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PRODUCT STEWARDSHIP
IN
THE COMPOSITES INDUSTRY

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DUPONT ADVANCED MATERIALS SYSTEMS

AIA, NASA, SACMA JOINT CONFERENCE
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ENVIRONMENTAL SAFETY & HEALTH CONSIDERATIONS -
COMPOSITE MATERIALS IN THE AEROSPACE INDUSTRY

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OVERVIEW

- What is Product Stewardship and what does it mean to your business
- How can **you** make Product Stewardship work for you
- How does the Product Stewardship Code of Management Practice apply to the Advanced Composites and Aerospace Industries
- How does Product Stewardship fit into your business organization
- What is life cycle thinking and how does it impact your business decisions

WHAT IS PRODUCT STEWARDSHIP?

Product Stewardship is a system for identifying and managing safety, health and environmental risks throughout all stages of a product's life cycle and continuously seeking ways to reduce the adverse impact upon human health and the environment

Product Stewardship means providing information and support, as an integral part of our business offering, so that our contractors and customers can use our products safely and without environmental harm.

WHAT IS THE PURPOSE OF PRODUCT STEWARDSHIP?

The Purpose of Product Stewardship is to make **health, safety and environmental protection an integral part** of designing, manufacturing, using, recycling and disposing of your products.

Janos Schulze
Director of Regulatory Affairs
Ciba-Geigy Corporation

SACMA Presentation
October 1993

WHY DO PRODUCT STEWARDSHIP?

GOOD BUSINESS. You can improve your offering by responding to the needs, concerns, and outrage of customers and society

It helps you be responsive to society's expectations

Some is required by regulatory and liability considerations

Required of members of the Chemical Manufacturer's Association (CMA)

Corporate Policy

GOOD BUSINESS

A DOZEN WAYS TO MAKE PRODUCT STEWARDSHIP WORK FOR YOU

1. Review the safety, health, and environmental information you provide your customers for one product. Is it the best information you can provide? Can your customers use this product safely? Are they likely to?
2. Summarize the principle safety, health and environmental hazards of one of your products. Do competitive products have less serious hazard? How might this impact your business?
3. Examine the risk associated with one of your products

$$\text{Risk} = \text{Hazard (fact)} + \text{Outrage (perception)}$$

Do competitive products have less serious risk? How might this impact your business?

A DOZEN WAYS TO MAKE PRODUCT STEWARDSHIP WORK FOR YOU
(cont.)

4. Determine how your customers use one of your products. Do employees of your customers have sufficient information to work with your product safely? Are the customers' employees using correct personal protective equipment? What happens to residual product? How can you help reduce hazards and minimize emissions?

5. Review how you and a customer dispose of a material. Does your business have some continuing "liability" for this material?

6. Does the management of your company have a policy of supporting Product Stewardship? Do you have goals and responsibilities for implementing Product Stewardship? If not, would this improve your company's offering or reduce your liabilities?

A DOZEN WAYS TO MAKE PRODUCT STEWARDSHIP WORK FOR YOU
(cont.)

7. Examine your employees' perception of your company's SH&E performance. Can you improve by involving them more?

8. Review your systems to design, develop or improve products and processes. Do your systems make health, safety and environmental impact key considerations?

9. Consider what your site looks like to the public. Do they know how well you manage environmental risks? Have you established a relationship of trust with community opinion leaders?

A DOZEN WAYS TO MAKE PRODUCT STEWARDSHIP WORK FOR YOU
(cont.)

10. Determine how a contractor is using your products. Are all appropriate safeguards in place to manage hazards and minimize emissions? Is potential liability to your business being properly managed?

11. Review transportation incidents with one of your products. How can these be minimized?

12. Consider one of your key suppliers. Do they provide you appropriate health, safety and environmental information and guidance on their products? Is their operations such that you can be assured of continuing supply of critical raw materials?

THE RESPONSIBLE CARE® CODE OF MANAGEMENT PRACTICE

Responsible Care® is a Chemical Manufacturers Association-led initiative to improve the industry's responsible management of chemicals

Code of Management Practice

Community Awareness and Emergency Response

Pollution Prevention

Process Safety

Distribution

Employee Health and Safety

Product Stewardship

Adoption of these codes and an annual self-evaluation is required for CMA members.

If you are not a CMA member, why should you be interested in Responsible Care®?

WHY DO IT?

- Responsible Care® developed in response to society's concern about the chemical industry
- Composites are part of the chemical industry
- Society's concerns regarding chemicals impact composite manufacturers and users
- SH&E "risk" is not limited to hazardous or toxic chemicals. It is defined by the public's perceptions
- Growing regulatory requirements
- Following the principles of Responsible Care® is good business

RESPONSIBLE CARE®
PRODUCT STEWARDSHIP MANAGEMENT PRACTICES

Management Leadership and Commitment

Information and Characterization

Risk Management

PRODUCT RISK CHARACTERIZATION

1. Make Hazard Assessment

Prepare summary of physical, human and ecological hazards and understanding of data gaps

2. Identify potential for human and environmental exposures

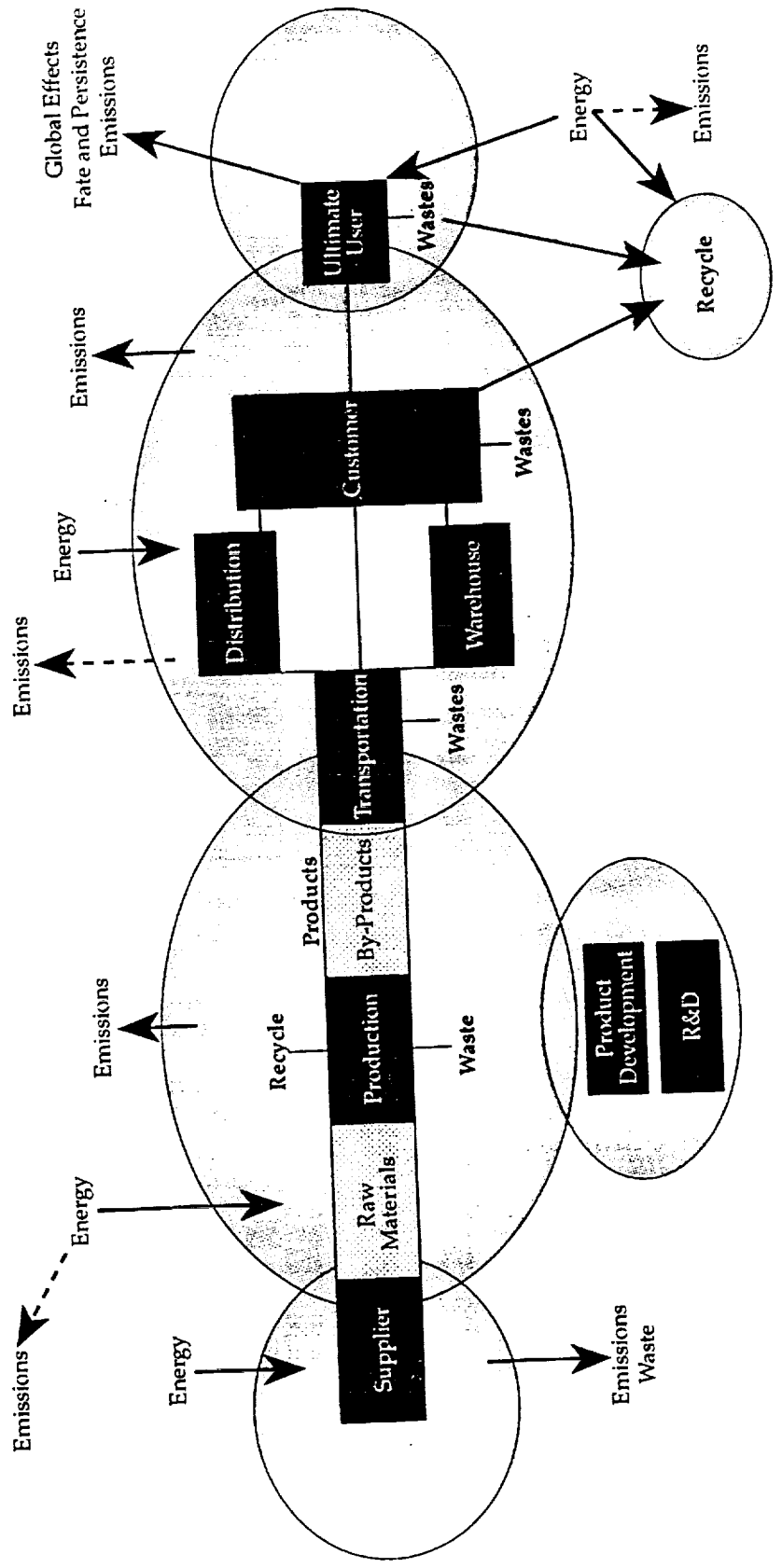
Describe product trail: where, how much, to whom, how used and disposed by customer and distributor

3. Combine Hazard information and potential exposures

Are appropriate systems and procedures in place to protect users of your products and the environment from the identified hazards?

4. Identify potential outrage issues.

PRODUCT STEWARDSHIP PLUS LIFE CYCLE ASSESSMENT



SUMMARY

Product Stewardship is good business

Product Stewardship is a frame of mind

Product Stewardship is proactive action

Good Product Stewardship is important for
growth of composites

Product Stewardship is good business

