000.000    367.00800 1   Chase (1985)
 1.34865490E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-3.65722010E+04-5.70490870E+01 1.34865490E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-3.65722010E+04-5.70490870E+01 0.00000000E+00    4
PbCL2(s)          J 6/73PB 1.CL 2.   0.   0.C   300.000   774.000    278.10540 1   Chase (1985)
 8.28026900E+00 3.04143430E-03 1.56025800E-06-2.22846100E-09 1.11154400E-12    2
-4.58412180E+04-3.17812420E+01 8.28026900E+00 3.04143430E-03 1.56025800E-06    3
-2.22846100E-09 1.11154400E-12-4.58412180E+04-3.17812420E+01-4.32273685E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

```
PbCL2(L)            J 6/73PB 1.CL 2.   0.   0.C   774.000  5000.000    278.10540 1   Chase (1985)
 1.34110650E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-4.61670770E+04-5.99326540E+01 1.34110650E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-4.61670770E+04-5.99326540E+01 0.00000000E+00    4
PbF2(a)             J12/73PB 1.F  2.   0.   0.C   298.150   583.000    245.19681 1   Chase (1985)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 2.46966471E+01-1.59658886E-01 5.67676318E-04    3
-8.51030524E-07 4.66841985E-10-8.52413317E+04-9.81573714E+01 0.00000000E+00    4
PbF2(b)             J12/73PB 1.F  2.   0.   0.C   583.000  1103.000    245.19681 1   Chase (1985)
 9.93284674E+02-1.87255943E+00 8.90699273E-04 0.00000000E+00 0.00000000E+00    2
-4.26962008E+05-5.40678897E+03-9.63524957E+02 4.50587453E+00-7.58224107E-03    3
 5.52315524E-06-1.47183923E-09 7.85231255E+04 4.49531736E+03 0.00000000E+00    4
PbF2(L)             J12/73PB 1.F  2.   0.   0.C  1103.000  6000.000    245.19681 1   Chase (1985)
 1.31340648E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-8.47552152E+04-6.20713278E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
PbI2(s)             J12/73PB 1.I  2.   0.   0.C   300.000   683.000    461.00894 1   Chase (1985)
 8.44244310E+00 5.91957720E-03-1.38886860E-05 1.32213930E-08 1.61640680E-12    2
-2.37790490E+04-2.83379000E+01 8.44244310E+00 5.91957720E-03-1.38886860E-05    3
 1.32213930E-08 1.61640680E-12-2.37790490E+04-2.83379000E+01-2.10946481E+04    4
PbI2(L)             J12/73PB 1.I  2.   0.   0.C   683.000  5000.000    461.00894 1   Chase (1985)
 1.30588050E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.34409320E+04-5.20448070E+01 1.30588050E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.34409320E+04-5.20448070E+01 0.00000000E+00    4
PbO(rd)             J12/71PB 1.O  1.   0.   0.C   300.000   762.000    223.19940 1   Chase (1985)
 2.86460100E+00 1.07723720E-02-3.66130960E-06-1.22810870E-08 1.00664350E-11    2
-2.76701740E+04-1.13045130E+01 2.86460100E+00 1.07723720E-02-3.66130960E-06    3
-1.22810870E-08 1.00664350E-11-2.76701740E+04-1.13045130E+01-2.63891608E+04    4
PbO(yw)             J12/71PB 1.O  1.   0.   0.C   762.000  1159.000    223.19940 1   Chase (1985)
 5.11246260E+00 2.03944890E-03-2.04282280E-07 0.00000000E+00 0.00000000E+00    2
-2.78546610E+04-2.15059440E+01 4.20732530E+00 5.21764810E-03-3.86135870E-06    3
 1.38401460E-09 0.00000000E+00-2.76656010E+04-1.70644760E+01 0.00000000E+00    4
PbO(L)              J12/71PB 1.O  1.   0.   0.C  1159.000  5000.000    223.19940 1   Chase (1985)
 7.81766980E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.66565330E+04-3.57169340E+01 7.81766980E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.66565330E+04-3.57169340E+01 0.00000000E+00    4
PbO2(s)             J12/71PB 1.O  2.   0.   0.C   300.000  1200.000    239.19880 1   Chase (1985)
 6.86954900E+00 4.68879400E-03-2.02063490E-06 0.00000000E+00 0.00000000E+00    2
-3.53187500E+04-3.20013720E+01 2.34297850E+00 2.66129100E-02-4.12126330E-05    3
 3.07232400E-08-8.92878750E-12-3.45852910E+04-1.10699310E+01-3.30114828E+04    4
PbS(s)              J 6/73PB 1.S  1.   0.   0.C   300.000  1386.500    239.26600 1   Chase (1985)
 4.86954080E+00 2.55098480E-03-3.80428790E-07-5.48146380E-10 2.65738190E-13    2
-1.32984520E+04-1.72996060E+01 5.51609700E+00 1.71966880E-03-1.26586040E-06    3
 1.25056850E-09-4.62785080E-13-1.35381800E+04-2.09092670E+01-1.18260529E+04    4
PbS(L)              J 6/73PB 1.S  1.   0.   0.C  1386.500  5000.000    239.26600 1   Chase (1985)
 8.05167150E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.35660600E+04-3.57577960E+01 8.05167150E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.35660600E+04-3.57577960E+01 0.00000000E+00    4
Pb3O4(s)            J12/71PB 3.O  4.   0.   0.C   300.000  5000.000    685.59760 1   Chase (1985)
 1.99272030E+01 5.03362330E-03-8.34392170E-10 2.07608990E-13-1.77708800E-17    2
-9.28767870E+04-9.02884070E+01 2.47093570E+00 8.98670090E-02-1.52313110E-04    3
 1.19885000E-07-3.49496520E-11-9.00477260E+04-9.60622350E+00-8.64419716E+04    4
S(cr1)              TPIS89S  1.   0.   0.   0.C   200.000   368.300     32.06600 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 3.71369512E-01 1.53373501E-02-3.35441107E-05    3
 2.89249500E-08 0.00000000E+00-5.53213850E+02-1.59624498E+00 0.00000000E+00    4
S(cr2)              TPIS89S  1.   0.   0.   0.C   368.300   388.360     32.06600 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 2.08033146E+00 2.44137554E-03 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-6.85306695E+02-8.60715487E+00 0.00000000E+00    4
S(L)                TPIS89S  1.   0.   0.   0.C   388.360  6000.000     32.06600 1   McBride (1993)
 3.50078410E+00 3.81662100E-04-1.55569962E-07 2.72783689E-11-1.72812554E-15    2
-5.90873035E+02-1.52167270E+01-7.27405684E+01 4.81222534E-01-1.07842233E-03    3
 1.03257728E-06-3.58884490E-10 8.29134856E+03 3.15269743E+02 0.00000000E+00    4
SCL2(L)             J 6/78S  1.CL 2.   0.   0.C   300.000  5000.000    102.97140 1   Chase (1985)
 1.09452410E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-9.25175430E+03-4.02697950E+01 1.09452410E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-9.25175430E+03-4.02697950E+01-5.98843070E+03    4
S2CL2(L)            J 6/78S  2.CL 2.   0.   0.C   300.000  5000.000    135.03740 1   Chase (1985)
 1.49489350E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.14519150E+04-5.82502250E+01 1.49489350E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.14519150E+04-5.82502250E+01-6.99489003E+03    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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Si(cr)            TPIS91SI 1.   0.   0.   0.C   200.000  1690.000     28.08550 1   McBride (1993)
 1.75547382E+00 3.17285497E-03-2.78236402E-06 1.26458065E-09-2.17128464E-13    2
-6.28657363E+02-8.55341177E+00-1.29176912E-01 1.47203139E-02-2.76510160E-05    3
 2.41878251E-08-7.93452912E-12-4.15516417E+02-3.59570008E-01 0.00000000E+00    4
Si(L)             TPIS91SI 1.   0.   0.   0.C  1690.000  6000.000     28.08550 1   McBride (1993)
 3.27138941E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 4.88286795E+03-1.32665477E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
SiC(b)            J 3/67SI 1.C  1.   0.   0.C   300.000  4000.000     40.09650 1   Chase (1985)
 3.79748090E+00 3.18728860E-03-1.45023340E-06 3.15497440E-10-2.61589910E-14    2
-1.02919370E+04-2.10677910E+01-2.47159070E+00 3.06937830E-02-4.92630850E-05    3
 3.86263890E-08-1.17616210E-11-9.06912600E+03 8.80092140E+00-8.80624423E+03    4
SiO2(Lqz)         J 6/67SI 1.O  2.   0.   0.C   200.000   847.000     60.08430 1   Chase (1985)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00-7.58511380E-01 3.05773989E-02-4.00861855E-05    3
 2.16194849E-08-6.17249042E-13-1.10371483E+05 1.78384529E+00 6.91608300E+03    4
SiO2(hqz)         J 6/67SI 1.O  2.   0.   0.C   847.000  1696.000     60.08430 1   Chase (1985)
 7.23537106E+00 7.61842227E-04 4.89502294E-07-2.35754591E-10 4.20839131E-14    2
-1.11823834E+05-3.69642796E+01 7.11787621E+00 1.13819527E-03 3.69734234E-08    3
 0.00000000E+00 0.00000000E+00-1.11794194E+05-3.63708064E+01 6.91608300E+03    4
SiO2(L)           J 6/67SI 1.O  2.   0.   0.C  1696.000  6000.000     60.08430 1   Chase (1985)
 1.03160657E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.14600563E+05-5.76266603E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 6.91608300E+03    4
Si2N2O(s)         L 1/84SI 2.N  2.O  1.   0.C   298.150  2500.000    100.18380 1   Fegley (1981)
 1.18490230E+01 2.42446810E-03 3.65292350E-07-4.25788290E-10 8.62759300E-14    2
-1.18214940E+05-6.42500920E+01-4.12268540E+00 5.41728140E-02-4.23929300E-05    3
-1.07245950E-08 1.73668580E-11-1.14746000E+05 1.48221580E+01-1.13982840E+05    4
Si3N4(a)          J 3/67SI 3.N  4.   0.   0.C   300.000  3000.000    140.28346 1   Chase (1985)
 2.79817450E+00 2.79750180E-02-1.50205780E-05 3.58722880E-09-3.17769690E-13    2
-9.10172410E+04-8.92688190E+00 7.16356800E+00 1.90071110E-02-1.14693330E-05    3
 7.06659150E-09-2.74586400E-12-9.24666510E+04-3.24424310E+01-8.95746895E+04    4
Sr(a)             SRD 93SR 1.   0.   0.   0.C   298.150   820.000     87.62000 1   Alcock (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2   McBride (1993)
 0.00000000E+00 0.00000000E+00 2.61121855E+00 3.06923896E-03-4.43980854E-06    3
 4.03524789E-09-1.48087835E-12-8.83002675E+02-9.01331093E+00 0.00000000E+00    4
Sr(b)             SRD 93SR 1.   0.   0.   0.C   820.000  1041.000     87.62000 1   Alcock (1993)
 3.19032631E+00 4.83732655E-04 0.00000000E+00 0.00000000E+00 0.00000000E+00    2   McBride (1993)
-8.56080629E+02-1.15723466E+01 3.19032631E+00 4.83732655E-04 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-8.56080629E+02-1.15723466E+01 0.00000000E+00    4
Sr(L)             SRD 93SR 1.   0.   0.   0.C  1041.000  6000.000     87.62000 1   Alcock (1993)
 4.45005178E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2   McBride (1993)
-9.43175540E+02-1.88969962E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
SrCL2(1)          J12/72SR 1.CL 2.   0.   0.C   300.000  1000.000    158.52540 1   Chase (1985)
 6.93696350E+00 1.07876000E-02-1.39079400E-05 5.89822760E-09 3.01333260E-12    2
-1.02127190E+05-2.83708820E+01 6.93696350E+00 1.07876000E-02-1.39079400E-05    3
 5.89822760E-09 3.01333260E-12-1.02127190E+05-2.83708820E+01-9.96892591E+04    4
SrCL2(2)          J12/72SR 1.CL 2.   0.   0.C  1000.000  1147.000    158.52540 1   Chase (1985)
 1.47949470E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.06427500E+05-7.53762280E+01 1.47949470E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.06427500E+05-7.53762280E+01 0.00000000E+00    4
SrCL2(L)          J12/72SR 1.CL 2.   0.   0.C  1147.000  5000.000    158.52540 1   Chase (1985)
 1.25807370E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.01936770E+05-5.80763530E+01 1.25807370E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.01936770E+05-5.80763530E+01 0.00000000E+00    4
SrF2(s)           J12/72SR 1.F  2.   0.   0.C   300.000  1750.000    125.61681 1   Chase (1985)
 8.87471680E+01-1.63765080E-01 6.51968990E-05 4.35483950E-08-2.36734740E-11    2
-1.74561220E+05-4.69345230E+02 5.29162130E+00 1.55376550E-02-1.92119080E-05    3
 7.49652320E-09 9.40005730E-13-1.48530500E+05-2.40891530E+01-1.46416681E+05    4
SrF2(L)           J12/72SR 1.F  2.   0.   0.C  1750.000  5000.000    125.61681 1   Chase (1985)
 1.19129510E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.46428080E+05-5.80228420E+01 1.19129510E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.46428080E+05-5.80228420E+01 0.00000000E+00    4
SrO(s)            J12/72SR 1.O  1.   0.   0.C   300.000  2938.000    103.61940 1   Chase (1985)
 5.64779350E+00 1.31539990E-03-2.76404120E-07 6.73083310E-11-6.56263530E-15    2
-7.30373440E+04-2.60983600E+01 3.56313720E+00 9.27178460E-03-1.16465790E-05    3
 7.08518320E-09-1.52599060E-12-7.25914040E+04-1.59287960E+01-7.12065685E+04    4
SrO(L)            J12/72SR 1.O  1.   0.   0.C  2938.000  5000.000    103.61940 1   Chase (1985)
 8.05167150E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-6.67347690E+04-3.90929440E+01 8.05167150E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-6.67347690E+04-3.90929440E+01 0.00000000E+00    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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SrO2H2(s)          J12/75SR 1.0  2.H  2.   0.C   300.000   783.150    121.63468 1    Chase (1985)
 4.17069560E+00 1.65037010E-02-1.30297450E-06 1.39718190E-09-5.39489420E-13    2
-1.18500560E+05-1.69628130E+01 4.17069560E+00 1.65037010E-02-1.30297450E-06    3
 1.39718190E-09-5.39489420E-13-1.18500560E+05-1.69628130E+01-1.16532537E+05    4
SrO2H2(L)          J12/75SR 1.0  2.H  2.   0.C   783.150  5000.000    121.63468 1    Chase (1985)
 1.89717510E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.22611740E+05-9.96605010E+01 1.89717510E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.22611740E+05-9.96605010E+01 0.00000000E+00    4
SrS(s)             J 9/77SR 1.S  1.   0.   0.C   300.000  3000.000    119.68600 1    Chase (1985)
 5.94054630E+00 1.04473280E-03-3.07943920E-07 9.71985450E-11-1.11296850E-14    2
-5.82547290E+04-2.60999610E+01 5.74442320E+00-2.03636100E-03 1.19833400E-05    3
-1.48896430E-08 5.96164430E-12-5.80629980E+04-2.43073180E+01-5.63615462E+04    4
Ta(cr)             J12/72TA 1.   0.   0.   0.C   200.000  3258.000    180.94790 1    McBride (1993)
 2.89594963E+00 5.33759133E-04-3.59144721E-08-7.20761461E-11 3.13302008E-14    2
-8.71255826E+02-1.16440280E+01 2.32998499E+00 4.45028402E-03-9.52242819E-06    3
 9.87829159E-09-3.78308406E-12-8.26091467E+02-9.27093646E+00 0.00000000E+00    4
Ta(L)              J12/72TA 1.   0.   0.   0.C  3258.000  6000.000    180.94790 1    McBride (1993)
 5.03216666E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-7.44223758E+02-2.59736577E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
TaC(s)             J12/73TA 1.C  1.   0.   0.C   300.000  4273.000    192.95890 1    Chase (1985)
 5.00270560E+00 1.28490410E-03-1.74959390E-07 3.52455810E-11-2.64292600E-15    2
-1.90205530E+04-2.41296910E+01 1.02497170E+00 1.76286200E-02-2.55158590E-05    3
 1.73133080E-08-4.30578580E-12-1.82265970E+04-5.00931270E+00-1.73307143E+04    4
TaC(L)             J12/73TA 1.C  1.   0.   0.C  4273.000  5000.000    192.95890 1    Chase (1985)
 8.05167150E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.01033380E+04-4.20855450E+01 8.05167150E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.01033380E+04-4.20855450E+01 0.00000000E+00    4
Ta2O5(s)           J12/72TA 2.0  5.   0.   0.C   300.000  2058.000    441.89280 1    Chase (1985)
 1.84736840E+01 3.49024330E-03 9.11565840E-07-1.15082870E-09 2.47020600E-13    2
-2.52459110E+05-9.07334910E+01 1.01199420E+01 2.55375590E-02-1.68473510E-05    3
 3.47340780E-11 3.12680110E-12-2.50081740E+05-4.73108770E+01-2.46076715E+05    4
Ta2O5(L)           J12/72TA 2.0  5.   0.   0.C  2058.000  5000.000    441.89280 1    Chase (1985)
 2.91873090E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.53362450E+05-1.58577740E+02 2.91873090E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.53362450E+05-1.58577740E+02 0.00000000E+00    4
Ti(a)              CODA89TI 1.   0.   0.   0.C   200.000  1156.000     47.88000 1    McBride (1993)
 2.97967171E+01-5.67369024E-02 3.08487350E-05 0.00000000E+00 0.00000000E+00    2
-9.27557025E+03-1.56730793E+02 1.32829640E+00 1.04776117E-02-2.19816539E-05    3
 2.17463998E-08-7.66060428E-12-7.06881044E+02-6.19722912E+00 0.00000000E+00    4
Ti(b)              CODA89TI 1.   0.   0.   0.C  1156.000  1944.000     47.88000 1    McBride (1993)
 4.55059938E+00-5.78446834E-03 6.58428776E-06-2.60523484E-09 4.06930218E-13    2
-1.86695724E+02-1.97953040E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
Ti(L)              CODA89TI 1.   0.   0.   0.C  1944.000  6000.000     47.88000 1    McBride (1993)
 5.62871414E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.37509598E+03-3.07872691E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
TiC(s)             J 6/68TI 1.C  1.   0.   0.C   300.000  3290.000     59.89100 1    Chase (1985)
 5.94139360E+00-3.72799670E-04 7.12099530E-07-1.35170900E-10 9.98036600E-15    2
-2.41734150E+04-3.15302220E+01-1.36339420E+00 2.82522370E-02-4.11752110E-05    3
 2.67888180E-08-6.34698680E-12-2.26783520E+04 3.86264830E+00-2.21429614E+04    4
TiC(L)             J 6/68TI 1.C  1.   0.   0.C  3290.000  5000.000     59.89100 1    Chase (1985)
 7.54844110E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.76602040E+04-4.06296610E+01 7.54844210E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.76602040E+04-4.06296610E+01 0.00000000E+00    4
TiCL2(s)           J12/68TI 1.CL 2.   0.   0.C   300.000  2000.000    118.78540 1    Chase (1985)
 7.96841470E+00 2.54479250E-03-2.86481190E-07 1.31878060E-10-2.22708260E-14    2
-6.45084420E+04-3.57130890E+01 5.75675180E+00 1.36310330E-02-2.04162290E-05    3
 1.59098830E-08-4.54511040E-12-6.41699180E+04-2.55854560E+01-6.19987670E+04    4
TiCL3(s)           J 6/68TI 1.CL 3.   0.   0.C   300.000  5000.000    154.23810 1    Chase (1985)
 1.14626530E+01 1.40178060E-03-3.06897240E-08 1.23390070E-13-1.05612980E-17    2
-9.03169630E+04-4.89930780E+01 1.09379360E+01 2.66227360E-03-1.47859230E-07    3
-1.54067680E-09 9.22187740E-13-9.01826680E+04-4.62872870E+01-8.68071084E+04    4
TiCL4(L)           J12/67TI 1.CL 4.   0.   0.C   300.000  5000.000    189.69080 1    Chase (1985)
 1.71426480E+01 1.09370870E-03-1.06903110E-09 2.66167570E-13-2.27944800E-17    2
-1.01880270E+05-6.76401420E+01 1.70660420E+01 1.57771680E-03-1.08703760E-06    3
 1.03903080E-09-3.60225300E-13-1.01871340E+05-6.73082280E+01-9.67206958E+04    4
TiN(s)             J 6/68TI 1.N  1.   0.   0.C   300.000  3220.000     61.88674 1    Chase (1985)
 5.60100500E+00 3.56459390E-04 3.95218030E-07-8.87180020E-11 7.78445130E-15    2
-4.24434310E+04-2.87732930E+01-2.53201190E+00 4.11748560E-02-7.70557760E-05    3
 6.52898690E-08-2.06051870E-11-4.11246660E+04 8.67507960E+00-4.06109779E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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TiN(L)              J 6/68TI 1.N  1.   0.   0.C  3220.000  5000.000     61.88674 1   Chase (1985)
 7.54844210E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-3.62617090E+04-3.95839060E+01 7.54844210E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-3.62617090E+04-3.95839060E+01 0.00000000E+00    4
TiO(a)              J12/73TI 1.0  1.   0.   0.C   300.000  1265.000     63.87940 1   Chase (1985)
 2.65167850E+00 7.99632030E-03-4.95528280E-06 1.41288420E-09 0.00000000E+00    2
-6.62883610E+04-1.29187030E+01 8.98095640E-01 2.13543830E-02-3.58428730E-05    3
 3.04081570E-08-9.71216350E-12-6.62243320E+04-5.95670040E+00-6.52685922E+04    4
TiO(b)              J12/73TI 1.0  1.   0.   0.C  1265.000  2023.000     63.87940 1   Chase (1985)
 1.79714190E+00 1.01288630E-02-7.45855710E-06 3.08358150E-09-4.75617470E-13    2
-6.54827730E+04-7.93491750E+00 1.79714190E+00 1.01288630E-02-7.45855710E-06    3
 3.08358150E-09-4.75617470E-13-6.54827730E+04-7.93491750E+00 0.00000000E+00    4
TiO(L)              J12/73TI 1.0  1.   0.   0.C  2023.000  5000.000     63.87940 1   Chase (1985)
 8.05167150E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-6.32721380E+04-4.13121090E+01 8.05167150E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-6.32721380E+04-4.13121090E+01 0.00000000E+00    4
TiO2(ru)            J12/73TI 1.0  2.   0.   0.C   300.000  2130.000     79.87880 1   Chase (1985)
 6.84891510E+00 4.24634610E-03-3.00889840E-06 1.06025190E-09-1.43795970E-13    2
-1.15992460E+05-3.45141060E+01-1.61175170E-01 3.79666600E-02-6.51547500E-05    3
 5.25521360E-08-1.62000510E-11-1.14788970E+05-1.88740350E+00-1.13628959E+05    4
TiO2(L)             J12/73TI 1.0  2.   0.   0.C  2130.000  5000.000     79.87880 1   Chase (1985)
 1.20775070E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.14942300E+05-6.59107590E+01 1.20775070E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.14942300E+05-6.59107590E+01 0.00000000E+00    4
Ti203(1)            J 6/73TI 2.0  3.   0.   0.C   300.000   470.000    143.75820 1   Chase (1985)
 1.46235420E+01-3.71617170E-02 9.00264700E-05 0.00000000E+00 0.00000000E+00    2
-1.86416930E+05-6.69148990E+01 1.46235420E+01-3.71617170E-02 9.00264700E-05    3
 0.00000000E+00 0.00000000E+00-1.86416930E+05-6.69148990E+01-1.82913296E+05    4
Ti203(2)            J 6/73TI 2.0  3.   0.   0.C   470.000  2115.000    143.75820 1   Chase (1985)
 1.48742220E+01 4.54656950E-03-2.36463630E-06 5.99603920E-10-5.34142600E-14    2
-1.87973420E+05-7.78631650E+01 1.69774850E+00 5.71374340E-02-8.33206810E-05    3
 5.72995280E-08-1.52116850E-11-1.85250360E+05-1.40665590E+01 0.00000000E+00    4
Ti203(L)            J 6/73TI 2.0  3.   0.   0.C  2115.000  5000.000    143.75820 1   Chase (1985)
 1.88711050E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.78586980E+05-9.65672570E+01 1.88711050E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.78586980E+05-9.65672570E+01 0.00000000E+00    4
Ti305(a)            J12/73TI 3.0  5.   0.   0.C   300.000   450.000    223.63700 1   Chase (1985)
-3.73374340E+00 1.06193190E-01-1.04723810E-04 0.00000000E+00 0.00000000E+00    2
-2.98456170E+05 9.82410160E+00-3.73374340E+00 1.06193190E-01-1.04723810E-04    3
 0.00000000E+00 0.00000000E+00-2.98456170E+05 9.82410160E+00-2.95774633E+05    4
Ti305(b)            J12/73TI 3.0  5.   0.   0.C   450.000  2050.000    223.63700 1   Chase (1985)
 1.84151590E+01 8.00131020E-03-1.99070560E-06 8.78123970E-10-1.42452750E-13    2
-2.99986840E+05-8.81354790E+01 1.86928170E+01 8.50510620E-03-5.12462080E-06    3
 4.61198750E-09-1.52385570E-12-3.00128950E+05-8.98895860E+01 0.00000000E+00    4
Ti305(L)            J12/73TI 3.0  5.   0.   0.C  2050.000  5000.000    223.63700 1   Chase (1985)
 3.22066860E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-2.93685410E+05-1.69127030E+02 3.22066860E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-2.93685410E+05-1.69127030E+02 0.00000000E+00    4
Ti407(s)            J12/73TI 4.0  7.   0.   0.C   300.000  1950.000    303.51580 1   Chase (1985)
 2.41129150E+01 2.29277140E-02-1.71191630E-05 6.48492060E-09-9.48838110E-13    2
-4.18107160E+05-1.21046500E+02-8.63335600E-01 1.41604620E-01-2.32423050E-04    3
 1.81940730E-07-5.48014130E-11-4.13794840E+05-4.56375800E+00-4.09478128E+05    4
Ti407(L)            J12/73TI 4.0  7.   0.   0.C  1950.000  5000.000    303.51580 1   Chase (1985)
 4.42841940E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-4.10896730E+05-2.35160430E+02 4.42841940E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-4.10896730E+05-2.35160430E+02 0.00000000E+00    4
V(cr)               J 6/73V  1.   0.   0.   0.C   200.000  2190.000     50.94150 1   McBride (1993)
 4.48215589E+00-4.25728053E-03 5.38325211E-06-2.42044016E-09 4.23981192E-13    2
-1.28420195E+03-2.12401625E+01 8.64273023E-01 1.40301270E-02-3.15228495E-05    3
 3.16728638E-08-1.14327459E-11-6.59969586E+02-4.48332268E+00 0.00000000E+00    4
V(L)                J 6/73V  1.   0.   0.   0.C  2190.000  6000.000     50.94150 1   McBride (1993)
 5.55703222E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.89958163E+03-3.07034308E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
VCL2(s)             L 2/76V  1.CL 2.   0.   0.C   300.000  1300.000    121.84690 1   Wagman (1971)
 6.27112160E+00 7.48900460E-03-5.25310000E-06 1.50673690E-09 0.00000000E+00    2   Wicks (1963)
-5.63580560E+04-2.57265380E+01 6.73955990E+00 1.04872230E-02-1.72267800E-05    3
 1.47688310E-08-4.75507060E-12-5.66988860E+04-2.92057040E+01-5.43486187E+04    4
VCL3(s)             L 2/76V  1.CL 3.   0.   0.C   300.000  1000.000    157.29960 1   Wagman (1971)
 6.97704130E+00 2.35420110E-02-4.07452720E-05 3.49284830E-08-1.12449000E-11    2   Wicks (1963)
-7.26781690E+04-2.94937120E+01 6.97704130E+00 2.35420110E-02-4.07452720E-05    3
 3.49284830E-08-1.12449000E-11-7.26781690E+04-2.94937120E+01-6.98478613E+04    4
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TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Continued)

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VCL4(L)           L 2/76V  1.CL 4.   0.   0.C   300.000  2000.000     192.75230 1   Wagman (1971)
 1.74620630E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2   Wicks (1963)
-7.36958450E+04-6.87947920E+01 1.74620630E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-7.36958450E+04-6.87947920E+01-6.84895309E+04    4
VN(s)             J12/73V  1.N  1.   0.   0.C   300.000  3500.000      64.94824 1   Chase (1985)
 4.83687400E+00 1.89001470E-03-3.16104630E-07 4.60506600E-11-1.91020370E-15    2
-2.77381520E+04-2.38733530E+01 8.12713570E-01 2.01010430E-02-3.11780040E-05    3
 2.31036890E-08-6.38451440E-12-2.70200940E+04-4.94574360E+00-2.61171678E+04    4
VO(s)             J12/73V  1.O  1.   0.   0.C   300.000  2063.000      66.94090 1   Chase (1985)
 5.33987150E+00 1.75917030E-03 3.84776170E-07-2.61824710E-10 5.10093950E-14    2
-5.36513790E+04-2.63823640E+01 2.53804010E+00 1.64470780E-02-2.85598100E-05    3
 2.48363920E-08-7.98869480E-12-5.32119190E+04-1.35997580E+01-5.19311959E+04    4
VO(L)             J12/73V  1.O  1.   0.   0.C  2063.000  5000.000      66.94090 1   Chase (1985)
 7.54844210E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-4.76004740E+04-3.61542130E+01 7.54844210E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-4.76004740E+04-3.61542130E+01 0.00000000E+00    4
V203(s)           J12/73V  2.0  3.   0.   0.C   300.000  2340.000     149.88120 1   Chase (1985)
 1.39642110E+01 1.68712980E-03 1.13712060E-06-2.08060070E-10 1.00283250E-14    2
-1.51005750E+05-6.87828940E+01 2.28770330E+00 5.76327630E-02-9.67385560E-05    3
 7.40669160E-08-2.06583890E-11-1.49111890E+05-1.47234460E+01-1.46586278E+05    4
V203(L)           J12/73V  2.0  3.   0.   0.C  2340.000  5000.000     149.88120 1   Chase (1985)
 1.88711050E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.40340630E+05-9.45809200E+01 1.88711050E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.40340630E+05-9.45809200E+01 0.00000000E+00    4
V204(1)           J 6/73V  2.0  4.   0.   0.C   300.000   340.000     165.88060 1   Chase (1985)
 6.89145420E+00 9.91420220E-03 5.78371010E-05 4.30539190E-08-2.84826940E-10    2
-1.74608640E+05-3.21573580E+01 6.89145420E+00 9.91420220E-03 5.78371010E-05    3
 4.30539190E-08-2.84826940E-10-1.74608640E+05-3.21573580E+01-1.71651493E+05    4
V204(2)           J 6/73V  2.0  4.   0.   0.C   340.000  1818.000     165.88060 1   Chase (1985)
 1.66102560E+01 2.33294190E-03 9.89047860E-07-7.50324960E-10 1.61354610E-13    2
-1.76073890E+05-8.08319970E+01 4.90036240E+00 5.00269520E-02-7.13163320E-05    3
 4.65155670E-08-1.07832680E-11-1.73736760E+05-2.45033750E+01 0.00000000E+00    4
V204(L)           J 6/73V  2.0  4.   0.   0.C  1818.000  5000.000     165.88060 1   Chase (1985)
 2.56647030E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.74630090E+05-1.36559400E+02 2.56647030E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.74630090E+05-1.36559400E+02 0.00000000E+00    4
V205(s)           J 6/73V  2.0  5.   0.   0.C   300.000   943.000     181.88000 1   Chase (1985)
-1.16403600E+00 9.35358840E-02-1.56750970E-04 1.22235240E-07-3.57388450E-11    2
-1.89145 .0E+05 4.07227530E-01-1.16403600E+00 9.35358840E-02-1.56750970E-04    3
 1.22235240E-07-3.57388450E-11-1.89145310E+05 4.07227530E-01-1.86495188E+05    4
V205(L)           J 6/73V  2.0  5.   0.   0.C   943.000  5000.000     181.88000 1   Chase (1985)
 2.29472640E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.87514470E+05-1.10892770E+02 2.29472640E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.87514470E+05-1.10892770E+02 0.00000000E+00    4
Zn(cr)            CODA89ZN 1.   0.   0.   0.C   200.000   692.730      65.39000 1   McBride (1993)
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 1.85068929E+00 9.17791410E-03-2.61047009E-05    3
 3.38568767E-08-1.39430709E-11-7.89403133E+02-7.38526333E+00 0.00000000E+00    4
Zn(L)             CODA89ZN 1.   0.   0.   0.C   692.730  6000.000      65.39000 1   McBride (1993)
 3.77653043E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-4.31695298E+02-1.56708437E+01 3.77653043E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-4.31695298E+02-1.56708437E+01 0.00000000E+00    4
ZnSO4(a)          J 3/79ZN 1.S  1.0  4.   0.C   300.000   540.000     161.45360 1   Chase (1985)
 5.16573640E+00 2.39773940E-02-3.07007440E-06-4.84501640E-09 0.00000000E+00    2
-1.20453590E+05-2.31053690E+01 5.16573640E+00 2.39773940E-02-3.07007440E-06    3
-4.84501640E-09 0.00000000E+00-1.20453590E+05-2.31053690E+01-1.17884403E+05    4
ZnSO4(a)          J 3/79ZN 1.S  1.0  4.   0.C   540.000  1013.000     161.45360 1   Chase (1985)
 1.58952590E+01 1.18409420E-03 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.22604330E+05-7.79153220E+01 1.55534950E+01 2.77373190E-03-3.80347210E-06    3
 4.08455430E-09-1.52895620E-12-1.22504900E+05-7.62216840E+01 0.00000000E+00    4
ZnSO4(b)          J 3/79ZN 1.S  1.0  4.   0.C  1013.000  5000.000     161.45360 1   Chase (1985)
 1.74618250E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.21138060E+05-8.51432530E+01 1.74618250E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.21138060E+05-8.51432530E+01 0.00000000E+00    4
Zr(a)             J 6/79ZR 1.   0.   0.   0.C   200.000  1135.000      91.22400 1   McBride (1993)
 2.28119546E+00 1.46971684E-03-1.04657616E-08 0.00000000E+00 0.00000000E+00    2
-6.61803147E+02-8.57377198E+00 2.18288840E+00 5.42886393E-03-1.21463952E-05    3
 1.31132729E-08-4.83818355E-12-8.08441355E+02-8.94741836E+00 0.00000000E+00    4
Zr(b)             J 6/79ZR 1.   0.   0.   0.C  1135.000  2125.000      91.22400 1   McBride (1993)
 4.06876245E+00-1.58489721E-03 1.02995129E-06-1.55767557E-10 2.30284611E-14    2
-6.91172261E+02-1.78593403E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
```

TABLE II. - THERMODYNAMIC DATA COEFFICIENTS (Concluded)

```
Zr(L)             J 6/79ZR 1.   0.   0.   0.C  2125.000  6000.000     91.22400 1   McBride (1993)
 5.03216666E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.10084626E+03-2.54797587E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    4
ZrN(s)            J 6/61ZR 1.N  1.   0.   0.C   300.000  3225.000    105.23074 1   Chase (1985)
 5.54078200E+00 6.18393530E-04 2.95421100E-07-1.17843110E-10 1.52414300E-14    2
-4.57513240E+04-2.74206540E+01 2.85562900E+00 8.61669700E-03-5.34866380E-06    3
-2.88042190E-09 3.10878490E-12-4.51120200E+04-1.39010690E+01-4.39291087E+04    4
ZrN(L)            J 6/61ZR 1.N  1.   0.   0.C  3225.000  5000.000    105.23074 1   Chase (1985)
 7.04511640E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-3.81055270E+04-3.44362640E+01 7.04511640E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-3.81055270E+04-3.44362640E+01 0.00000000E+00    4
ZrO2(a)           J12/65ZR 1.O  2.   0.   0.C   300.000  1478.000    123.22280 1   Chase (1985)
-2.21443950E+01 9.96397630E-02-1.20066880E-04 6.46867360E-08-1.30048810E-11    2
-1.27327970E+05 1.11008910E+02-7.95371060E-01 4.39334580E-02-8.12144440E-05    3
 6.95676480E-08-2.23809470E-11-1.33119670E+05 5.32210090E-01-1.31994717E+05    4
ZrO2(b)           J12/65ZR 1.O  2.   0.   0.C  1478.000  2950.000    123.22280 1   Chase (1985)
 8.95736290E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.34143540E+05-4.52740170E+01 8.95736290E+00 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.34143540E+05-4.52740170E+01 0.00000000E+00    4
ZrO2(L)           J12/65ZR 1.O  2.   0.   0.C  2950.000  5000.000    123.22280 1   Chase (1985)
 1.05676750E+01 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-1.28427450E+05-5.45922640E+01 1.05676750E+01 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-1.28427450E+05-5.45922640E+01 0.00000000E+00    4
```

TABLE III. – FORMAT FOR TRANSPORT PROPERTY DATA IN TABLE IV

Record	Contents	Format	Columns
[a]1	Species name	A15	1–15
	Second species name if binary interaction (blank for pure species)	A15	17–31
	V if there are viscosity coefficients	A1	35
	Temperature intervals for viscosity (0, 1, 2, or 3)	I1	36
	C if there are thermal conductivity coefficients	A1	37
	Temperature intervals for thermal conductivity (0, 1, 2, or 3)	I1	38
	Comments (references, date, etc.)	A40	41–80
[b]Any number from 1 to 6	V if coefficients are for viscosity	A1	2
	C if coefficients are for thermal conductivity	A1	2
	First and last temperature of temperature interval	2F9.2	3–20
	Four coefficients in equations below[c]	4E15.8	21–80

[a]Header record for each pure species or binary interaction.

[b]The number of records for each pure species or binary interaction equals the sum of the number of temperature intervals for both viscosity and thermal conductivity (sum of the numbers in columns 36 and 38 of the header record). Temperature intervals must be in increasing order. Viscosity or thermal conductivity order is immaterial. Any number of species is permitted between the first record (TRAN) and the last record (LAST).

[c]Empirical equations

$$\left.\begin{array}{ll} \text{Viscosity:} & \ln \eta \\ \text{Thermal conductivity:} & \ln \lambda \\ \text{Interaction parameter:} & \ln \eta_{ij} \end{array}\right\} = A \ln T + \frac{B}{T} + \frac{C}{T^2} + D$$

TABLE IV. - TRANSPORT PROPERTY COEFFICIENTS

```
AL                                   V2C2  GORDON; NASA TM 86885, OCT 1984
 V  300.000 1000.000 0.10752557E 01 0.19889058E 03-0.12117144E 05-0.21520631E 01
 V 1000.000 5000.000 0.71350606E 00-0.11856849E 04 0.54275069E 06 0.11828645E 01
 C  300.000 1000.000 0.10752525E 01 0.19888814E 03-0.12116940E 05-0.20074452E 01
 C 1000.000 5000.000 0.71350537E 00-0.11856885E 04 0.54275195E 06 0.13274647E 01
ALCL                                 V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.10793661E 01 0.29479492E 02 0.34836606E 04-0.16604981E 01
 V 1000.000 5000.000 0.56571504E 00-0.61915065E 03 0.84747061E 05 0.24526497E 01
 C  300.000 1000.000 0.98944147E 00-0.77767293E 02 0.95232979E 04-0.10951633E 01
 C 1000.000 5000.000 0.92919002E 00 0.55439951E 03-0.38427598E 06-0.92595436E 00
ALCL3                                V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.61229102E 00-0.28594038E 03 0.23454551E 05 0.18075879E 01
 V 1000.000 5000.000 0.60709246E 00-0.18319762E 03-0.26432110E 05 0.17893156E 01
 C  300.000 1000.000 0.53927315E 00-0.37682451E 03 0.24912742E 05 0.22191800E 01
 C 1000.000 5000.000 0.62289726E 00-0.17219458E 03-0.37837236E 05 0.14991020E 01
ALF                                  V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.70972961E 00-0.23988833E 03 0.21750838E 05 0.14759560E 01
 V 1000.000 5000.000 0.59844567E 00-0.25576271E 03-0.15698332E 05 0.22953071E 01
 C  300.000 1000.000 0.63982862E 00-0.36200317E 03 0.28935026E 05 0.22035161E 01
 C 1000.000 5000.000 0.82926601E 00 0.45857946E 03-0.31619957E 06 0.41287174E 00
ALF3                                 V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11831354E 01 0.21280115E 03-0.12068067E 05-0.30756164E 01
 V 1000.000 5000.000 0.54224957E 00-0.14154382E 04 0.50196098E 06 0.24678661E 01
 C  300.000 1000.000 0.10540002E 01-0.44281890E 02 0.42266524E 04-0.16746411E 01
 C 1000.000 5000.000 0.58015647E 00-0.12078108E 04 0.36246719E 06 0.24043768E 01
ALN                                  V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.10849637E 01 0.20278915E 03-0.12402095E 05-0.24794937E 01
 V 1000.000 5000.000 0.69622507E 00-0.12321802E 04 0.55392960E 06 0.10806617E 01
 C  300.000 1000.000 0.10626080E 01 0.97231206E 02-0.53995714E 04-0.19781162E 01
 C 1000.000 5000.000 0.89077352E 00-0.61169788E 03 0.27138370E 06-0.35678171E 00
ALO                                  V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.69358489E 00-0.24813626E 03 0.22090563E 05 0.15357661E 01
 V 1000.000 5000.000 0.59975079E 00-0.24369049E 03-0.17675810E 05 0.22167865E 01
 C  300.000 1000.000 0.75594793E 00-0.29882464E 03 0.25091437E 05 0.13546324E 01
 C 1000.000 5000.000-0.47126491E-01-0.28647802E 04 0.89987333E 06 0.85957812E 01
ALS                                  V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.12012329E 01 0.19184294E 03-0.98258862E 04-0.30235495E 01
 V 1000.000 5000.000 0.52866648E 00-0.12292746E 04 0.37191904E 06 0.26616528E 01
 C  300.000 1000.000 0.11325357E 01 0.70872529E 02-0.22176598E 04-0.25403064E 01
 C 1000.000 5000.000 0.61366770E 00-0.10019288E 04 0.27882881E 06 0.18352128E 01
AL2                                  V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.10752585E 01 0.19889302E 03-0.12117352E 05-0.20094402E 01
 V 1000.000 5000.000 0.71350386E 00-0.11856946E 04 0.54275505E 06 0.13255298E 01
 C  300.000 1000.000 0.70514534E 00-0.10865958E 03 0.51395343E 04 0.91199110E 00
 C 1000.000 5000.000 0.10656803E 01-0.22547576E 03 0.25027281E 06-0.16990424E 01
Ar                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.57067551E 00-0.95117331E 02 0.20896403E 04 0.24718808E 01
 V 1000.000 5000.000 0.65601183E 00 0.51780497E 02-0.33046713E 05 0.17711406E 01
 C  300.000 1000.000 0.56758528E 00-0.10015251E 03 0.25736598E 04 0.22537407E 01
 C 1000.000 5000.000 0.64275516E 00 0.14112909E 02-0.20639082E 05 0.16440096E 01
B                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.10153085E 01 0.18260457E 03-0.11403408E 05-0.19379621E 01
 V 1000.000 5000.000 0.86554514E 00-0.70329297E 03 0.39418000E 06-0.41699586E 00
 C  300.000 1000.000 0.10153123E 01 0.18260767E 03-0.11403675E 05-0.87871718E 00
 C 1000.000 5000.000 0.86554464E 00-0.70329657E 03 0.39418227E 06 0.64228265E 00
```

TABLE IV. - TRANSPORT PROPERTY COEFFICIENTS (Continued)

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BCL                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11283769E 01 0.76450365E 02-0.17748945E 03-0.20908397E 01
 V 1000.000 5000.000 0.55841030E 00-0.71462960E 03 0.11967028E 06 0.25150686E 01
 C  300.000 1000.000 0.10113718E 01-0.10847549E 03 0.13713948E 05-0.98482715E 00
 C 1000.000 5000.000 0.62710414E 00-0.57941570E 03 0.62190303E 05 0.20887250E 01
BCL2                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.87089983E 00-0.13565485E 03 0.15230166E 05-0.11573987E 00
 V 1000.000 5000.000 0.58601275E 00-0.37609219E 03 0.11838942E 05 0.20922105E 01
 C  300.000 1000.000 0.67455285E 00-0.36896292E 03 0.29473134E 05 0.14166908E 01
 C 1000.000 5000.000 0.76222128E 00 0.47341934E 02-0.13582232E 06 0.55755257E 00
BCL3                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.53015087E 00-0.26981248E 03 0.17868859E 05 0.23991533E 01
 V 1000.000 5000.000 0.63300765E 00-0.35473626E 02-0.54027717E 05 0.15256305E 01
 C  300.000 1000.000 0.40446349E 00-0.49037555E 03 0.31588434E 05 0.33981223E 01
 C 1000.000 5000.000 0.62298372E 00-0.12917747E 03-0.47559225E 05 0.16059997E 01
BF                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.77979668E 00-0.19815853E 03 0.19395356E 05 0.87157543E 00
 V 1000.000 5000.000 0.59314912E 00-0.30647190E 03-0.57059710E 04 0.22908893E 01
 C  300.000 1000.000 0.86312103E 00-0.26058933E 03 0.27303459E 05 0.87690595E 00
 C 1000.000 5000.000 0.64385946E 00-0.24050628E 03-0.71374225E 05 0.24629533E 01
BF2                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.55593630E 00-0.29101131E 03 0.21583886E 05 0.24931700E 01
 V 1000.000 5000.000 0.61886303E 00-0.10901231E 03-0.39210436E 05 0.19364888E 01
 C  300.000 1000.000 0.48805271E 00-0.51770789E 03 0.38891125E 05 0.36081784E 01
 C 1000.000 5000.000 0.75004594E 00 0.26148665E 03-0.23265358E 06 0.12857610E 01
BF3                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.56564222E 00-0.12499270E 03 0.34882520E 04 0.22864247E 01
 V 1000.000 5000.000 0.65392366E 00 0.43786564E 02-0.38984840E 05 0.15506732E 01
 C  300.000 1000.000 0.87131899E 00 0.17223247E 03-0.30597035E 05 0.45588089E-01
 C 1000.000 5000.000 0.87131899E 00 0.17223247E 03-0.30597035E 05 0.45588089E-01
BO                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.75873244E 00-0.21164516E 03 0.20242897E 05 0.94865379E 00
 V 1000.000 5000.000 0.59469665E 00-0.29150656E 03-0.89452363E 04 0.21875876E 01
 C  300.000 1000.000 0.10254991E 01-0.11637386E 03 0.16280741E 05-0.39149427E 00
 C 1000.000 5000.000 0.72161172E 00 0.37402510E 02-0.20826150E 06 0.17684961E 01
B2                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.10153036E 01 0.18259970E 03-0.11402951E 05-0.17237353E 01
 V 1000.000 5000.000 0.86554075E 00-0.70331451E 03 0.39419142E 06-0.20276677E 00
 C  300.000 1000.000 0.64386787E 00-0.27034707E 03 0.24539000E 05 0.22169204E 01
 C 1000.000 5000.000 0.10444757E 01-0.63405901E 02 0.14581458E 06-0.87637083E 00
B2O3                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11524128E 01 0.21138490E 03-0.12280476E 05-0.29978787E 01
 V 1000.000 5000.000 0.57258110E 00-0.14520945E 04 0.55888628E 06 0.21035665E 01
 C  300.000 1000.000 0.12164024E 01 0.11057804E 02 0.26511337E 04-0.26257982E 01
 C 1000.000 5000.000 0.57952095E 00-0.13857006E 04 0.40348741E 06 0.27690891E 01
Be                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.99075722E 00 0.17478908E 03-0.10979581E 05-0.21702237E 01
 V 1000.000 5000.000 0.92818726E 00-0.47846807E 03 0.31682660E 06-0.14069833E 01
 C  300.000 1000.000 0.99075881E 00 0.17479061E 03-0.10979729E 05-0.92906799E 00
 C 1000.000 5000.000 0.92818917E 00-0.47845983E 03 0.31682272E 06-0.16583283E 00
BeBr2                                  V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.10815738E 01 0.31488250E 02 0.33342410E 04-0.15195904E 01
 V 1000.000 5000.000 0.56544582E 00-0.62294767E 03 0.86024179E 05 0.26150470E 01
 C  300.000 1000.000 0.94702722E 00-0.15100815E 03 0.15732058E 05-0.11155243E 01
 C 1000.000 5000.000 0.57495517E 00-0.61043946E 03 0.69935770E 05 0.18565556E 01
```

TABLE IV. - TRANSPORT PROPERTY COEFFICIENTS (Continued)

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BeCL                                V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11433037E 01 0.92214926E 02-0.13964883E 04-0.23862858E 01
 V 1000.000 5000.000 0.55460242E 00-0.76038750E 03 0.13823757E 06 0.23908447E 01
 C  300.000 1000.000 0.10287535E 01-0.91837616E 02 0.12470591E 05-0.12586174E 01
 C 1000.000 5000.000 0.66547171E 00-0.46614122E 03 0.13999294E 05 0.16193002E 01
BeCL2                               V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.10815721E 01 0.31486702E 02 0.33343869E 04-0.18620786E 01
 V 1000.000 5000.000 0.56544694E 00-0.62294279E 03 0.86021580E 05 0.22725350E 01
 C  300.000 1000.000 0.93114692E 00-0.18207640E 03 0.18669890E 05-0.57868449E 00
 C 1000.000 5000.000 0.57052913E 00-0.63004493E 03 0.72778110E 05 0.23029490E 01
BeF                                 V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.81333746E 00-0.17569939E 03 0.17918421E 05 0.41468512E 00
 V 1000.000 5000.000 0.59065127E 00-0.33067146E 03-0.10867531E 02 0.21222036E 01
 C  300.000 1000.000 0.83317386E 00-0.28303483E 03 0.28482478E 05 0.97318830E 00
 C 1000.000 5000.000 0.66542344E 00-0.17486307E 03-0.94979537E 05 0.21402360E 01
BeF2                                V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11930485E 01 0.15435989E 03-0.64969004E 04-0.27919358E 01
 V 1000.000 5000.000 0.53625212E 00-0.99126199E 03 0.24371524E 06 0.26390016E 01
 C  300.000 1000.000 0.10992600E 01-0.78243423E 02 0.11248031E 05-0.13752526E 01
 C 1000.000 5000.000 0.54043845E 00-0.99264666E 03 0.20319019E 06 0.32042915E 01
BeI2                                V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11253994E 01 0.73434325E 02 0.56310693E 02-0.19974264E 01
 V 1000.000 5000.000 0.55902352E 00-0.70706379E 03 0.11670325E 06 0.25762970E 01
 C  300.000 1000.000 0.99072683E 00-0.98254204E 02 0.11664040E 05-0.20375965E 01
 C 1000.000 5000.000 0.56811948E 00-0.69344488E 03 0.10786410E 06 0.13777955E 01
Br                                  V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.54702688E 00-0.17637941E 03 0.77307478E 04 0.27597117E 01
 V 1000.000 5000.000 0.65298898E 00 0.49470753E 02-0.58185528E 05 0.18678659E 01
 C  300.000 1000.000 0.54702794E 00-0.17637848E 03 0.77306607E 04 0.18186229E 01
 C 1000.000 5000.000 0.65298973E 00 0.49472426E 02-0.58185715E 05 0.92677855E 00
Br2                                 V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.62157718E 00-0.28211824E 03 0.23352028E 05 0.21557562E 01
 V 1000.000 5000.000 0.60608156E 00-0.19067023E 03-0.25347251E 05 0.22185948E 01
 C  300.000 1000.000 0.60932991E 00-0.30191532E 03 0.23211009E 05 0.11628217E 01
 C 1000.000 5000.000 0.68777571E 00-0.32848855E 02-0.74477067E 05 0.44844691E 00
C                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.75778612E 00 0.10029848E 02-0.34350072E 03 0.48138451E 00
 V 1000.000 5000.000 0.78673253E 00 0.11075074E 03-0.42007548E 05 0.22250861E 00
 C  300.000 1000.000 0.75958919E 00 0.11690326E 02-0.52227847E 03 0.14214785E 01
 C 1000.000 5000.000 0.78674028E 00 0.11079284E 03-0.42032506E 05 0.11763579E 01
CCL                                 V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.57655234E 00-0.96628216E 02 0.17409200E 04 0.20958373E 01
 V 1000.000 5000.000 0.65188500E 00 0.28700760E 02-0.23880346E 05 0.14760977E 01
 C  300.000 1000.000 0.54729233E 00-0.20448099E 03 0.10622264E 05 0.24972163E 01
 C 1000.000 5000.000 0.83466538E 00 0.55431206E 03-0.24998561E 06 0.10838079E-01
CCL2                                V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.55724714E 00-0.14977389E 03 0.53618988E 04 0.22148823E 01
 V 1000.000 5000.000 0.65428700E 00 0.50778805E 02-0.50483365E 05 0.14000778E 01
 C  300.000 1000.000 0.65384740E 00-0.19801619E 03 0.59831307E 04 0.15755369E 01
 C 1000.000 5000.000 0.42859933E 00-0.33369305E 03-0.15971455E 06 0.34294957E 01
CCL2F2                              V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.53953452E 00-0.19563618E 03 0.95641709E 04 0.23064644E 01
 V 1000.000 5000.000 0.65111259E 00 0.43620390E 02-0.61378726E 05 0.13673282E 01
 C  300.000 1000.000 0.39138383E 00-0.47842100E 03 0.24982204E 05 0.37291240E 01
 C 1000.000 5000.000 0.63765919E 00-0.52612804E 02-0.77721526E 05 0.17034524E 01
 C  300.000 1000.000 0.38511892E 00-0.44496089E 03 0.26000413E 05 0.34754153E 01
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TABLE IV. - TRANSPORT PROPERTY COEFFICIENTS (Continued)

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CCL3                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.53353195E 00-0.21260474E 03 0.11243839E 05 0.23131174E 01
 V 1000.000 5000.000 0.64876429E 00 0.34886169E 02-0.62725110E 05 0.13434325E 01
 C 1000.000 5000.000 0.63447302E 00-0.64381891E 02-0.54003615E 05 0.14524436E 01
CCL3F                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.52919683E 00-0.26784349E 03 0.17589765E 05 0.23679496E 01
 V 1000.000 5000.000 0.63392510E 00-0.31038323E 02-0.54872898E 05 0.14796189E 01
 C  300.000 1000.000 0.40674422E 00-0.48444324E 03 0.27214677E 05 0.34373121E 01
 C 1000.000 5000.000 0.62699522E 00-0.11469915E 03-0.56090320E 05 0.16285785E 01
CCL4                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.52702958E 00-0.26107773E 03 0.16677986E 05 0.22643095E 01
 V 1000.000 5000.000 0.63673227E 00-0.17696067E 02-0.57319847E 05 0.13366395E 01
 C  300.000 1000.000 0.37319835E 00-0.48094791E 03 0.28654318E 05 0.34495056E 01
 C 1000.000 5000.000 0.62613733E 00-0.11484151E 03-0.40941433E 05 0.14063361E 01
CF                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.60838138E 00-0.35675635E 02-0.11133136E 04 0.19108330E 01
 V 1000.000 5000.000 0.64822928E 00 0.50801210E 01-0.39194754E 04 0.15979323E 01
 C  300.000 1000.000 0.69032820E 00-0.10472560E 03 0.77951218E 04 0.19069266E 01
 C 1000.000 5000.000 0.74287117E 00 0.22828479E 03-0.13320698E 06 0.13472818E 01
CF2                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.60112940E 00-0.47520431E 02-0.77996950E 03 0.20107893E 01
 V 1000.000 5000.000 0.64856892E 00 0.75188715E 01-0.61062289E 04 0.16335919E 01
 C  300.000 1000.000 0.51387097E 00-0.32792087E 03 0.21855506E 05 0.32864938E 01
 C 1000.000 5000.000 0.10264808E 01 0.11962118E 04-0.52804095E 06-0.12363563E 01
CF3                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.59522997E 00-0.58952176E 02-0.35007012E 03 0.20404508E 01
 V 1000.000 5000.000 0.64915060E 00 0.11271276E 02-0.92389547E 04 0.16068193E 01
 C  300.000 1000.000 0.44393088E 00-0.43173764E 03 0.26544418E 05 0.38522839E 01
 C 1000.000 5000.000 0.63989098E 00-0.54064277E 02-0.66106112E 05 0.22110418E 01
CF4                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.58875126E 00-0.71741283E 02 0.29157581E 03 0.20502421E 01
 V 1000.000 5000.000 0.64998118E 00 0.16492141E 02-0.13517918E 05 0.15530599E 01
 C  300.000 1000.000 0.39324764E 00-0.49266851E 03 0.27846245E 05 0.42192831E 01
 C 1000.000 5000.000 0.63984578E 00-0.53205056E 02-0.75511259E 05 0.21777695E 01
CH                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.63306702E 00-0.75491296E 01-0.21396736E 04 0.14781500E 01
 V 1000.000 5000.000 0.64807346E 00 0.31141665E 01-0.18292566E 04 0.13638041E 01
 C  300.000 1000.000 0.10884807E 01 0.27220319E 03-0.22480091E 05-0.64679028E 00
 C 1000.000 5000.000 0.44721563E 00-0.10513211E 04 0.28092259E 06 0.48038688E 01
CH3CL                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.53405720E 00-0.27557997E 03 0.18732367E 05 0.23540681E 01
 V 1000.000 5000.000 0.62996532E 00-0.50440636E 02-0.51067301E 05 0.15355845E 01
 C  300.000 1000.000 0.79071697E 00-0.50214675E 03 0.39887527E 05 0.15433822E 01
 C 1000.000 5000.000 0.54235542E 00-0.66642579E 03-0.18356783E 04 0.34590507E 01
CH3OH                                   V2C2  GORDON; NASA TM86885, OCT 1984. CH3OH
 V  300.000 1000.000 0.62326827E 00-0.28139531E 03 0.23329867E 05 0.17003401E 01
 V 1000.000 5000.000 0.60590993E 00-0.19198488E 03-0.25158890E 05 0.17778509E 01
 C  300.000 1000.000 0.10211686E 01-0.44472491E 03 0.41226364E 05 0.43413536E 00
 C 1000.000 5000.000 0.45440985E 00-0.11298018E 04 0.14206088E 06 0.49230571E 01
CH4                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.57388074E 00-0.98544160E 02 0.20012204E 04 0.17536015E 01
 V 1000.000 5000.000 0.65074534E 00 0.23936771E 02-0.22020183E 05 0.11244058E 01
 C  300.000 1000.000 0.11770360E 01-0.17422121E 03 0.22865563E 05-0.55146852E 00
 C 1000.000 5000.000 0.49214767E 00-0.91598343E 03 0.87265127E 05 0.48489412E 01
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TABLE IV. - TRANSPORT PROPERTY COEFFICIENTS (Continued)

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CN                                        V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.62544382E 00-0.15318186E 02-0.18288251E 04 0.16016921E 01
 V 1000.000 5000.000 0.64808436E 00 0.34533673E 01-0.22117730E 04 0.14272475E 01
 C  300.000 1000.000 0.94972662E 00 0.12435517E 03-0.88374423E 04-0.15377147E 00
 C 1000.000 5000.000 0.68082840E 00-0.90526823E 03 0.48574325E 06 0.22457778E 01
CO                                        V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.60443938E 00-0.43632704E 02-0.88441949E 03 0.18972150E 01
 V 1000.000 5000.000 0.65060585E 00 0.28517449E 02-0.16690236E 05 0.15223271E 01
 C  300.000 1000.000 0.83001480E 00 0.59139032E 02-0.98639405E 04 0.70962875E 00
 C 1000.000 5000.000 0.65030086E 00-0.15100725E 03-0.16723855E 05 0.21699139E 01
COS                                       V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.52969284E 00-0.26892616E 03 0.17742103E 05 0.25013200E 01
 V 1000.000 5000.000 0.63342607E 00-0.33447711E 02-0.54409462E 05 0.16208681E 01
 C  300.000 1000.000 0.57101414E 00-0.41050507E 03 0.26688182E 05 0.26183777E 01
 C 1000.000 5000.000 0.67257356E 00-0.89956888E 02-0.91877099E 05 0.17124897E 01
CO2                                       V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.54330318E 00-0.18823898E 03 0.88726567E 04 0.24499362E 01
 V 1000.000 5000.000 0.65318879E 00 0.51738759E 02-0.62834882E 05 0.15227045E 01
 C  300.000 1000.000 0.53726173E 00-0.49928331E 03 0.37397504E 05 0.32903619E 01
 C 1000.000 5000.000 0.66068182E 00-0.12741845E 03-0.81580328E 05 0.21817907E 01
CP                                        V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.55142210E 00-0.16522371E 03 0.67076536E 04 0.20562199E 01
 V 1000.000 5000.000 0.65372263E 00 0.51025907E 02-0.55485385E 05 0.11956174E 01
 C  300.000 1000.000 0.59035579E 00-0.26133699E 03 0.16965587E 05 0.20433882E 01
 C 1000.000 5000.000 0.67681979E 00 0.43561992E 02-0.90694254E 05 0.12456589E 01
CS                                        V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.56203230E 00-0.13600215E 03 0.42677153E 04 0.20800917E 01
 V 1000.000 5000.000 0.65429610E 00 0.47958932E 02-0.44621677E 05 0.13080095E 01
 C  300.000 1000.000 0.61122836E 00-0.22957023E 03 0.15067012E 05 0.19653352E 01
 C 1000.000 5000.000 0.86597093E 00 0.73832733E 03-0.37667638E 06-0.37818229E 00
CS2                                       V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.60692003E 00-0.28798698E 03 0.23491408E 05 0.18384461E 01
 V 1000.000 5000.000 0.60771682E 00-0.17867431E 03-0.27087634E 05 0.17729523E 01
 C  300.000 1000.000 0.60405741E 00-0.42146703E 03 0.30555828E 05 0.20552995E 01
 C 1000.000 5000.000 0.68099098E 00-0.77363827E 02-0.10329799E 06 0.13105042E 01
C2                                        V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.62126764E 00-0.19814414E 02-0.16506365E 04 0.15582169E 01
 V 1000.000 5000.000 0.64809340E 00 0.36749201E 01-0.24685282E 04 0.13505925E 01
 C  300.000 1000.000 0.11782197E 01 0.51596967E 03-0.42793543E 05-0.20201745E 01
 C 1000.000 5000.000 0.84536557E 00 0.16283010E 03-0.21960714E 05 0.60979956E 00
C2H2,acetylene                            V2C2  GORDON; NASA TM86885, OCT 1984. C2H2
 V  300.000 1000.000 0.54922881E 00-0.17078109E 03 0.72130467E 04 0.19955795E 01
 V 1000.000 5000.000 0.65338952E 00 0.50419792E 02-0.56910493E 05 0.11190694E 01
 C  300.000 1000.000 0.72408606E 00-0.27145126E 03 0.11112107E 05 0.21630756E 01
 C 1000.000 5000.000 0.65646287E 00-0.43191905E 03 0.24326887E 05 0.27779508E 01
C2H4                                      V2C2  GORDON; NASA TM86885, OCT 1984. C2H4
 V  300.000 1000.000 0.55243600E 00-0.16260917E 03 0.64734038E 04 0.19463233E 01
 V 1000.000 5000.000 0.65385054E 00 0.51157317E 02-0.54731184E 05 0.10933538E 01
 C  300.000 1000.000 0.77957663E 00-0.47857623E 03 0.32147858E 05 0.21827872E 01
 C 1000.000 5000.000 0.48277394E 00-0.91773465E 03 0.11528060E 06 0.45824405E 01
C2H6                                      V2C2  GORDON; NASA TM86885, OCT 1984. C2H6
 V  300.000 1000.000 0.55619461E 00-0.15265690E 03 0.56050805E 04 0.18241467E 01
 V 1000.000 5000.000 0.65422199E 00 0.51041684E 02-0.51534435E 05 0.10006480E 01
 C  300.000 1000.000 0.87089937E 00-0.45633731E 03 0.31766620E 05 0.16351124E 01
 C 1000.000 5000.000 0.47062424E 00-0.96911156E 03 0.10907459E 06 0.48272647E 01
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TABLE IV. - TRANSPORT PROPERTY COEFFICIENTS (Continued)

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C2H5OH                                  V2C2  GORDON; NASA TM86885, OCT 1984. C2H5OH
 V  300.000 1000.000 0.53896094E 00-0.28047594E 03 0.19533016E 05 0.21089755E 01
 V 1000.000 5000.000 0.62692259E 00-0.65829493E 02-0.47946575E 05 0.13535012E 01
 C  300.000 1000.000 0.71918262E 00-0.61788717E 03 0.45758562E 05 0.25917619E 01
 C 1000.000 5000.000 0.55479945E 01-0.26707561E 04 0.47694513E 07-0.33305380E 02
C2N2                                    V2C2  GORDON; NASA TM86885, OCT 1984. C2N2
 V  300.000 1000.000 0.53356050E 00-0.27497951E 03 0.18638758E 05 0.22893437E 01
 V 1000.000 5000.000 0.63030975E 00-0.48720171E 02-0.51418095E 05 0.14641935E 01
 C  300.000 1000.000 0.68867870E 00-0.32090493E 03 0.20848386E 05 0.19542675E 01
 C 1000.000 5000.000 0.58675888E 00-0.34787226E 03-0.19158252E 05 0.27229253E 01
C3H6,cyclo-                             V2C2  GORDON; NASA TM86885, OCT 1984. C3H6
 V  300.000 1000.000 0.52642893E 00-0.24304494E 03 0.14490001E 05 0.21036650E 01
 V 1000.000 5000.000 0.64243372E 00 0.83055174E 01-0.61290810E 05 0.11264132E 01
 C  300.000 1000.000 0.75434495E 00-0.56817108E 03 0.39706666E 05 0.23579094E 01
 C 1000.000 5000.000 0.46796950E 00-0.98032164E 03 0.12025017E 06 0.46607118E 01
C3H8                                    V2C2  GORDON; NASA TM86885, OCT 1984. C3H8
 V  300.000 1000.000 0.54679651E 00-0.17696657E 03 0.77856045E 04 0.18001056E 01
 V 1000.000 5000.000 0.65294463E 00 0.49357706E 02-0.58312245E 05 0.90667797E 00
 C  300.000 1000.000 0.74388890E 00-0.55911365E 03 0.36290570E 05 0.24613167E 01
 C 1000.000 5000.000 0.47421324E 00-0.94559650E 03 0.10647490E 06 0.46336342E 01
C3H8O,1propanol                         V2C2  GORDON; NASA TM86885, OCT 1984. C3H7OH
 V  300.000 1000.000 0.73440698E 00-0.22629180E 03 0.21086249E 05 0.67643591E 00
 V 1000.000 5000.000 0.59652900E 00-0.27394426E 03-0.12451645E 05 0.17070661E 01
 C  300.000 1000.000 0.87763046E 00-0.60698875E 03 0.50287900E 05 0.14897201E 01
 C 1000.000 5000.000 0.57171849E 01-0.21255482E 04 0.45327874E 07-0.34773207E 02
C4H10,isobutane                         V2C2  GORDON; NASA TM86885, OCT 1984. I-C4H10
 V  300.000 1000.000 0.52832039E 00-0.26563679E 03 0.17285072E 05 0.20055687E 01
 V 1000.000 5000.000 0.63489923E 00-0.26370421E 02-0.55754234E 05 0.11025916E 01
 C  300.000 1000.000 0.67475778E 00-0.66361596E 03 0.44196906E 05 0.30206687E 01
 C 1000.000 5000.000 0.46635940E 00-0.98961826E 03 0.11790333E 06 0.47061309E 01
C4H10,n-butane                          V2C2  GORDON; NASA TM86885, OCT 1984. N-C4H10
 V  300.000 1000.000 0.68141614E 00-0.25412492E 03 0.22317723E 05 0.10228466E 01
 V 1000.000 5000.000 0.60074817E 00-0.23466020E 03-0.19061014E 05 0.15996809E 01
 C  300.000 1000.000 0.83404393E 00-0.64023382E 03 0.49149211E 05 0.19789190E 01
 C 1000.000 5000.000 0.45229275E 00-0.11085240E 04 0.11643121E 06 0.50090208E 01
C6H6                                    V2C2   SVEHLA; NASA TR R-132, 1962  . C6H6
 V   300.00  1000.00 0.56309582E 00-0.29359980E 03 0.22248917E 05 0.18470699E 01
 V  1000.00  5000.00 0.61627702E 00-0.12384842E 03-0.36361541E 05 0.13677380E 01
 C   300.00  1000.00 0.48438372E 00-0.83571820E 03 0.48515114E 05 0.41854633E 01
 C  1000.00  5000.00 0.48653010E 00-0.89465684E 03 0.86496530E 05 0.41869639E 01
CD                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11885348E 01 0.14622882E 03-0.58133069E 04-0.17382773E 01
 V 1000.000 5000.000 0.53920305E 00-0.94803288E 03 0.22274390E 06 0.36110995E 01
 C  300.000 1000.000 0.11885357E 01 0.14622946E 03-0.58133583E 04-0.30206915E 01
 C 1000.000 5000.000 0.53920312E 00-0.94803288E 03 0.22274407E 06 0.23286912E 01
CL                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.59042211E 00-0.68463350E 02 0.11486756E 03 0.20947363E 01
 V 1000.000 5000.000 0.64975744E 00 0.15081620E 02-0.12359163E 05 0.16139819E 01
 C  300.000 1000.000 0.59042380E 00-0.68461622E 02 0.11470140E 03 0.19662606E 01
 C 1000.000 5000.000 0.64975781E 00 0.15083117E 02-0.12360002E 05 0.14855162E 01
CLCN                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.53044034E 00-0.27031325E 03 0.17941511E 05 0.25473656E 01
 V 1000.000 5000.000 0.63275432E 00-0.36705413E 02-0.53780760E 05 0.16781431E 01
 C  300.000 1000.000 0.63550134E 00-0.32017641E 03 0.20231531E 05 0.21282233E 01
 C 1000.000 5000.000 0.71166697E 00-0.39566346E 02-0.91690728E 05 0.14316566E 01
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TABLE IV. - TRANSPORT PROPERTY COEFFICIENTS (Continued)

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CLF                                  V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.56070752E 00-0.13992607E 03 0.45668081E 04 0.24732312E 01
 V 1000.000 5000.000 0.65434798E 00 0.49042184E 02-0.46439063E 05 0.16887227E 01
 C  300.000 1000.000 0.50866868E 00-0.25631123E 03 0.12208834E 05 0.29062389E 01
 C 1000.000 5000.000 0.41413675E 01 0.11621040E 05-0.45999311E 07-0.29499043E 02
CLF3                                 V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.52962852E 00-0.26875506E 03 0.17718417E 05 0.26423307E 01
 V 1000.000 5000.000 0.63350474E 00-0.33065466E 02-0.54490816E 05 0.17607381E 01
 C  300.000 1000.000 0.35753660E 00-0.49903816E 03 0.29633530E 05 0.42197696E 01
 C 1000.000 5000.000 0.62598051E 00-0.11436080E 03-0.43406305E 05 0.20547418E 01
CL0                                  V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.56676952E 00-0.12161047E 03 0.32653369E 04 0.23124565E 01
 V 1000.000 5000.000 0.65374100E 00 0.42188490E 02-0.37132937E 05 0.15886710E 01
 C  300.000 1000.000 0.51162100E 00-0.25600994E 03 0.13415594E 05 0.28360325E 01
 C 1000.000 5000.000 0.72663272E 00 0.17120774E 03-0.10303851E 06 0.10393509E 01
CL2                                  V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.52629434E 00-0.25652928E 03 0.16097518E 05 0.25710501E 01
 V 1000.000 5000.000 0.63837763E 00-0.10033969E 02-0.58625311E 05 0.16245853E 01
 C  300.000 1000.000 0.47840317E 00-0.33823485E 03 0.20875963E 05 0.26885462E 01
 C 1000.000 5000.000 0.78175250E 00 0.22694893E 03-0.11427704E 06 0.16441939E 00
F                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.59906011E 00-0.51437723E 02-0.65028471E 03 0.21238160E 01
 V 1000.000 5000.000 0.64874088E 00 0.86603487E 01-0.70792924E 04 0.17271575E 01
 C  300.000 1000.000 0.59906234E 00-0.51435839E 02-0.65044231E 03 0.26191892E 01
 C 1000.000 5000.000 0.64874106E 00 0.86606545E 01-0.70793785E 04 0.22225465E 01
FCN                                  V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.57223550E 00-0.10670086E 03 0.23425058E 04 0.23528480E 01
 V 1000.000 5000.000 0.65269707E 00 0.34249373E 02-0.28971825E 05 0.16877932E 01
 C  300.000 1000.000 0.66385760E 00-0.20552503E 03 0.10302488E 05 0.23513200E 01
 C 1000.000 5000.000 0.62110746E 00-0.16681687E 03-0.34951313E 05 0.26513070E 01
FO                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.60040365E 00-0.48873309E 02-0.73709186E 03 0.21428657E 01
 V 1000.000 5000.000 0.64862605E 00 0.78985320E 01-0.64302665E 04 0.17588863E 01
 C  300.000 1000.000 0.59294732E 00-0.17328829E 03 0.10140084E 05 0.27094093E 01
 C 1000.000 5000.000 0.76539077E 00 0.25741139E 03-0.12609784E 06 0.12211694E 01
F2                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.59905281E 00-0.51442916E 02-0.64988587E 03 0.22241253E 01
 V 1000.000 5000.000 0.64874823E 00 0.86919179E 01-0.70944874E 04 0.18273444E 01
 C  300.000 1000.000 0.56966196E 00-0.17423423E 03 0.85461006E 04 0.28676709E 01
 C 1000.000 5000.000 0.75540432E 00 0.22361134E 03-0.10529872E 06 0.12991675E 01
F20                                  V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.57511461E 00-0.99851239E 02 0.19330999E 04 0.22639580E 01
 V 1000.000 5000.000 0.65214551E 00 0.30451540E 02-0.25452577E 05 0.16292941E 01
 C  300.000 1000.000 0.42544147E 00-0.35613685E 03 0.19443891E 05 0.38975844E 01
 C 1000.000 5000.000 0.64844804E 00-0.30201572E 01-0.56012679E 05 0.20794278E 01
H                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V   300.00  1000.00 0.58190587E 00 0.46941424E 02-0.68759582E 04 0.91591909E 00
 V  1000.00  5000.00 0.51631898E 00-0.14613202E 04 0.71446141E 06 0.21559015E 01
 C   300.00  1000.00 0.58190587E 00 0.46941424E 02-0.68759582E 04 0.43477961E 01
 C  1000.00  5000.00 0.51631898E 00-0.14613202E 04 0.71446141E 06 0.55877786E 01
HBr                                  V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.58933864E 00-0.29335433E 03 0.23424808E 05 0.25894275E 01
 V 1000.000 5000.000 0.61018630E 00-0.16167656E 03-0.29734382E 05 0.23658526E 01
 C  300.000 1000.000 0.96304562E 00-0.68855077E 02 0.73361773E 04-0.75845739E 00
 C 1000.000 5000.000 0.62746202E 00-0.38180804E 03-0.61467487E 04 0.18834342E 01
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TABLE IV. - TRANSPORT PROPERTY COEFFICIENTS (Continued)

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HCN                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.72518078E 00-0.23153256E 03 0.21358586E 05 0.80192307E 00
 V 1000.000 5000.000 0.59723751E 00-0.26719537E 03-0.13701350E 05 0.17535640E 01
 C  300.000 1000.000 0.92501663E 00-0.26471427E 03 0.22685411E 05 0.40109942E 00
 C 1000.000 5000.000 0.54537647E 00-0.78102180E 03 0.91785663E 05 0.34682243E 01
HCL                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.53225757E 00-0.27322163E 03 0.18370730E 05 0.26560841E 01
 V 1000.000 5000.000 0.63127019E 00-0.43971936E 02-0.52359830E 05 0.18130021E 01
 C  300.000 1000.000 0.88016829E 00-0.51733060E 02 0.19343635E 04 0.26613366E 00
 C 1000.000 5000.000 0.61958001E 00-0.42848675E 03 0.44628818E 05 0.23998301E 01
HF                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.52829217E 00-0.26558442E 03 0.17277654E 05 0.25060989E 01
 V 1000.000 5000.000 0.63491956E 00-0.26269491E 02-0.55768516E 05 0.16027459E 01
 C  300.000 1000.000 0.71973296E 00-0.12963167E 03 0.62985645E 04 0.18331238E 01
 C 1000.000 5000.000 0.60081345E 00-0.70664493E 03 0.21916284E 06 0.30222222E 01
HI                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.52784444E 00-0.23380328E 03 0.13460328E 05 0.28602844E 01
 V 1000.000 5000.000 0.64469869E 00 0.18163803E 02-0.62312536E 05 0.18765994E 01
 C  300.000 1000.000 0.89496799E 00-0.43876558E 02 0.18359113E 04-0.84524179E 00
 C 1000.000 5000.000 0.66970197E 00-0.13253951E 03-0.68569796E 05 0.86614196E 00
H2                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.68887644E 00 0.48727168E 01-0.59565053E 03 0.55569577E 00
 V 1000.000 5000.000 0.70504381E 00 0.36287686E 02-0.72255550E 04 0.41921607E 00
 C  300.000 1000.000 0.93724945E 00 0.19013311E 03-0.19701961E 05 0.17545108E 01
 C 1000.000 5000.000 0.74368397E 00-0.54941898E 03 0.25676376E 06 0.35553997E 01
H20                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.78387780E 00-0.38260408E 03 0.49040158E 05 0.85222785E 00
 V 1000.000 5000.000 0.50714993E 00-0.68966913E 03 0.87454750E 05 0.30285155E 01
 C  300.000 1000.000 0.15541443E 01 0.66106305E 02 0.55969886E 04-0.39259598E 01
 C 1000.000 5000.000 0.79349503E 00-0.13340063E 04 0.37864327E 06 0.23591474E 01
H202                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.99686871E 00-0.41461068E 02 0.87172900E 04-0.15770256E 01
 V 1000.000 5000.000 0.57419481E 00-0.50408983E 03 0.48898234E 05 0.17621537E 01
 C  300.000 1000.000 0.11075595E 01-0.20746382E 03 0.23930396E 05-0.12685243E 01
 C 1000.000 5000.000 0.46981213E 00-0.11937657E 04 0.22076993E 06 0.39203830E 01
H2S                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.52624074E 00-0.24493210E 03 0.14706252E 05 0.25104802E 01
 V 1000.000 5000.000 0.64192799E 00 0.60684364E 01-0.61015379E 05 0.15356997E 01
 C  300.000 1000.000 0.10513345E 01-0.43140454E 02 0.39906490E 04-0.67586328E 00
 C 1000.000 5000.000 0.63433801E 00-0.38738396E 03-0.37840585E 05 0.25861506E 01
He                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.64802751E 00 0.43051414E 00-0.37873123E 02 0.16131962E 01
 V 1000.000 5000.000 0.64764043E 00-0.44612757E 00 0.23006610E 03 0.16164797E 01
 C  300.000 1000.000 0.64802850E 00 0.43145992E 00-0.37964201E 02 0.36659896E 01
 C 1000.000 5000.000 0.64764079E 00-0.44641921E 00 0.23088408E 03 0.36692778E 01
Hg                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.94367314E 00-0.82917932E 02 0.11637023E 05 0.44357040E 00
 V 1000.000 5000.000 0.57925263E 00-0.44580916E 03 0.31691900E 05 0.33002507E 01
 C  300.000 1000.000 0.94367375E 00-0.82917583E 02 0.11637001E 05-0.14179521E 01
 C 1000.000 5000.000 0.57925278E 00-0.44580773E 03 0.31691108E 05 0.14387311E 01
HgBr2                                  V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.94367468E 00-0.82916893E 02 0.11636948E 05-0.33764020E 00
 V 1000.000 5000.000 0.57925294E 00-0.44580484E 03 0.31688745E 05 0.25190480E 01
 C  300.000 1000.000 0.83359360E 00-0.17616187E 03 0.17189236E 05-0.92777594E 00
 C 1000.000 5000.000 0.59766218E 00-0.40168705E 03 0.19056094E 05 0.92331802E 00
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TABLE IV. - TRANSPORT PROPERTY COEFFICIENTS (Continued)

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I                                       V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.55813203E 00-0.14734417E 03 0.51602827E 04 0.25867214E 01
 V 1000.000 5000.000 0.65432576E 00 0.50478828E 02-0.49558226E 05 0.17793810E 01
 C  300.000 1000.000 0.55813321E 00-0.14734315E 03 0.51601885E 04 0.11830226E 01
 C 1000.000 5000.000 0.65432558E 00 0.50478927E 02-0.49558521E 05 0.37569275E 00
I2                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.61471143E 00-0.28497347E 03 0.23431772E 05 0.20973875E 01
 V 1000.000 5000.000 0.60681821E 00-0.18519473E 03-0.26138435E 05 0.21003450E 01
 C  300.000 1000.000 0.63064253E 00-0.27550593E 03 0.21405999E 05 0.42524340E 00
 C 1000.000 5000.000 0.71129313E 00 0.25273438E 02-0.91445236E 05-0.32116092E 00
Li                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11752934E 01 0.21157274E 03-0.12015201E 05-0.35064726E 01
 V 1000.000 5000.000 0.54766371E 00-0.14297740E 04 0.51685974E 06 0.19440930E 01
 C  300.000 1000.000 0.11752927E 01 0.21157214E 03-0.12015152E 05-0.20041680E 01
 C 1000.000 5000.000 0.54766479E 00-0.14297696E 04 0.51685796E 06 0.34463823E 01
LiCL                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11723081E 01 0.21106360E 03-0.11990988E 05-0.31121607E 01
 V 1000.000 5000.000 0.54988650E 00-0.14341736E 04 0.52206379E 06 0.23012792E 01
 C  300.000 1000.000 0.11152834E 01 0.86278294E 02-0.30441406E 04-0.23747100E 01
 C 1000.000 5000.000 0.66364820E 00-0.11212899E 04 0.38567849E 06 0.15658741E 01
LiF                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11291533E 01 0.21068947E 03-0.12539950E 05-0.28995579E 01
 V 1000.000 5000.000 0.60903786E 00-0.14233356E 04 0.58185627E 06 0.17379115E 01
 C  300.000 1000.000 0.11058083E 01 0.76731452E 02-0.16090045E 04-0.19121012E 01
 C 1000.000 5000.000 0.71312432E 00-0.11330693E 04 0.43119396E 06 0.15799391E 01
LiO                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.59024601E 00-0.29313587E 03 0.23436429E 05 0.19633498E 01
 V 1000.000 5000.000 0.61004264E 00-0.16263674E 03-0.29581936E 05 0.17480629E 01
 C  300.000 1000.000 0.53291070E 00-0.40303638E 03 0.30090655E 05 0.32950033E 01
 C 1000.000 5000.000 0.71128127E 00 0.27334001E 02-0.10271842E 06 0.17640287E 01
Li2                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11752942E 01 0.21157326E 03-0.12015231E 05-0.33915691E 01
 V 1000.000 5000.000 0.54766486E 00-0.14297727E 04 0.51686050E 06 0.20589929E 01
 C  300.000 1000.000 0.11864429E 01 0.16477281E 03-0.86676933E 04-0.20521179E 01
 C 1000.000 5000.000 0.77445801E 00-0.88331404E 03 0.31514451E 06 0.15195400E 01
Li2O                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11852391E 01 0.21253421E 03-0.12014231E 05-0.32722272E 01
 V 1000.000 5000.000 0.54051860E 00-0.14091648E 04 0.49613971E 06 0.22969412E 01
 C  300.000 1000.000 0.10844145E 01-0.60833980E 01 0.46422023E 04-0.13442709E 01
 C 1000.000 5000.000 0.56950679E 00-0.12475771E 04 0.38458480E 06 0.30746519E 01
Mg                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11999414E 01 0.20126672E 03-0.10756481E 05-0.29969415E 01
 V 1000.000 5000.000 0.52943536E 00-0.12953759E 04 0.41295444E 06 0.27081121E 01
 C  300.000 1000.000 0.11999384E 01 0.20126452E 03-0.10756302E 05-0.27478556E 01
 C 1000.000 5000.000 0.52943478E 00-0.12953787E 04 0.41295539E 06 0.29571809E 01
MgCL                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.90734101E 00-0.10957625E 03 0.13455239E 05-0.33583701E 00
 V 1000.000 5000.000 0.58274560E 00-0.40902478E 03 0.21055824E 05 0.21945136E 01
 C  300.000 1000.000 0.81687290E 00-0.21031421E 03 0.19272508E 05 0.26796453E 00
 C 1000.000 5000.000 0.67370002E 00-0.21524204E 03-0.45824091E 05 0.13239636E 01
MgCL2                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11643480E 01 0.21154461E 03-0.12157671E 05-0.29851196E 01
 V 1000.000 5000.000 0.55826967E 00-0.14453042E 04 0.53835586E 06 0.23110024E 01
 C  300.000 1000.000 0.11079049E 01 0.98601320E 02-0.43172118E 04-0.25982670E 01
 C 1000.000 5000.000 0.59190755E 00-0.12500553E 04 0.42853003E 06 0.18844669E 01
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TABLE IV. - TRANSPORT PROPERTY COEFFICIENTS (Continued)

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MgF                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.57153724E 00-0.29502488E 03 0.22829882E 05 0.24330715E 01
 V 1000.000 5000.000 0.61382741E 00-0.13849662E 03-0.33680482E 05 0.20400420E 01
 C  300.000 1000.000 0.52769344E 00-0.38550300E 03 0.27187035E 05 0.30176213E 01
 C 1000.000 5000.000 0.74461056E 00 0.18905510E 03-0.16740309E 06 0.11368690E 01
MgF2                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.10536783E 01 0.19463118E 03-0.12040073E 05-0.22328636E 01
 V 1000.000 5000.000 0.77039040E 00-0.10172891E 04 0.49502968E 06 0.43533118E 00
 C  300.000 1000.000 0.10102266E 01 0.53808657E 02-0.33371180E 04-0.15775513E 01
 C 1000.000 5000.000 0.74741881E 00-0.10287026E 04 0.43422069E 06 0.88732021E 00
Mg2                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11999338E 01 0.20126085E 03-0.10755969E 05-0.29052069E 01
 V 1000.000 5000.000 0.52943951E 00-0.12953560E 04 0.41294399E 06 0.27997510E 01
 C  300.000 1000.000 0.12619936E 01 0.27244603E 03-0.14272719E 05-0.35314094E 01
 C 1000.000 5000.000 0.58940412E 00-0.10635945E 04 0.32638934E 06 0.21090193E 01
N                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.78466590E 00 0.15060468E 02-0.25374756E 04 0.67458825E 00
 V 1000.000 5000.000 0.80487742E 00 0.95211647E 02-0.36759153E 05 0.48842200E 00
 C  300.000 1000.000 0.78466590E 00 0.15060468E 02-0.25374756E 04 0.14747985E 01
 C 1000.000 5000.000 0.80487742E 00 0.95211647E 02-0.36759153E 05 0.12886322E 01
NF3                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.56967038E 00-0.11332714E 03 0.27443384E 04 0.22987466E 01
 V 1000.000 5000.000 0.65320219E 00 0.37910855E 02-0.32557395E 05 0.16061944E 01
 C  300.000 1000.000 0.38158835E 00-0.44211254E 03 0.19950177E 05 0.43208327E 01
 C 1000.000 5000.000 0.65091667E 00 0.73881686E 01-0.84389117E 05 0.21144498E 01
NH                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.63709858E 00-0.36353873E 01-0.22869699E 04 0.15599278E 01
 V 1000.000 5000.000 0.64806518E 00 0.29290818E 01-0.16401980E 04 0.14772122E 01
 C  300.000 1000.000 0.94940463E 00 0.19417023E 03-0.17195992E 05 0.32016455E 00
 C 1000.000 5000.000 0.86518748E 00 0.25156774E 03-0.12770184E 06 0.95443399E 00
NH3                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.81181026E 00-0.16192541E 03 0.13635348E 05 0.38586405E 00
 V 1000.000 5000.000 0.58385051E 00-0.42758871E 03 0.37959204E 05 0.22004252E 01
 C  300.000 1000.000 0.12268934E 01-0.25575098E 03 0.32926505E 05-0.10143928E 01
 C 1000.000 5000.000 0.32131924E 00-0.18686802E 04 0.45173941E 06 0.64352314E 01
NO                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.59536071E 00-0.57867416E 02-0.38658607E 03 0.20594392E 01
 V 1000.000 5000.000 0.65096667E 00 0.19493763E 02-0.13229282E 05 0.16106960E 01
 C  300.000 1000.000 0.95581984E 00 0.12705354E 03-0.14468456E 05-0.15581681E 00
 C 1000.000 5000.000 0.65454142E 00-0.10184116E 03-0.30492856E 05 0.21672442E 01
NOCL                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.55407775E 00-0.29013153E 03 0.21387042E 05 0.23569867E 01
 V 1000.000 5000.000 0.61962388E 00-0.10475832E 03-0.40052964E 05 0.17794912E 01
 C  300.000 1000.000 0.65936900E 00-0.32842689E 03 0.24228608E 05 0.18140106E 01
 C 1000.000 5000.000 0.79155874E 00 0.23355702E 03-0.20076887E 06 0.55981448E 00
NO2                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.55638659E 00-0.15082685E 03 0.54896589E 04 0.23748776E 01
 V 1000.000 5000.000 0.65567489E 00 0.57106126E 02-0.53285015E 05 0.15402063E 01
 C  300.000 1000.000 0.63306921E 00-0.33284539E 03 0.24120737E 05 0.24663012E 01
 C 1000.000 5000.000 0.62299841E 00-0.12701358E 03-0.69901508E 05 0.24212675E 01
N2                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.60443938E 00-0.43632704E 02-0.88441949E 03 0.18972150E 01
 V 1000.000 5000.000 0.65060585E 00 0.28517449E 02-0.16690236E 05 0.15223271E 01
 C  300.000 1000.000 0.94306384E 00 0.12279898E 03-0.11839435E 05-0.10668773E 00
 C 1000.000 5000.000 0.65147781E 00-0.15059801E 03-0.13746760E 05 0.21801632E 01
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TABLE IV. - TRANSPORT PROPERTY COEFFICIENTS (Continued)

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N20                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.54648279E 00-0.17538256E 03 0.76356925E 04 0.23887157E 01
 V 1000.000 5000.000 0.65511342E 00 0.56849480E 02-0.60316082E 05 0.14742903E 01
 C  300.000 1000.000 0.47050344E 00-0.46505674E 03 0.27421960E 05 0.37269968E 01
 C 1000.000 5000.000 0.60986936E 00-0.20883718E 03-0.47931337E 05 0.25858920E 01
N204                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.53228523E 00-0.27822164E 03 0.19037688E 05 0.24757071E 01
 V 1000.000 5000.000 0.62866433E 00-0.56425245E 02-0.47939866E 05 0.16552361E 01
 C  300.000 1000.000 0.50253745E 00-0.55343094E 03 0.38361339E 05 0.34935842E 01
 C 1000.000 5000.000 0.59679657E 00-0.27024654E 03-0.46223556E 05 0.26422917E 01
Na                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11991657E 01 0.17272436E 03-0.81074814E 04-0.33187241E 01
 V 1000.000 5000.000 0.53084448E 00-0.11004044E 04 0.29936796E 06 0.22628268E 01
 C  300.000 1000.000 0.11991657E 01 0.17272429E 03-0.81074712E 04-0.30140274E 01
 C 1000.000 5000.000 0.53084498E 00-0.11004040E 04 0.29936869E 06 0.25675191E 01
NaBr                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11669297E 01 0.21109685E 03-0.12066967E 05-0.29043573E 01
 V 1000.000 5000.000 0.55512537E 00-0.14419020E 04 0.53270536E 06 0.24330610E 01
 C  300.000 1000.000 0.11717902E 01 0.17091273E 03-0.91899870E 04-0.35438249E 01
 C 1000.000 5000.000 0.70441563E 00-0.10435636E 04 0.37598970E 06 0.51601184E 00
NaCN                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11528091E 01 0.21135235E 03-0.12272262E 05-0.32860731E 01
 V 1000.000 5000.000 0.57199458E 00-0.14520507E 04 0.55818630E 06 0.18227691E 01
 C  300.000 1000.000 0.12979173E 01 0.21066488E 03-0.11550963E 05-0.38003025E 01
 C 1000.000 5000.000 0.57843144E 00-0.14055772E 04 0.45884228E 06 0.23167812E 01
NaCL                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11642456E 01 0.21156120E 03-0.12161063E 05-0.31564370E 01
 V 1000.000 5000.000 0.55839956E 00-0.14454200E 04 0.53857416E 06 0.21379969E 01
 C  300.000 1000.000 0.11549572E 01 0.15565790E 03-0.82703173E 04-0.31216782E 01
 C 1000.000 5000.000 0.69251630E 00-0.10821250E 04 0.39203169E 06 0.91254999E 00
NaF                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11246143E 01 0.20926938E 03-0.12461016E 05-0.29038556E 01
 V 1000.000 5000.000 0.61469605E 00-0.14144876E 04 0.58243849E 06 0.16525732E 01
 C  300.000 1000.000 0.10993781E 01 0.12223965E 03-0.65939282E 04-0.24078338E 01
 C 1000.000 5000.000 0.73852321E 00-0.10758653E 04 0.43139600E 06 0.84893555E 00
NaI                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11818393E 01 0.21275505E 03-0.12077525E 05-0.29875936E 01
 V 1000.000 5000.000 0.54320984E 00-0.14184781E 04 0.50491315E 06 0.25404083E 01
 C  300.000 1000.000 0.11906702E 01 0.17872335E 03-0.95080820E 04-0.40338377E 01
 C 1000.000 5000.000 0.73766296E 00-0.90161429E 03 0.31023034E 06-0.14298770E 00
NaO                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.54811203E 00-0.28689735E 03 0.20714307E 05 0.22972790E 01
 V 1000.000 5000.000 0.62224381E 00-0.90410313E 02-0.42923207E 05 0.16515893E 01
 C  300.000 1000.000 0.53629415E 00-0.32567270E 03 0.22011663E 05 0.27363629E 01
 C 1000.000 5000.000 0.75852874E 00 0.16366141E 03-0.12338203E 06 0.85664245E 00
NaOH                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11670325E 01 0.21107864E 03-0.12063366E 05-0.31668433E 01
 V 1000.000 5000.000 0.55500116E 00-0.14417592E 04 0.53247894E 06 0.21722072E 01
 C  300.000 1000.000 0.11973081E 01 0.15190412E 03-0.94845125E 04-0.26780278E 01
 C 1000.000 5000.000 0.53145211E 00-0.16768143E 04 0.57724947E 06 0.31684396E 01
Na2                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11991686E 01 0.17272712E 03-0.81077315E 04-0.32730108E 01
 V 1000.000 5000.000 0.53083913E 00-0.11004312E 04 0.29938121E 06 0.23086136E 01
 C  300.000 1000.000 0.12178308E 01 0.14749940E 03-0.59214668E 04-0.31914235E 01
 C 1000.000 5000.000 0.78291422E 00-0.55598388E 03 0.12553759E 06 0.38327194E 00
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TABLE IV. - TRANSPORT PROPERTY COEFFICIENTS (Continued)

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Na2O                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11852443E 01 0.21253834E 03-0.12014565E 05-0.33114310E 01
 V 1000.000 5000.000 0.54051892E 00-0.14091678E 04 0.49614217E 06 0.22577755E 01
 C  300.000 1000.000 0.10901142E 01 0.58450168E 02-0.15252071E 04-0.21912644E 01
 C 1000.000 5000.000 0.57538268E 00-0.12218109E 04 0.39358975E 06 0.22514879E 01
Ne                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.65216539E 00 0.62836411E 01-0.10731022E 04 0.20161733E 01
 V 1000.000 5000.000 0.64793219E 00 0.10343893E 01-0.24458823E 03 0.20497925E 01
 C  300.000 1000.000 0.65216494E 00 0.62830217E 01-0.10730420E 04 0.24512805E 01
 C 1000.000 5000.000 0.64793218E 00 0.10339824E 01-0.24427562E 03 0.24848962E 01
O                                       V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.73101989E 00 0.60468346E 01 0.35630372E 04 0.10955772E 01
 V 1000.000 5000.000 0.79832550E 00 0.18039626E 03-0.53243244E 05 0.51131026E 00
 C  300.000 1000.000 0.73824503E 00 0.11221345E 02 0.31668244E 04 0.17085307E 01
 C 1000.000 5000.000 0.79819261E 00 0.17970493E 03-0.52900889E 05 0.11797640E 01
OH                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.78530133E 00-0.16524903E 03 0.12621544E 05 0.69788972E 00
 V 1000.000 5000.000 0.58936635E 00-0.36223418E 03 0.23355306E 05 0.22363455E 01
 C  300.000 1000.000 0.10657500E 01 0.45300526E 02-0.37257802E 04-0.49894757E 00
 C 1000.000 5000.000 0.58415552E 00-0.87533541E 03 0.20830503E 06 0.35371017E 01
O2                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.61936357E 00-0.44608607E 02-0.13460714E 04 0.19597562E 01
 V 1000.000 5000.000 0.63839563E 00-0.12344438E 01-0.22885810E 05 0.18056937E 01
 C  300.000 1000.000 0.81595343E 00-0.34366856E 02 0.22785080E 04 0.10050999E 01
 C 1000.000 5000.000 0.80805788E 00 0.11982181E 03-0.47335931E 05 0.95189193E 00
P                                       V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.60172588E 00-0.46427776E 02-0.81317670E 03 0.16997237E 01
 V 1000.000 5000.000 0.64852762E 00 0.72352703E 01-0.58578232E 04 0.13280342E 01
 C  300.000 1000.000 0.60172595E 00-0.46427473E 02-0.81321475E 03 0.17063279E 01
 C 1000.000 5000.000 0.64852696E 00 0.72315702E 01-0.58557552E 04 0.13346455E 01
PCL3                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.56705910E 00-0.29448453E 03 0.22549684E 05 0.21386508E 01
 V 1000.000 5000.000 0.61504988E 00-0.13110380E 03-0.35012832E 05 0.17004736E 01
 C  300.000 1000.000 0.46759856E 00-0.41412012E 03 0.27219078E 05 0.27289212E 01
 C 1000.000 5000.000 0.62191640E 00-0.15804841E 03-0.30115458E 05 0.14648170E 01
PF                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.53250121E 00-0.21585581E 03 0.11573865E 05 0.23996959E 01
 V 1000.000 5000.000 0.64822622E 00 0.32763872E 02-0.62813079E 05 0.14258782E 01
 C  300.000 1000.000 0.48759354E 00-0.33214183E 03 0.19491414E 05 0.28625744E 01
 C 1000.000 5000.000 0.74083389E 00-0.70783873E 02 0.24323383E 05 0.84812178E 00
PF3                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.56074201E 00-0.13982780E 03 0.45592921E 04 0.23671865E 01
 V 1000.000 5000.000 0.65434702E 00 0.49018779E 02-0.46395135E 05 0.15829936E 01
 C  300.000 1000.000 0.35685408E 00-0.45395937E 03 0.24494685E 05 0.42777573E 01
 C 1000.000 5000.000 0.64448599E 00-0.17581982E 02-0.67596124E 05 0.19469495E 01
PH3                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.54019301E 00-0.19389179E 03 0.93950337E 04 0.22206500E 01
 V 1000.000 5000.000 0.65131973E 00 0.44335896E 02-0.61168787E 05 0.12852911E 01
 C  300.000 1000.000 0.91611132E 00-0.28581024E 03 0.23587890E 05 0.66131005E 00
 C 1000.000 5000.000 0.57031841E 00-0.43404881E 03-0.59921420E 05 0.32733369E 01
PN                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.55608253E 00-0.15297277E 03 0.56317889E 04 0.20722783E 01
 V 1000.000 5000.000 0.65421428E 00 0.51068828E 02-0.51651821E 05 0.12478568E 01
 C  300.000 1000.000 0.63283895E 00-0.22459221E 03 0.14686096E 05 0.17226824E 01
 C 1000.000 5000.000 0.67234004E 00 0.31696890E 02-0.89082667E 05 0.12936103E 01
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TABLE IV. - TRANSPORT PROPERTY COEFFICIENTS (Continued)

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PO                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.53499761E 00-0.20819304E 03 0.10800626E 05 0.23240954E 01
 V 1000.000 5000.000 0.64944290E 00 0.37502999E 02-0.62501896E 05 0.13610015E 01
 C  300.000 1000.000 0.62888900E 00-0.23560675E 03 0.16600563E 05 0.17844784E 01
 C 1000.000 5000.000 0.68948887E 00 0.88744522E 02-0.11442197E 06 0.11682889E 01
PS                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.93790241E 00-0.87211038E 02 0.11929757E 05-0.10076496E 01
 V 1000.000 5000.000 0.57981876E 00-0.43970997E 03 0.29904427E 05 0.17968971E 01
 C  300.000 1000.000 0.86384389E 00-0.17171526E 03 0.17342587E 05-0.59094819E 00
 C 1000.000 5000.000 0.77799708E 00 0.17456414E 03-0.21313233E 06-0.11971285E 00
P2                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.83447892E 00-0.16116318E 03 0.16947283E 05-0.25314649E 00
 V 1000.000 5000.000 0.58901033E 00-0.34661904E 03 0.40066685E 04 0.16371453E 01
 C  300.000 1000.000 0.72205544E 00-0.31814871E 03 0.27523268E 05 0.49864673E 00
 C 1000.000 5000.000 0.63663671E 00-0.25348443E 03-0.41841022E 05 0.10899479E 01
P4                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.90411767E 00-0.11190439E 03 0.13613879E 05-0.68973758E 00
 V 1000.000 5000.000 0.58304168E 00-0.40596142E 03 0.20188552E 05 0.18119219E 01
 C  300.000 1000.000 0.64479485E 00-0.38428864E 03 0.28229348E 05 0.12449679E 01
 C 1000.000 5000.000 0.60247381E 00-0.36355102E 03-0.94694443E 04 0.15531529E 01
S                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.10275633E 01-0.15730982E 02 0.67814046E 04-0.16868317E 01
 V 1000.000 5000.000 0.57141532E 00-0.53985986E 03 0.59619329E 05 0.19326899E 01
 C  300.000 1000.000 0.10275638E 01-0.15730602E 02 0.67813658E 04-0.17146989E 01
 C 1000.000 5000.000 0.57141299E 00-0.53987155E 03 0.59625328E 05 0.19048482E 01
SF6                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.55356148E 00-0.15968072E 03 0.62136748E 04 0.23462379E 01
 V 1000.000 5000.000 0.65398528E 00 0.51259194E 02-0.53866067E 05 0.15018342E 01
 C  300.000 1000.000 0.32698365E 00-0.49765320E 03 0.16383569E 05 0.45533559E 01
 C 1000.000 5000.000 0.64458376E 00-0.20128103E 02-0.85429899E 05 0.19836988E 01
SH                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.61408230E 00-0.28143128E 02-0.13467850E 04 0.18884765E 01
 V 1000.000 5000.000 0.64813948E 00 0.42553989E 01-0.30920912E 04 0.16229133E 01
 C  300.000 1000.000 0.10118698E 01 0.26386658E 03-0.22711870E 05-0.77379683E 00
 C 1000.000 5000.000 0.68044235E 00-0.15805050E 03 0.75469456E 04 0.19066699E 01
SO                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.52625143E 00-0.24484659E 03 0.14696572E 05 0.24878570E 01
 V 1000.000 5000.000 0.64195121E 00 0.61710442E 01-0.61027285E 05 0.15129757E 01
 C  300.000 1000.000 0.54421574E 00-0.34870235E 03 0.24686677E 05 0.25225817E 01
 C 1000.000 5000.000 0.60326368E 00-0.59356628E 03 0.21055577E 06 0.21750850E 01
SO2                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.52954513E 00-0.26860106E 03 0.17696352E 05 0.25434068E 01
 V 1000.000 5000.000 0.63357876E 00-0.32706650E 02-0.54558956E 05 0.16605700E 01
 C  300.000 1000.000 0.53161859E 00-0.46428334E 03 0.34368389E 05 0.28729848E 01
 C 1000.000 5000.000 0.68373370E 00-0.17546035E 02-0.11091192E 06 0.15164401E 01
S2                                    V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.10275639E 01-0.15730803E 02 0.67814093E 04-0.16664187E 01
 V 1000.000 5000.000 0.57141835E 00-0.53984612E 03 0.59611578E 05 0.19530790E 01
 C  300.000 1000.000 0.98092737E 00-0.12110140E 03 0.13039909E 05-0.14396672E 01
 C 1000.000 5000.000 0.64033875E 00-0.59597252E 03 0.72484889E 05 0.13270533E 01
S2F2                                  V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.55994786E 00-0.14213224E 03 0.47398132E 04 0.22961206E 01
 V 1000.000 5000.000 0.65435710E 00 0.49551587E 02-0.47408338E 05 0.15047134E 01
 C  300.000 1000.000 0.41057319E 00-0.36233030E 03 0.15064933E 05 0.36096006E 01
 C 1000.000 5000.000 0.65312444E 00 0.18099392E 02-0.71163472E 05 0.16401929E 01
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TABLE IV. - TRANSPORT PROPERTY COEFFICIENTS (Continued)

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Si                                        V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.10449719E 01 0.19143103E 03-0.11829247E 05-0.21394108E 01
 V 1000.000 5000.000 0.78988567E 00-0.95537214E 03 0.47572682E 06 0.28832678E 00
 C  300.000 1000.000 0.10449713E 01 0.19143050E 03-0.11829201E 05-0.20349144E 01
 C 1000.000 5000.000 0.78988608E 00-0.95537169E 03 0.47572729E 06 0.39281511E 00
SiCL                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.11060893E 01 0.54472185E 02 0.15508572E 04-0.19779345E 01
 V 1000.000 5000.000 0.56223642E 00-0.66627167E 03 0.10127956E 06 0.23974239E 01
 C  300.000 1000.000 0.10399161E 01-0.25627339E 02 0.66452541E 04-0.16186619E 01
 C 1000.000 5000.000 0.72298227E 00-0.20077852E 03-0.74276182E 05 0.82207367E 00
SiCL4                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.55156535E 00-0.28884804E 03 0.21111522E 05 0.21060079E 01
 V 1000.000 5000.000 0.62068684E 00-0.98874758E 02-0.41219319E 05 0.15001162E 01
 C  300.000 1000.000 0.43894980E 00-0.43471622E 03 0.27690887E 05 0.28487965E 01
 C 1000.000 5000.000 0.62357602E 00-0.14610669E 03-0.32112677E 05 0.13452883E 01
SiF                                       V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.74469669E 00-0.22023807E 03 0.20750850E 05 0.11032763E 01
 V 1000.000 5000.000 0.59574337E 00-0.28144567E 03-0.10987859E 05 0.22220602E 01
 C  300.000 1000.000 0.69844981E 00-0.32202998E 03 0.27986749E 05 0.16227540E 01
 C 1000.000 5000.000 0.73548029E 00 0.11273623E 03-0.17893865E 06 0.11337502E 01
SiF4                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.57077021E 00-0.11041847E 03 0.25670575E 04 0.21607302E 01
 V 1000.000 5000.000 0.65298266E 00 0.36297519E 02-0.30956385E 05 0.14800331E 01
 C  300.000 1000.000 0.42518081E 00-0.39420381E 03 0.19135444E 05 0.37213358E 01
 C 1000.000 5000.000 0.65150413E 00 0.64377124E 01-0.79487595E 05 0.18549219E 01
SiH4                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.55924396E 00-0.14415953E 03 0.49013752E 04 0.20043942E 01
 V 1000.000 5000.000 0.65435256E 00 0.49950878E 02-0.48263745E 05 0.12067324E 01
 C  300.000 1000.000 0.76108905E 00-0.41994290E 03 0.28112649E 05 0.21424344E 01
 C 1000.000 5000.000 0.60035284E 00-0.28430063E 03-0.11637412E 06 0.32542195E 01
SiO                                       V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.72506064E 00-0.23159941E 03 0.21361941E 05 0.11938159E 01
 V 1000.000 5000.000 0.59723532E 00-0.26715791E 03-0.13693384E 05 0.21445353E 01
 C  300.000 1000.000 0.74584054E 00-0.33365366E 03 0.31257625E 05 0.12854454E 01
 C 1000.000 5000.000 0.72347442E 00 0.10673017E 03-0.20274219E 06 0.12256205E 01
SiO2                                      V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.10548774E 01 0.19502577E 03-0.12060648E 05-0.23035749E 01
 V 1000.000 5000.000 0.76767529E 00-0.10257777E 04 0.49762839E 06 0.39792053E 00
 C  300.000 1000.000 0.10514211E 01-0.68683144E 01 0.44778115E 04-0.18080684E 01
 C 1000.000 5000.000 0.73063010E 00-0.11009925E 04 0.42616688E 06 0.10825751E 01
SiS                                       V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.12010728E 01 0.18110947E 03-0.88652451E 04-0.30589063E 01
 V 1000.000 5000.000 0.52945943E 00-0.11514295E 04 0.32706083E 06 0.25765863E 01
 C  300.000 1000.000 0.11018478E 01 0.17738569E 02 0.30781405E 04-0.23546834E 01
 C 1000.000 5000.000 0.88673914E 00 0.82340153E 02-0.18949212E 06-0.74829186E 00
Si2                                       V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.10449790E 01 0.19143586E 03-0.11829602E 05-0.20322708E 01
 V 1000.000 5000.000 0.78988110E 00-0.95539350E 03 0.47573737E 06 0.39556243E 00
 C  300.000 1000.000 0.11761733E 01 0.93952349E 02 0.10348143E 04-0.27660853E 01
 C 1000.000 5000.000 0.98246822E 00-0.76637847E 02 0.71989828E 05-0.13330007E 01
SnCL4                                     V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.56767328E 00-0.29459106E 03 0.22592397E 05 0.21167412E 01
 V 1000.000 5000.000 0.61486966E 00-0.13217830E 03-0.34814305E 05 0.16848596E 01
 C  300.000 1000.000 0.54879279E 00-0.31796597E 03 0.19347146E 05 0.16823364E 01
 C 1000.000 5000.000 0.34656610E 00-0.12573241E 04 0.45215867E 06 0.35944770E 01
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TABLE IV. - TRANSPORT PROPERTY COEFFICIENTS (Concluded)

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Zn                                   V2C2  GORDON; NASA TM86885, OCT 1984
 V  300.000 1000.000 0.12002271E 01 0.17586903E 03-0.83995383E 04-0.19217073E 01
 V 1000.000 5000.000 0.53031143E 00-0.11169229E 04 0.30819706E 06 0.36814803E 01
 C  300.000 1000.000 0.12002288E 01 0.17587033E 03-0.83996394E 04-0.26621911E 01
 C 1000.000 5000.000 0.53031130E 00-0.11169233E 04 0.30819716E 06 0.29410104E 01
He              Ar                   V1CO
 V  300.000 5000.000 0.47903400E 00-0.24133330E 03 0.34125770E 05 0.27830000E 01
Ar              Kr                   V1CO
 V  300.000 5000.000 0.53955200E 00-0.14537710E 03 0.77105300E 04 0.27820000E 01
CH4             CF4                  V1CO
 V  300.000 5000.000 0.13074500E 00-0.55907700E 03 0.55942230E 05 0.52550000E 01
LAST
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REPORT DOCUMENTATION PAGE

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1. AGENCY USE ONLY (*Leave blank*)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	October 1993	Technical Memorandum

4. TITLE AND SUBTITLE

Coefficients for Calculating Thermodynamic and Transport Properties of Individual Species

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12a. DISTRIBUTION/AVAILABILITY STATEMENT

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13. ABSTRACT (*Maximum 200 words*)

Libraries of thermodynamic data and transport properties are given for individual species in the form of least-squares coefficients. Values of $C_p^o(T)$, $H^o(T)$, and $S^o(T)$ are available for 1130 solid, liquid, and gaseous species. Viscosity and thermal conductivity data are given for 155 gases. The original $C_p^o(T)$ values were fit to a fourth-order polynomial with integration constants for $H^o(T)$ and $S^o(T)$. For each species the integration constant for $H^o(T)$ includes the heat of formation. Transport properties have a different functional form. The temperature range for most of the data is 300 to 5000 K, although some of the newer thermodynamic data have a range of 200 to 6000 K. Because the species are mainly possible products of reaction, the data are useful for chemical equilibrium and kinetics computer codes. Much of the data has been distributed for several years with the NASA Lewis equilibrium program CET89. The thermodynamic properties of the reference elements have been updated along with about 175 species that involve the elements carbon, hydrogen, oxygen, and nitrogen. These sets of data will be distributed with the NASA Lewis personal computer program for calculating chemical equilibria, CETPC.

14. SUBJECT TERMS

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