

V. COMPONENTS OF THE IDENTIFICATION SYSTEM FOR  
OCCUPATIONALLY HAZARDOUS MATERIALS

This system consists of five parts which contain information and instructions for the development of an alert symbol, label statements, and a Material Safety Data Sheet (MSDS) for any hazardous material or product containing a hazardous material. The five parts are arranged in the order in which they will be used and are entitled:

- (a) Definition of a Hazardous Material
- (b) Criteria for Determination of Degree of Hazard
- (c) Preparation of a Material Safety Data Sheet
- (d) Preparation of a Hazard Alert Symbol
- (e) Selection of Label Statements

Guidelines for implementation of the components may be found in Chapter VI. These include the details of size, location, and quantity for affixing placards and labels.

- (a) Definition of a Hazardous Material

All materials can cause unwanted changes under some circumstances, but a careful assessment of properties and circumstances will classify common substances such as water and sodium chloride as practically nonhazardous materials from the viewpoint of the need for informing the worker.

For the purposes of the recommended standard, a material shall be defined as hazardous if it meets any one of the following criteria:

- (1) Toxicity - A toxic substance is one that has demonstrated the potential to: endanger human life by exposure via any route found in the workplace; produce short- or long-term disease or bodily injury; affect

health adversely; induce cancer or other neoplastic effects in man or experimental animals; induce a transmissible change in the characteristics of an offspring from those of its human or experimental animal parents; or cause the production of physical defects in the developing human or experimental animal embryo.

In the absence of human or animal effects data described above, a toxic substance is one that produces death in experimental animals exposed to the substance in quantities and by routes which are reasonable. See Appendix III. The following cut-off points apply to animal exposure data:

A single oral LD50 of up to 5,000 mg/kg.

A single inhalation exposure LC50 of up to 10,000 ppm for gases, or 100,000 mg/cu m by volume for mists or dusts.

A single skin absorption (percutaneous) LD50 of up to 2,800 mg/kg.

Since this is toxicity data, the lower the LD or LC50 value, the more toxic the material.

(2) Flammability A flammable substance is one that will burn in air when exposed to a temperature of 1,500 F (815 C) for a period of five (5) minutes or less. See Appendix IV.

(3) Reactivity - A reactive substance is one that will release hazardous amounts of energy when subject to shock, spark, or light, during uncontrolled polymerization, or when contacted by common substances, eg, water, air, or steel; or is a strong oxidizing or reducing material.

References [4-28] are major sources of information on hazardous materials, but many other sources are equally valuable and should not be neglected.

(b) Criteria for Determination of Degree of Hazard

This section includes a classification scheme which provides relative ratings for the categories of health, fire, and reactivity. To use this section, data on the material should be assembled from reference sources, expert opinion, and direct experience and familiarity with the material or specific combination of materials. A composite statement of the potential hazard from the standpoint of health effect, flammability, and reactivity can then be formulated. The proper relative hazard ratings are then assessed by a comparison of the summary data with the tables and relative rating definitions.

(1) Determination of Degree of Health Hazard

The health hazard rating of a material shall be determined by evaluating the potential for harm and the relative toxicity of the material or mixture of materials as a whole. Table V-1 applies to human effects data. In the absence of human exposure data, Table V-2 shall be used as a guideline. Since the correlation between acute animal toxicity and human effects is frequently poor, human experience should supersede animal data. Where both acute and chronic exposure data are available, the data for the worst effect shall be used to develop the rating.

TABLE V-1

RELATIVE TOXICITY RATING FOR HAZARDOUS MATERIALS  
(Human Exposure by Any Route)

Rating	Key Words	Acute (Single Exposure, immediate or delayed effects)	Chronic (Repeated Exposure)
4	EXTREME HEALTH HAZARD	Death	Death*
3	HIGH HEALTH HAZARD	Major temporary or permanent injury May threaten life	Major permanent injury (Includes mutagens and teratogens)
2	MODERATE HEALTH HAZARD	Minor temporary or permanent injury** (Includes nonlife threatening substances which sensitize the majority of exposed workers)	Minor temporary or permanent injury (Includes skin carcinogens)
1	SLIGHT HEALTH HAZARD	Minor injury readily reversible**	Minor injury readily reversible
0	NO SIGNIFICANT HEALTH HAZARD	Materials which produce toxic effects only under the most unusual conditions or by overwhelming dosage.	

\*Includes substances which bear a significant relationship to the development of cancer in man, but excluding the common varieties of skin cancer.

\*\*Allergens are rated according to their sensitizing potential rather than the severity of an allergic reaction upon reexposure to a substance by a sensitized worker.

TABLE V-2

## RELATIVE ACUTE TOXICITY CRITERIA \*

Rating	Key Words	LD50 Single* Oral Dose: Rats mg/kg	LC50 Inhalation* Vapor Exposure: Rats ppm	LD50-Skin* Rabbits: mg/kg
		less than or equal to	less than or equal to	less than or equal to
4	EXTREMELY HAZARDOUS	1	10	5
3	HIGHLY HAZARDOUS	50	100	43
2	MODERATELY HAZARDOUS	500	1,000	340
1	SLIGHTLY HAZARDOUS	5,000	10,000	2,800
0	NO SIGNIFICANT HAZARD	5,000 or greater	10,000 or greater	2,800 or greater

\* See Appendix III for the source of these data and test methods.

## (2) Determination of Degree of Fire Hazard

The fire hazard rating of a product shall be determined by evaluating the potential for harm and the relative flammability of the material or mixture of materials as a whole, using the criteria which follows. Appendix IV contains a discussion of the basis for these criteria.

The fire hazard rating of a liquid shall be determined from the criteria contained in Table V-3 and based on data using the final product

formulation. The test procedures as found in 29 CFR 1910.106 and 107 are mandatory for liquids.

EXTREMELY FLAMMABLE: Rating 4

Any liquid or gaseous material which is a liquid while under pressure and having a flash point below 73 F (22.8 C).

Materials which on account of their physical form or environmental conditions can form explosive mixtures with air and which are readily dispersed in air, such as dusts of combustible solids and mists or flammable or combustible liquid droplets.

HIGHLY FLAMMABLE: Rating 3

Liquids and solids that can be ignited under almost all ambient temperature conditions. This rating shall include:

Liquids having a flash point at or above 73 F (22.8 C) and below 100 F (37.8 C).

Solid materials in the form of coarse dusts which may burn rapidly but which generally do not form explosive atmospheres with air.

Solid materials in a fibrous or shredded form which may burn rapidly and create flash fire hazards, such as cotton, sisal and hemp.

Materials which burn with extreme rapidity, usually by reason of self-contained oxygen (eg, dry nitrocellulose and many organic peroxides).

Materials which ignite spontaneously when exposed to air or other substances.

MODERATELY COMBUSTIBLE: Rating 2

Materials that must be moderately heated or exposed to realatively high ambient temperatures before ignition can occur. Materials with this rating would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating may release vapor in sufficient quantities to produce hazardous atmospheres with air. This rating shall include:

Liquids having a flash point above 100 F (37.8 C) but below 200 F (93.4 C).

Solids and semisolids which readily give off flammable vapors.

SLIGHTLY COMBUSTIBLE: Rating 1

Materials that must be preheated before ignition can occur. Materials with this rating require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. This rating shall include:

Materials which will burn in air when exposed to a temperature of 1,500 F (815 C) for a period of 5 minutes or less.

Liquids, solids and semisolids having a flash point at or above 200 F (93.4 C).

NONCOMBUSTIBLE: Rating 0

This degree should include any material which will not burn in air when exposed to a temperature of 1,500 F (815 C) for a period of 5 minutes.

The relative ratings are taken from the NFPA 704M [3] booklet, with changes in flash point to reflect current OSHA regulations.

TABLE V-3  
RELATIVE FLAMMABILITY CRITERIA  
FOR LIQUIDS HAVING A FLASH POINT

Numerical Rating	Key Terms	Flash Point F (C)
4	EXTREMELY FLAMMABLE	below 73 (22.8)
3	HIGHLY FLAMMABLE	at or above 73 (22.8) but below 100 (37.8)
2	MODERATELY COMBUSTIBLE	at or above 100 (37.8) but below 200 (93.4)
1	SLIGHTLY COMBUSTIBLE	at or above 200 (93.4)
0	NONCOMBUSTIBLE	greater than 1,500 (815)

### (3) Determination of Degree of Reactivity

The reactivity hazard rating of a material shall be determined by evaluating the potential for harm and the relative reactivity of the material or mixture of materials as a whole, using the criteria which follow.

Materials in this category may be self-reactive by polymerization, decomposition, or condensation, and/or reactive with other materials commonly encountered in the workplace. The reactivity in this category often involves the rapid release of energy in the form of heat and



pressure, and/or the release of highly hazardous products. The assessment of relative reactivity requires specific knowledge of what materials may be encountered in the workplace.

**EXTREMELY REACTIVE: Rating 4**

Materials which in themselves are readily capable of detonation or of explosive decomposition or explosive reaction at normal temperatures and pressures. This rating should include materials which are sensitive to mechanical or localized thermal shock at normal temperatures and pressures.

**HIGHLY REACTIVE: Rating 3**

Materials which in themselves are capable of detonation or of explosive decomposition or explosive reaction, but which require a strong initiating source or which must be heated under confinement before initiation. This rating should include materials which are sensitive to thermal or mechanical shock at elevated temperatures and pressures or which react explosively with water without requiring heat or confinement.

**MODERATELY REACTIVE: Rating 2**

Materials which in themselves are normally unstable and readily undergo rapid chemical change but do not detonate. This rating should include materials which can undergo chemical change with rapid release of energy at normal temperatures and pressures. It should also include those materials which may react violently with water or which may form potentially explosive mixtures with water.

SLIGHTLY REACTIVE: Rating 1

Materials which in themselves are normally stable but which can become unstable at elevated temperatures and pressures or which may react violently with water with some release of energy but not violently.

NONREACTIVE: Rating 0

Materials which in themselves are normally stable, even under fire exposure conditions, and which are not reactive with water.

(c) Preparation of a Material Safety Data Sheet

A Material Safety Data Sheet (MSDS) must be completed for each hazardous material or mixture of hazardous materials which meet the criteria contained in Part (a).

Information that pertains to materials or products with similar ingredients that pose identical hazards may be recorded on a single MSDS. Those sheets which cover a group may be developed from trade association recommendations on an industry-wide basis, but must accurately reflect the total hazard of any product to which they are applied. A list of all products covered by such a data sheet shall be included on the sheet.

Not all divisions of the MSDS will be applicable in every instance. At a minimum, only the Health Hazard Data and Special Precautions Divisions shall be used, since these divisions are of major importance for worker protection.

When a division or part of a division is not applicable to a particular material, it should be noted by "not applicable" If a thorough search of the literature and trade sources fails to provide data, the words

"no data" should be inserted. In the absence of experimental data, opinion based on experience or analogy with similar products may be included in divisions V through IX, with a notation reflecting that the information is unverified.

Figure V-1 is an example of the MSDS format.

Figure V-1 - MSDS Format


# MATERIAL SAFETY DATA SHEET

## I PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	REGULAR TELEPHONE NO. EMERGENCY TELEPHONE NO.
ADDRESS	
<b>TRADE NAME</b>	
<b>SYNONYMS</b>	

## II HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA

## III PHYSICAL DATA

BOILING POINT, 760 MM HG		MELTING POINT
SPECIFIC GRAVITY (H <sub>2</sub> O=1)		VAPOR PRESSURE
VAPOR DENSITY (AIR=1)		SOLUBILITY IN H <sub>2</sub> O, % BY WT.
% VOLATILES BY VOL.		EVAPORATION RATE (BUTYL ACETATE :1)
APPEARANCE AND ODOR		

## IV FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	AUTOIGNITION TEMPERATURE	
FLAMMABLE LIMITS IN AIR, % BY VOL.	LOWER	UPPER
EXTINGUISHING MEDIA		
SPECIAL FIRE FIGHTING PROCEDURES		
UNUSUAL FIRE AND EXPLOSION HAZARD		

## V HEALTH HAZARD INFORMATION

HEALTH HAZARD DATA
ROUTES OF EXPOSURE
INHALATION
SKIN CONTACT
SKIN ABSORPTION
EYE CONTACT
INGESTION
EFFECTS OF OVEREXPOSURE
ACUTE OVEREXPOSURE
CHRONIC OVEREXPOSURE
EMERGENCY AND FIRST AID PROCEDURES
EYES:
SKIN:
INHALATION:
INGESTION:
NOTES TO PHYSICIAN

## VI REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

INCOMPATIBILITY

HAZARDOUS DECOMPOSITION PRODUCTS

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

## VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

NEUTRALIZING CHEMICALS

WASTE DISPOSAL METHOD

## VIII SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL)

EYE

GLOVES

OTHER CLOTHING AND EQUIPMENT

## IX SPECIAL PRECAUTIONS

PRECAUTIONARY  
STATEMENTS

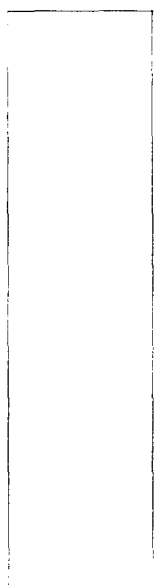
OTHER HANDLING AND  
STORAGE REQUIREMENTS

PREPARED BY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

DATE: \_\_\_\_\_

The following items of information which are applicable to a specific product or material shall be provided in the appropriate block of the Material Safety Data Sheet.



<input type="checkbox"/>	<input type="text"/>
<input type="checkbox"/>	<input type="text"/>
<input type="checkbox"/>	<input type="text"/>

## **MATERIAL SAFETY DATA SHEET**

The product designation is inserted in the block in the upper left corner of the first page to facilitate filing and retrieval. Print in upper case letters in as large type size as possible. It should be printed to read upright with the sheet turned sideways. The product designation is that name or code designation which appears on the label, or by which the product is sold or known by employees. The relative numerical hazard ratings and key statements are those determined by the rules in Chapter V,



Part B. The company identification may be printed in the upper right corner if desired.

<b>I PRODUCT IDENTIFICATION</b>	
MANUFACTURER'S NAME	REGULAR TELEPHONE NO. EMERGENCY TELEPHONE NO.
ADDRESS	
<b>TRADE NAME</b>	
<b>SYNONYMS</b>	

The manufacturer's name, address, regular and emergency telephone number (including area code), are inserted in the appropriate blocks of Section I. The company listed here should be a source of detailed backup information on the hazards of the material(s) covered by the MSDS. The listing of suppliers, or wholesale distributors is discouraged. The trade name should be the product designation or common name associated with the material. The synonyms are those commonly used for this product, especially formal chemical nomenclature. Every known chemical designation or competitor's trade name need not be listed.

## II HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA

The "materials" listed here shall be those substances which are part of the hazardous product covered by the MSDS and individually meet any of the criteria defining a hazardous material. Thus one component of a multi-component product might be listed because of its toxicity, another component because of its flammability, while a third could be included both for its toxicity and its reactivity. Note that a MSDS for a single component product must have the name of the material repeated in this section to avoid giving the impression that there are no hazardous ingredients.

Chemical substances should be listed according to their complete name derived from a recognized system of nomenclature. Where possible, avoid using common names and general class names such as "aromatic amine," "safety solvent," or "aliphatic hydrocarbon" when the specific name is known.

The % may be the approximate percentage by weight or volume (indicate basis) which each hazardous ingredient of the mixture bears to the whole mixture. This may be indicated as a range or maximum amount, ie, 10-40% vol. or 10% max. wt. to avoid disclosure of trade secrets.

Toxic hazard data shall be stated in terms of concentration, mode of exposure or test, and animal used, ie, 100 ppm LC50 oral rat, 25 mg/cu m LD50 skin-rabbit, 75 ppm LC man, or permissible exposure from 29 CFR 1910.93, or if not available, from other published sources such as the ACGIH TLV list. [16] Flammable or reactive data could be flash point, shock sensitivity, or other brief data indicating nature of the hazard.

### III PHYSICAL DATA

BOILING POINT, 760 MM HG		MELTING POINT
SPECIFIC GRAVITY (H <sub>2</sub> O = 1)		VAPOR PRESSURE
VAPOR DENSITY (AIR = 1)		SOLUBILITY IN H <sub>2</sub> O, % BY WT.
% VOLATILES BY VOL.		EVAPORATION RATE (BUTYL ACETATE = 1)
APPEARANCE AND ODOR		

The data in this section should be for the total mixture and should include the boiling point and melting point in degrees Fahrenheit (Centigrade in parentheses); vapor pressure, in millimeters of mercury; vapor density of gas or vapor (air = 1); solubility in water, in parts per hundred parts of water by weight; specific gravity (water = 1); percent volatile, indicate if by weight or volume, at 70 Fahrenheit (15.5 Centigrade); evaporation rate for liquids or sublimable solids; and

appearance and odor. These data are useful for the control of toxic vapors. Boiling point, vapor density, % volatiles, vapor pressure and evaporation are useful for designing proper ventilation equipment.

This information is also useful for design and deployment of adequate fire and spill containment equipment. The appearance and odor may facilitate identification of substances stored in improperly marked containers, or when spilled.

<b>IV FIRE AND EXPLOSION DATA</b>				
FLASH POINT (TEST METHOD)			AUTOIGNITION TEMPERATURE	
FLAMMABLE LIMITS IN AIR, % BY VOL.	LOWER		UPPER	
EXTINGUISHING MEDIA				
SPECIAL FIRE FIGHTING PROCEDURES				
UNUSUAL FIRE AND EXPLOSION HAZARD				

This section should contain complete fire and explosion data for the product, including flash point and autoignition temperature in degrees Fahrenheit (Centigrade); flammable limits, in percent by volume in air; suitable extinguishing media or materials; special fire fighting procedures; and unusual fire and explosion hazard information. If the product presents no fire hazard, insert "NO FIRE HAZARD" on the line labeled "Extinguishing Media."

## V HEALTH HAZARD INFORMATION

### HEALTH HAZARD DATA

#### ROUTES OF EXPOSURE

INHALATION

SKIN CONTACT

SKIN ABSORPTION

EYE CONTACT

INGESTION

#### EFFECTS OF OVEREXPOSURE

ACUTE OVEREXPOSURE

CHRONIC OVEREXPOSURE

#### EMERGENCY AND FIRST AID PROCEDURES

EYES:

SKIN:

INHALATION:

INGESTION:

#### NOTES TO PHYSICIAN

The "Health Hazard Data" should be a combined estimate of the hazard of the total product. This can be expressed as a time-weighted average

concentration, permissible exposure, or by some other indication of acceptable standard. Other data, such as lowest LD50, are acceptable.

Under "Principal Routes of Absorption" comments in each category should reflect the potential hazard from absorption by this route. Comments should indicate the severity of the effect and the basis for the statement if possible. Basis might be animal studies, analogy with similar products, or human experiences. Comments such as "yes", or "possible" are not helpful. Typical comments might be:

Skin Contact single short contact-- no adverse effects likely.

Prolonged or repeated contact - mild irritation and possibly some blistering.

Eye Contact some pain and mild transient irritation. No corneal scarring.

Effects of Overexposure should include relevant signs, symptoms, and disease entities that could arise from acute and chronic exposure to the hazardous agent.

The "Emergency and First Aid Procedures" should be written in lay language, and should primarily be first aid treatment that could be provided by paramedical personnel or individuals trained in first aid.

Information in the Notes to Physicians section should include any special medical information which would be of assistance to an attending physician including required or recommended preplacement and periodic medical examinations, diagnostic procedures, and medical management of overexposed workers.

## VI REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

INCOMPATIBILITY

HAZARDOUS DECOMPOSITION PRODUCTS

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

The comments in this section relate to safe storage and handling of hazardous, unstable substances. It is particularly important to highlight instability or incompatibility to common substances or circumstances such as water, direct sunlight, steel or copper piping, acids, alkalies, etc. "Hazardous Decomposition Products" shall include those products released under fire conditions. It must also include dangerous products produced by aging such as peroxides in the case of some ethers. Where applicable, shelf life should be indicated here.

## VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

NEUTRALIZING CHEMICALS

WASTE DISPOSAL METHOD

Detailed procedures for clean-up and disposal should be listed with emphasis on precautions to be taken to protect workers assigned to the clean-up detail. Specific neutralizing chemicals or procedures should be specified in detail. Disposal methods should be explicit including proper labeling of containers holding residues and ultimate disposal methods such as "sanitary landfill", "incineration". Warnings to comply with local, State, and Federal anti-pollution ordinances are proper but not sufficient. Specific procedures shall be identified.



<b>VIII SPECIAL PROTECTION INFORMATION</b>
VENTILATION REQUIREMENTS
SPECIFIC PERSONAL PROTECTIVE EQUIPMENT RESPIRATORY (SPECIFY IN DETAIL)
EYE
GLOVES
OTHER CLOTHING AND EQUIPMENT

This section requires specific information. "Yes", "No", or "If Necessary" are not informative. Ventilation requirements should be specific as to type and preferred methods. Respirators shall be specified as to type and NIOSH or US Bureau of Mines approval class, ie, "Supplied Air", "Organic vapor canister", "Suitable for dusts not more toxic than lead", etc. Protective equipment must be specified as to type and materials of construction.

## IX SPECIAL PRECAUTIONS

PRECAUTIONARY  
STATEMENTS

OTHER HANDLING AND  
STORAGE REQUIREMENTS

"Precautionary Statements" shall consist of the label statements selected for use on the container or placard. Additional information on any aspect of safety or health not covered in other sections should be inserted here. The lower block can contain references to published guides or in-house procedures for handling and storage. Department of Transportation markings and classifications and other freight, handling, or storage requirements and environmental controls can be noted here.

PREPARED BY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

DATE: \_\_\_\_\_

Finally, the name and address of the responsible person who completed the MSDS and the date of completion are entered. This will facilitate correction of errors and identify a source of additional information.

The MSDS shall be filed in a location readily accessible to workers potentially exposed to the hazardous material. The MSDS can be used as a training aid and basis for discussion during safety meetings and training of new employees. It should assist management by directing attention to the need for specific control engineering, work practices, and protective measures to ensure safe handling and use of the material. It will aid the safety and health staff in planning a safe and healthful work environment and suggesting appropriate emergency procedures and sources of help in the event of harmful exposure of employees.

(d) Preparation of the Hazard Alert Symbol

A hazard symbol can be developed once the relative numerical index of a hazardous material or product containing one or more hazardous materials has been determined by comparison of its properties with the criteria in Part (b). Figure V-2 depicts the symbol for a substance of Rating 4 Health Hazard, Rating 3 Flammability, and Rating 2 Reactivity. The signal words to the right of the boxes are governed by the signal words of the rating assigned to the material.

4	Extreme Health Hazard
3	Highly Flammable
2	Moderately Reactive

FIGURE V-2 - HAZARD ALERT SYMBOL

(e) Selection of Label Statements

Label statements are intermediate in information content between the hazard symbol and the detailed Material Safety Data Sheets. It is stressed that the requirements detailed in this section are minimal because of the complexity and diversity of hazardous materials. Additional warnings and detailed medical and other information may be desirable on labels attached to containers of new or unusual materials. In addition, the manufacturer or user may supply additional cautions on ecological or other matters, as appropriate.

Appendix II contains tables of suggested label statements. They are supplied for guidance only. Label wording should be tailored specifically for each material or combination of materials.

For health hazards, the major considerations are modes of entry, speed of attack, and whether the effects are acute or chronic.

For fire hazards, considerations include vapor pressure and vapor density, autoignition temperature, explosive limits, viscosity, products of combustion, and extinguishing media.

Reactivity hazards require knowledge of sensitivity to detonation by shock or heat, tendency to rapid polymerization, reactivity with common substances, ability to supply oxygen in a fire situation, and other special harmful properties.

The number of statements used will depend on the hazard involved. Extremely dangerous materials may require extensive warnings and detailed instructions for safe use and disposal. Minimally hazardous substances may require little more than the hazard statement. Specific and more detailed first aid statements including notes to physicians may be necessary for

extremely hazardous materials. These statements are best formulated by physicians familiar with the hazards of the specific material and aware of the capabilities of industrial paramedical personnel and facilities.