

P. H. Schenck
LAW Dept.

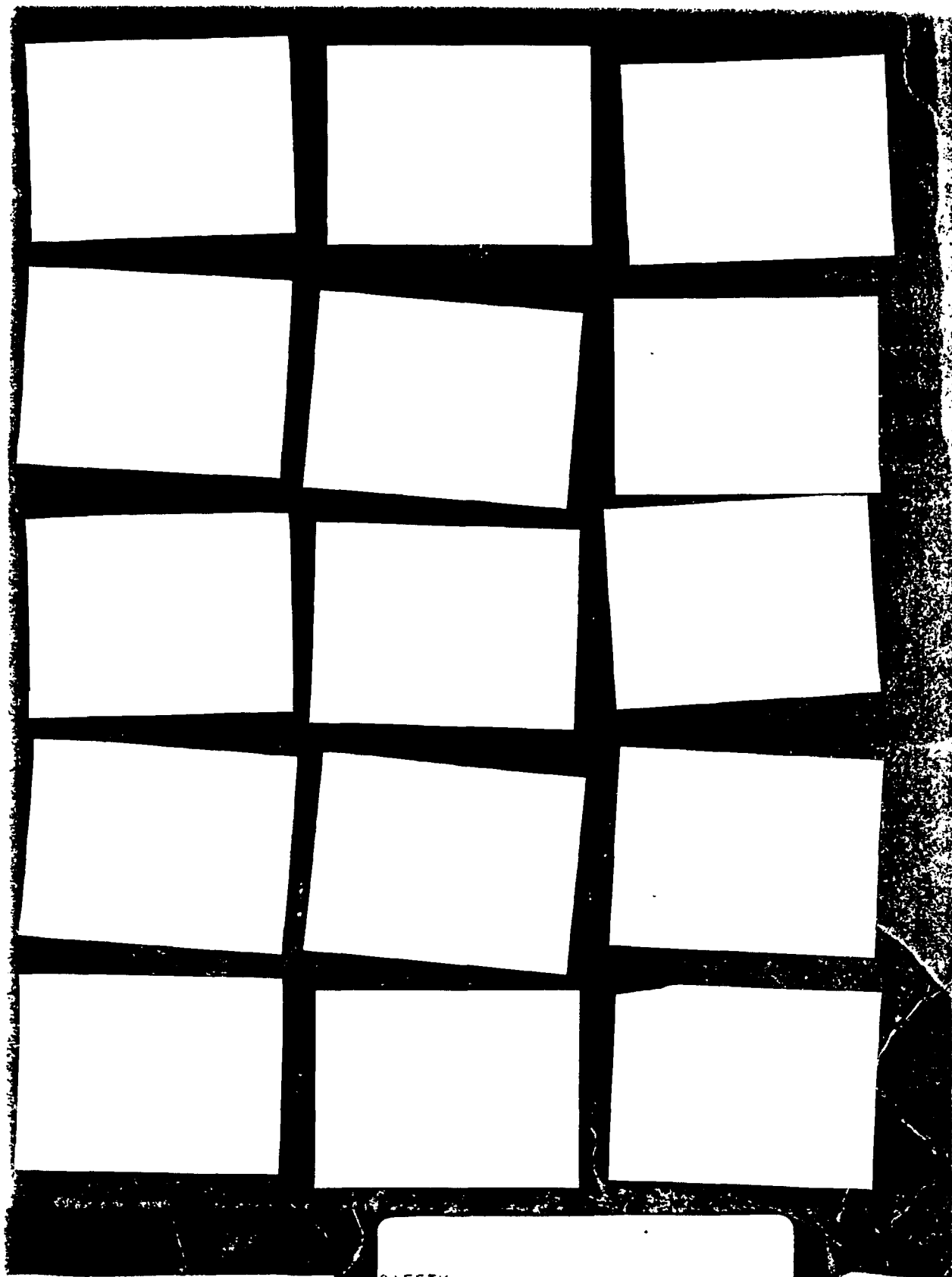
T. Town

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SAFETY
HAZARD & RISK ANALYSIS CONTROL TEAM
3-520-L 4 OF 5,000 443

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SAFETY
HAZARD & RISK ANALYSIS CONTROL TEAM
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Elmer Products

RECEIVED
RESEARCH & DEVELOPMENT

OCT 1 1976

INTEROFFICE
MEMORANDUM

W. M. SMITH

OCT 21 '76 - CEB

Subject Hazard and Risk Analysis and

Control Program for Plastics

To C. E. Blades

Piscataway

(Location, Organization, or Department)

From A. R. Adams

Trexlertown

(Location, Organization, or Department)

cc: A. J. Diglio
S. F. Burke
J. T. Barr

G. J. Mantell
J. C. Novak

This will confirm our conversation today with respect to the development of the Plastics HARAC Control Program.

1. I have assumed the role of Team Captain for the HARAC Control Program.
2. We will develop a control program for two businesses-- PVC Resins and PVC Compounds.
3. Following the proposed program outline, I have indicated responsibility for preparing the control program and it is as follows:

- a. Statement of Purpose
- b. Organization of the Program

C. E. Blades

A. R. Adams (See written program attached)

- c. Summary of Hazard Data

1. Toxicity Check List
2. Raw Materials Hazard Evaluation
3. By-products and Residues Toxicity Summary
4. Fire/Explosion Hazard Data & Evaluation

C. E. Blades

J. C. Novak

J. C. Novak

To be taken from current material safety data sheet

4. Plant Manager's Certification of Safety Practices to Mitigate Risks

J. C. Novak will prepare for the Plant Manager certification at Calvert City and Pensacola

(320)

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- | | |
|---|--|
| 5. Distribution Manager's Certification of Compliance with DOT Regulations relating to Labeling, Shipping Instructions, Emergency Procedure practices | Steve Burke will prepare Form 3147, revised 9/74 for compounds and resins* |
| 6. Use/Misuse Summary | A. R. Adams |
| 7. Product Emergency and First Aid Procedures Approval Form. | To be deleted |
| 8. Commercial Summary | A. R. Adams |
| 9. Environmental Safeguards | A. J. Diglio |
| 10. Quality Control | To be deleted |

*Please find attached two copies of the required form which should be filled out by Distribution from information made available by J. C. Novak and/or G. J. Mantell.

A. R. Adams

kag

Attachment

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ORGANIZATION OF THE PROGRAM

PVC Resins and PVC Compounds have been large volume items of commerce since the early 1940s. The toxic risks of these products are very well understood by the users as well as the PVC Producers. The chief risks for the consumer are fairly described in the Material Safety Data Sheet; and, therefore, the control of these hazards for the consumer is dependent upon compliance with product specifications and fair representation of risks in data sheets and correspondence with our customers.

The most significant occupational risks relate to VCM; lead stabilizers; and purchased carcinogens or mutagenic raw materials, e.g. trichloroethylene, which are used in recipes for manufacturing PVC. The major control for managing these risks will be provided by the Manufacturing Department through work practices which have been developed for compliance to OSHA standards.

From time-to-time, recipe changes will be made for compounds and resins, because of some economic benefit that presumably will be derived from these changes. These new compounds will be purchased from chemical vendors and must be evaluated in terms of the toxicity problems that they could present to APCI employees or APCI customers. Control of this risk will be done by the appropriate information requirements imposed upon vendors by R&D and Purchasing.

E.B.

TABLE I

TOXICITY CHECK LIST

PRODUCT NAME: _____ DATE: _____

Document all sources of information. Where possible give original references rather than handbook or summary listings. Methodology and dating are important indices of reliability.

1. Acute Toxicity

	Test animal	Date tested
(a) Oral _____	_____	_____
(b) Dermal _____	" _____	" _____
(c) Inhalation _____	" _____	" _____

2. Corrosivity/Irritation

	Test animal	Date tested
(a) Skin _____	_____	_____
(b) Eyes _____	" _____	" _____
(c) Mucous Membrane _____	" _____	_____

3. Sub-Acute Toxicity

Describe tests and results obtained. (e.g. 90-day feeding study on rats and dogs)

Feeding Level	Time of Test	Animal(s)
_____	_____	_____

Results:

4. Chronic Toxicity

Describe any long term, low level feeding, or inhalation studies and give results.

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5. Clinical Toxicity: Describe type of testing or observations made and results.

(a) Patch Testing _____

(b) Epidemiology _____

6. Toxline (CEB will provide)

(a) Number of References in data bank _____

(b) Number of Pertinent References cited _____

Summary of the Results:

7. Commercial Safety Literature

Cite references: Give summary or attach copy.

8. Privileged Information

Cite Source: Is it confidential? Reliability?

9. NIOSH Criteria Document

Is there one?

10. TLV

11. Sources of Data Presented

a.

b.

c.

d.

3-520-6

Guidelines for Prevention of Liability Program

I. Purpose

The Chemicals Group shall have a formal program for the prevention of injury or death to persons, and damage to property and the environment. These guidelines are intended to outline the organization and responsibilities for the operation of such a program.

The desirability of such a program is obvious. There is no single event or series of events that indicates the Company has not been diligent in the past in the maintenance of product integrity and in the prevention of injury to man and damage to property. However, the increasing size of the Company, compounded by the increase in government regulations and the general complexity of doing business, indicate the prudence of structuring a more formal program for the prevention of liability.

II. Organization

A. HARAC

The coordinating body for the general supervision of the Prevention of Liability Program will be the Hazard and Risk Analysis and Control Team. The

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members to HARAC will be appointed by the Group Vice President-Chemicals. Meetings of the Committee will be held regularly and a summary of the meeting will be prepared, distributed to the Group Vice President-Chemicals, HARAC members, and persons within the corporation who express an interest in receiving such minutes.

B. Objectives of HARAC

To characterize the hazards (toxicological, reactivity, fire/ explosion) for each product (individually or by class) sold by the business centers of the Chemicals Group and to determine the actions necessary to reduce risks to an acceptable level.

To apply the same standard to raw materials and intermediates and by-products or residues as these are handled in the plant or disposed of as waste materials.

To establish the means to monitor and control the risks taken by the Company in its business operations with hazardous materials as these impact on their manufacture, distribution, and use.

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1. Hazard in the present context is defined as:
 - a. A thing or condition that might operate against success or safety.
 - b. A possible source of peril, danger, duress or difficulty.
 - c. A condition that tends to increase the possibility of loss.
 - d. An adverse chance (as of being lost, injured or defeated).
2. In the Chemicals Group hazard arises from products which:
 - a. Upon exposure (injection, inhalation, contact) to the body are harmful to health or life in humans or animals.
 - b. Have potential for detonation/explosion/ fire under specified conditions, and consequently may give rise to injury or death or loss of property.
 - c. Have an unfavorable impact on the environment when spilled, dumped or allowed to escape.
3. Risk is defined as:

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- a. The possibility of loss, injury, disadvantage or destruction.
- b. The degree of probability of loss due to hazard.
- c. The product of the amount that may be lost times the probability of losing it.

4. Standards for acceptable risks may be established in the following framework:

- a. That manufacture, distribution or use of the product will not be in violation of federal state or municipal laws or regulations.
- b. That costs to reduce risks do not exceed the cost for liability suits.
- c. That loss of, or injury to, human life will not occur from manufacture, distribution or use of the products in the prescribed manner.
- d. That warnings are adequate to protect against all foreseen misuses.
- e. That maximum liability does not exceed the potential for profit from the product.

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5. A risk reduction program will have the following defensive strategy. (Taken from American Institute for Research, Staff Recommendations February 12, 1973.)

- a. Minimize the likelihood of product liability suits by tightening up on vulnerable operations.
- b. Maximize the chances for a successful defense if a suit does develop by documenting precautions taken.
- c. Maintain adequate financial protection in the event the Company loses a substantial product liability suit.

C. Operating Divisions and Departments

The establishment of HARAC in no way relieves the operating divisions and departments of the Chemicals Group from primary responsibility in the prevention of liability. HARAC, together with the Law Division, Manufacturing Division (particularly Industrial Hygiene and Environmental), Insurance Department, Corporate Medical Department and Corporate Safety Department, are service organizations whose primary task is to assist, within the area of their respective specialities, operating divisions and departments in the performance of their tasks.

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D. Subgroups Coordinating with HARAC

Operating divisions and departments will, where desirable, establish permanent subgroups to perform the responsibilities of such division or department in the Prevention of Liability Program.

III. Scope of the Prevention of Liability Program

In order to understand the scope of the Prevention of Liability Program, it is necessary to understand the potential hazards for liability:

A. Potential Liabilities

1. Personal injury or death, either traumatic or chronic, to:
 - a. employees
 - b. handlers in the distribution process
 - c. employees of purchasers
 - d. customers of such purchases
 - e. outsiders and bystanders not in the chain of commerce.
2. Property damage, including business interruptions, to the persons listed in A. above.
3. Damage to the environment, whether in the manufacturing process, the disposal of wastes, transportation of use of a product, or disposal of a product or its container.

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4. Liability imposed by contractual obligation, representation or warranty.
5. Liability imposed by statutory and regulatory requirement.

B. Scope of the Prevention of Liability Program is:

1. Recognition

Assist in the recognition of each potential hazard in the manufacture, use and disposal of products of interest to the Company, and in the recognition of each contractual, statutory and regulatory requirement imposed on the Company with respect to such products; cooperate with Federal agencies, independent institutions and other corporations in the determination of potential hazards created by such products.

2. Compliance

Assure compliance with legal and moral obligations imposed on the Company with respect to such products; assure preparation and dissemination of appropriate warning information concerning products manufactured by the Company and their safe use.

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3. Awareness

Create a constant awareness of compliance with the Company's objectives of safeguarding man and his environment from injury due to the manufacture, distribution, use or disposal of products manufactured by the Company, and of compliance with statutory and regulatory requirements concerning such products.

As the program is established it is anticipated that its scope and the identification of responsibilities will be expanded and refined.

IV. Performance Responsibilities

Consistent with the provisions of item II.C. above, the primary responsibilities for the various aspects of the Prevention of Liability Program are as follows:

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	HARAC	Manufacturing	Distribution	Profit Center	Industrial Hygiene	Purchasing
A. Material Safety Data Sheets - APCI Products						
1. Preparation				X		
2. Approval	X					
3. Distribution				X		
4. Annual Review	X					
B. Material Safety Data Sheets - Raw Materials						
1. Responsibility for receipt and distribution				X		X
2. Review					X	
3. Maintenance and availability		X				
C. Labeling of Products						
1. Hygiene/first aid instructions		X			X	
2. Labels meeting transportation requirements		X	X			
3. Labeling of samples		X				
D. Emergency Response Programs						
1. Chemtree				X		
2. APCI Emergency System - Corp. Program, Plus		X	X	X		
3. Poison Information Control	X					
E. Data Bank of Information on Industrial Health and Toxic Substances	X					

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	HARAC	Manufacturing	Distribution	Profit Center	Industrial Hygiene	Purchasing
F. Liaison with Agencies, Data Centers, Research Organizations	X					
G. Quality Control of Products						
1. Conformance with Specs. and Product Standards		X				
2. Compliance with Regulatory Laws, Environmental Laws and Contract Commitments if Raw Materials Change		X		X		
3. Notice of Users upon APCI Awareness of Product Failure or Failings					X	
H. Containers						
1. Selection		X				
2. Approval			X	X		
I. Compliance with Laws and Regulations						
1. Food and Drug Administration	X			X		
2. OSHA - Industrial Health Standards* *with Corporate Safety Dept.		X			X	
3. Toxic Substances Control Act	X			X		
4. Consumer Product Safety Commission				X		
5. Hazardous Materials Transportation Act			X			

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	HARAC	Manufacturing	Distribution	Profit Center	Industrial Hygiene	Purchasing
6. DOT Regulations/Coast Guard Regulations			X			
7. FTC Warranty Law						
J. Environmental Protection						
1. Federal and State Laws		X				
2. Environmental Controls in Distribution Process			X			
K. Uses of Products						
1. Constant Program to Monitor Uses of Products				X		
2. Understanding of Doctrines of Strict Liability and Liability for Negligence			X	X		
3. Uses of Raw Materials		X			X	
4. Distribution of Samples			X	X		
L. Contractual Liabilities						
1. (Express warranty, Implied warranty, Warranty of Conformance with Samples, Indemnity to Others, Indemnity from Customers)					X	
2. Indemnity from Sellers						

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HARAC	Manufacturing	Distribution	Profit Center	Industrial Hygiene	Purchasing
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3. Respresentations Regarding Compliance with Laws and Regulations	X
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M. Disclaimers

1. Specification Sheets	X
2. Samples	X

N. Education and Awareness Programs

1. Annual Review of MSDS	X
2. Oral Presentations	X
3. Bimonthly Release	X

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V. Discussion of Performance Responsibilities

A. Material Safety Data Sheets - APCI Products

At the present time MSDS's are not mandatory by law. In practice, however, they are being prepared and distributed by most major chemical companies.

MSDS's shall be prepared in the first instance by the relevant profit center and approved by the HARAC Team before being distributed. Restrictions will be the responsibility of the relevant profit center. Sufficient copies shall be given to customers of products to serve both the customer's headquarters and each of its using locations.

All MSDS's published by the Chemicals Group will be consistent in form, and have an expiration date. The relevant profit center will maintain a list of the recipients of MSDS's so that correct or revised copies can be distributed from time to time with advice to destroy previously distributed copies.

MSDS should be reviewed each time new data becomes available, if there is a process change, if it becomes apparent to the manager of relevant profit

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center that the data is incorrect or additional data might be added, and no less frequently than annually.

B. Material Safety Data Sheets - Raw Materials

The Purchasing Department will have responsibility for assuring the receipt and distribution to central manufacturing and to interested plant managers of MSDS's for raw materials purchased by the Company. [insert here directions concerning the use of the sheets].

C. Labeling of Products

1. Products in containers shall bear appropriate labels indicating: Identification - product name and lot number - manufacturing location. Labels should contain adequate warnings and cautions as to use and exposure. First aid or emergency medical instructions shall be approved by the corporate Medical Director.
2. Labels should be appended to containers, bills of lading, order acknowledgements (think through this problem since many of our products are transported in bulk).

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3. (Obtain recommendations of Transportation regarding labels).
4. (Labels should be dated as to printing date or form date. Copies of instructions and any backup data should be at a central location for emergency response.)

D. Emergency Response Program

(I know very little about these programs. Ernie or Mayo might better be equipped to offer some text here)

E. Data Bank of Information on Industrial Health and Toxic Substances

(Ask Ernie to complete)

F. Liaison with Agencies, Data Centers and Research Organizations

It is necessary that a central authority coordinate the Company's cooperative efforts, and requests and responses to outside organizations concerned with industrial or public health and toxicity

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problems. At the present time individual members of HARAC have generally assumed this responsibility and all communications to or from the Company concerning industrial or public health and toxicity chemical substances should continue to be coordinated with them. Coordination should also include the Medical Director at such time as the Company includes a medical director on its staff.

G. Quality Control of Products

These guidelines of the Prevention of Liability Program are not intended to supersede quality control programs of the Manufacturing Division. These guidelines are intended, however, to add an additional parameter to those manufacturing programs.

H. Containers

I. Compliance with Laws and Regulations

(Law

Department should prepare a comprehensive summary of relevant laws and regulations.)

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J. Environmental Projection

HARAC and the Environmental Department will upon request from time to time offer such assistance as it is able to give to the program already established for assuring compliance with environmental protection laws. As a practical matter, however, environmental protection programs will continue outside of HARAC and the Prevention of Liability Program.

K. Uses of Products

L. Contractual Liabilities

M. Disclaimers

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