



SAFETY REGULATION NO. 2

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PRECAUTIONARY LABELING OF HAZARDOUS CHEMICALS



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STATE OF NEW JERSEY
DEPARTMENT OF LABOR & INDUSTRY
BUREAU OF ENGINEERING & SAFETY
Trenton, N. J.

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FOREWORD

The development of new chemical products and the introduction of chemical processes into ever-widening fields have accentuated the need for furnishing appropriate information in those cases where there are hazards requiring special precautions. Precautionary information should, so far as practicable, reach every person using, handling, or storing chemicals. The most practical means to disseminate this information appears to be by warning labels affixed to containers of hazardous chemicals, bearing appropriate precautionary statements expressed as simply and briefly as circumstances permit. This Regulation establishes reasonable labeling requirements to accomplish this purpose. It is based upon *Guide to Precautionary Labeling of Hazardous Chemicals*, Manual L-1, Sixth Edition-1961, published by the Manufacturing Chemists Association.

Such label information, however, cannot take the place of the education of personnel regarding product hazards and the use of safety clothing and equipment. This education is, and must remain, the direct responsibility of their employers. The wording on precautionary labels cannot be expected to cover complete information as to the properties of a material nor the complete details of its proper handling under all conditions.

This Regulation is promulgated by the Commissioner of Labor and Industry of the State of New Jersey, under authority vested in him by Section 9 of the Worker Health and Safety Act, P. L. 1965, c. 154, N.J.S.A. 34:6A as follows:

The Commissioner shall make and promulgate rules and regulations reasonably necessary to implement the purposes of this act. Such rules and regulations shall have the force and effect of law and shall be enforced in the manner provided in this act. . . .

The same statute provides authority for the commissioner to grant exceptions from the requirements of rules and regulations in accordance with section 23 as follows:

The commissioner shall have the power and authority to grant exceptions from the literal requirements of rules and regulations promulgated under this act. Such exception shall be granted in any particular case only where it is clearly evident that it is necessary to prevent undue hardship or where existing conditions prevent compliance. In no case shall any exception be granted unless in the opinion of the commissioner reasonable protection of the health and safety of workers and the public will be maintained hereby. An application for an exception shall be filed in writing

with the commissioner, setting forth specifically the requirements of the rules and regulations from which an exception is desired and the reason why enforcement of the applicable provisions of the rules and regulations is unreasonable. The commissioner shall grant or deny the exception within 30 days from the date of receipt by him of the application. The commissioner shall maintain a record of all exceptions granted and shall make such record reasonably available for public examination and shall mail a copy of all rulings granting exceptions to the members of the board.

Prior to its promulgation, this Regulation was submitted to the New Jersey State Industrial Safety Committee and the Industrial Safety Board in accordance with requirements of the act cited above.

SECTION 1 - PURPOSE AND SCOPE

- 1.1 *Purpose* - The purpose of this Regulation is to provide reasonable requirements for the labeling of containers holding hazardous substances for the protection of the health and safety of employees.
- 1.2 *Scope* - This Regulation provides for warning label requirements for containers holding hazardous substances when such containers are used, handled, or stored in any place of employment subject to the Worker Health and Safety Act, P. L. 1965, c. 154, N.J.S.A. 34:6A.

SECTION 2 - DEFINITIONS

- 2.1 *Combustible Liquid* - any liquid which gives off flammable vapors above 80° F. to and including 150° F., as determined by flash point with Tagliabue's Open-Cup Method as used for testing of burning oils.
- 2.2 *Container* - an individual package, such as a bag, box, barrel, bottle, tube, can, carboy, cylinder, or drum, that is used to store or dispense a harmful substance. A container shall not include equipment or devices used either in the dynamic conveyance of such substances or in processing such substances.
- 2.3 *Corrosive (Physiological)* - a substance which in contact with living tissue causes destruction of the tissue by chemical action. This term shall not refer to action on inanimate surfaces.
- 2.4 *Dust* - solid particles generated by handling, crushing, grinding, rapid impact, detonation, or decrepitation of organic or inorganic materials such as rock, ore, metal, coal, wood, grain, etc. Dusts do not diffuse in air but settle under the influence of gravity.
- 2.5 *Extremely Flammable Liquid* - any liquid which gives off flammable vapors, at or below a temperature of 20° F., as determined by flash point with Tagliabue's Open-Cup Method as used for testing of burning oils.
- 2.6 *Flammable Liquid* - any liquid which gives off flammable vapors, above 20° F. to and including 80° F., as determined by flash point with Tagliabue's Open-Cup Method as used for testing of burning oils.
- 2.7 *Fume* - solid particles generated by condensation from the gaseous state, generally after volatilization from molten metals, etc., and often accompanied by a chemical reaction such as oxidation. Fumes flocculate and sometimes coalesce.

- 2.8 *Gas* - a normally formless fluid which occupies the space of enclosure and which can be changed to the liquid or solid state by the effect of increased pressure or decreased temperature or both. A gas diffuses.
- 2.9 *Hazardous Substance* - any substance or mixture of substances which is (1) toxic; (2) corrosive; (3) an irritant; (4) a strong sensitizer; (5) flammable, or which (6) generates pressure through decomposition, heat, or other means, if such substance or mixture of substances may cause substantial personal injury or substantial illness during or as a direct result of any customary or reasonably anticipated handling or use.
- 2.10 *Irritant (Physiological)* - any substance which on immediate, prolonged, or repeated contact with normal living tissue will induce a local inflammatory reaction.
- 2.11 *Mist* - suspended liquid droplets generated by condensation from the gaseous to the liquid state or by breaking up a liquid into a dispersed state, such as by splashing, foaming, or atomizing.
- 2.12 *Mixture* - a physical commingling of two or more substances which may or may not bear a fixed proportion to one another and which have not reacted chemically with one another.
- 2.13 *Oxidizing Material* - a substance that yields oxygen readily to stimulate the combustion of organic matter.
- 2.14 *Poison* - any substance or mixture of substances which falls within any of the following categories:
- (1) Produces death within 14 days in half or more than half of a group of 10 or more laboratory white rats each weighing between 200 and 300 grams, at a single dose of 50 milligrams or less per kilogram of body weight, when orally administered; or
 - (2) Produces death within 14 days in half or more than half of a group of 10 or more laboratory white rats each weighing between 200 and 300 grams, when inhaled continuously for a period of one hour or less at an atmospheric concentration of 200 parts per million or less by volume of gas or vapor or 2 milligrams or less per liter of mist, fume or dust, provided such concentration is likely to be encountered by man when the substances are used in any reasonably foreseeable manner; or
 - (3) Produces death within 14 days in half or more than half of a group of 10 or more rabbits tested in a dosage of 200 milligrams or less per kilogram of body weight, when administered by continuous contact with bare skin for 24 hours or less.

If available data on human experience with any substance in the above-named concentrations indicate results different from those obtained on animals, the human data shall take precedence in any classification of a substance as poisonous.

- 2.15 *Sensitizer* - a substance which will cause on normal living tissue through an allergic or photodynamic process a hyper-sensitivity which becomes evident on reapplication of the same substance.
- 2.16 *Toxic Substance* - a substance which has the inherent capacity to produce personal injury or illness to man through ingestion, inhalation, or absorption through any body surface.
- 2.17 *Vapor* - the gaseous form of a substance which is normally in the solid or liquid state. A vapor diffuses.

SECTION 3 - GENERAL REQUIREMENTS

- 3.1 All containers holding hazardous substances shall be labeled in accordance with this Regulation.
- 3.2 No employer in any establishment within the scope of this Regulation shall accept any containers of hazardous substances for use or handling by his employees unless such containers are labeled according to this Regulation.
- 3.3 No employer in any establishment within the scope of this Regulation shall distribute, make available, furnish or supply for use by his employees any hazardous substance unless the same is labeled according to this Regulation.
- 3.4 No employer in any establishment within the scope of this Regulation shall distribute, make available, furnish or supply for personal use by employees any container known to have contained a hazardous substance unless the container has been thoroughly and properly cleaned.

SECTION 4 - GENERAL LABELING REQUIREMENTS

- 4.1 The following information shall appear on containers of hazardous substances, which shall include but not be limited to the substances used for illustrative purposes in Appendix 3.
 - 4.1.1 Name of Product. The chemical name of the product should be used. Trade names may be used in addition to chemical names. A non-descriptive code designation or trade name should not be used as the only identification for hazardous chemicals. If the complete chemical name is not shown the label must at least clearly state the type of chemical, e.g., "corrosive acid," "lead compound."

- 4.1.2 Signal word designating degree of hazard, such as, DANGER!, WARNING!, CAUTION! (it is recommended that DANGER! refer to the most serious hazard and CAUTION! the least.)
- 4.1.3 Affirmative Statement of Hazards. This statement must give notice of the hazards that are present in connection with the customary or reasonably anticipated handling or use of the product, for example: "causes burns," "vapor extremely hazardous."
- 4.1.4 Precautionary measures covering actions to be followed or avoided. These instructions must supplement the statement of hazards by setting forth briefly measures to be taken to avoid injury from stated hazards. For example, "keep away from heat, sparks and open flame;" "Avoid breathing dust."
- 4.1.5 Instructions in Case of Contact or Exposure. Such instructions must be included in those instances where the result of contact or exposure are severe and immediate treatment is highly desirable, and where simple remedial measures may be taken safely by non-professional persons before medical assistance is available.
- 4.1.6 The word "POISON" for poisonous substances as defined in Section 2.14 or when required by any statute of this State, regulations of any state agency, or federal statute.
- 4.2 Warning statement or labels required by the provisions of this Regulation shall be located prominently on the container and shall be printed in legible type which shall be in contrast by typography, layout, or color with other printed matter on the container.
- 4.3 Use of language on labels which is the practical equivalent of that shown in Appendix Part 1 shall constitute compliance with this Regulation, except that no words shall be regarded as the practical equivalent of the words "Poison," or "Poisonous."

SECTION 5 - CONTAINER HANDLING AND STORAGE

Appropriate instructions shall be given either on separate labels or in combination with the warning labels attached to the container whenever required for the safe handling and storage of containers. Care shall always be exercised in handling and storing containers of hazardous substances. The general instructions set out in Appendix Part II shall be used as a guide in labeling for special handling and storing certain classes of containers. Applicable phrases may be selected from these statements.

APPENDIX

PART I Selection of Precautionary Statements

PART II Container Handling and Storage

PART III Illustrative Warning Labels for Industrial Chemicals

PART I

SELECTION OF PRECAUTIONARY STATEMENTS

Products will be encountered that present hazards varying in kind or degree from those listed. Appropriate Statement of Hazards, Precautionary Measures, and Instructions in Case of Contact or Exposure should be prepared on the basis of the properties of the product, following the pattern and general phraseology of the following table. Parenth'llical words in the table express variations in kind or degree and are to be used where applicable.

Class of Hazard	Statements of Hazard
I. Liquids Flashing at 150° F. or Below (Flash points are determined by the Tagliabue Open-Cup Method) A. Flash point 20° F. or below B. Flash point above 20° F. to 80° F. inclusive C. Flash point above 80° F. to 150° F. inclusive	IMPORTANT: Select applicable statement(s) only. Selection(s) to be based on actual hazard(s) and degree of hazard. In some instances, where a mild/caution is indicated, the Statement of Hazard may be omitted and adequate information provided by the statement of Precautionary Measures. EXTREMELY FLAMMABLE FLAMMABLE COMBUSTIBLE STRONG OXIDANT CONTACT WITH COMBUSTIBLE (OTHER) MATERIAL MAY CAUSE FIRE
II. Oxidizing Materials	
III. Materials Giving Vapors Rapidly Toxic or Extremely Irritating on Exposure for a Short Time or to Low Concentrations	VAPOR (EXTREMELY) HAZARDOUS (IRRITATING) HAZARDOUS LIQUID AND VAPOR (GAS UNDER PRESSURE) VAPOR POISONOUS IF INHALED VAPOR MAY BE FATAL IF INHALED [See NOTE opposite page]
IV. Materials Giving Vapors Hazardous from Prolonged or Repeated Exposures or Exposure to High Concentrations	VAPOR HARMFUL CAUSES IRRITATION OF EYES, NOSE, AND THROAT
V. Gases and Vapors Physiologically Inert	GAS (VAPOR) REDUCES OXYGEN AVAILABLE FOR BREATHING RELEASES HEAVY GAS (VAPOR) WHICH MAY CAUSE SUFFOCATION
VI. Materials in Dust Form Hazardous from Inhalation or Contact	HAZARDOUS (HARMFUL) DUST HARMFUL IF INHALED CAUSES IRRITATION OF SKIN, EYES, NOSE, AND THROAT
VII. Corrosives	CAUSES SEVERE BURNS CAUSES BURNS MAY CAUSE BURNS
VIII. Irritants, Sensitizers	CAUSES SKIN IRRITATION MAY CAUSE SKIN IRRITATION
IX. Materials Toxic through Skin Absorption	(EXTREMELY) HAZARDOUS (HARMFUL) SOLID (LIQUID) ABSORPTION THROUGH SKIN MAY BE FATAL ABSORPTION THROUGH SKIN HARMFUL (RAPIDLY) ABSORBED THROUGH SKIN [See NOTE opposite page]
X. Materials Toxic if Swallowed	POISONOUS IF SWALLOWED MAY BE FATAL IF SWALLOWED HARMFUL IF SWALLOWED [See NOH opposite page]

The statements shown below are not intended to be complete. In the preparation of a given label, statements applicable to the product may be found in this Table. However, suitable modification thereof, or different statements entirely, may be necessary.

NOTE: "POISON-skull and crossbones" should be included if the product meets any of the criteria for "POISON"

If "POISON" is used, add a first aid or antidote statement as required.

Precautionary Measures	Instructions in Case of Contact or Exposure
IMPORTANT: Select applicable statement(s) only. Selection(s) to be based on actual hazard(s) and degree of hazard. In some instances the omission of a Precautionary Statement may be justified where the measure to be followed is obvious from the Statement of Hazard.	IMPORTANT: Select applicable statement(s) only. Selection(s) to be based on necessity for prompt action in order to avoid serious effects.
Keep away from heat (sparks,) and open flame. Keep container closed (and away from heat). Use with adequate ventilation.	
Store separately (away) from and avoid contact with combustible (other) materials. Avoid contamination of clothing as it becomes dangerously flammable when dry. Keep container closed (and away from heat). Avoid contact with skin and eyes.	In case of contact, immediately flush skin or eyes with plenty of water for (at least) 15 minutes; for eyes, get medical attention. (Wash clothing thoroughly at once.) Sweep up spillage at once. Flush or absorb spillage with
Do not breathe vapor. Do not get in eyes, on skin, on clothing. Use only with adequate ventilation. Keep container closed (and away from heat). Have air-line respirator or self-contained oxygen respirator available for emergency.	In case of contact, immediately flush skin or eyes with plenty of water for (at least) 15 minutes; for eyes, get medical attention. Remove and wash clothing before re-use. [See NOTE above]
Use only with adequate ventilation. Avoid (prolonged or repeated) breathing (of) vapor. Avoid contact with skin, eyes, and clothing. Keep container closed (and away from heat).	If spilled on clothing, remove and wash before re-use. In case of exposure to high concentrations, move to fresh air.
Use with adequate ventilation. Keep container closed. Do not enter storage areas unless adequately ventilated.	If affected by exposure, move to fresh air. If breathing has stopped, apply artificial respiration.
Do not breathe dust. Avoid breathing dust. Wash thoroughly before eating or smoking. Avoid contact with skin, eyes, and clothing.	In case of contact, (immediately) flush skin or eyes with plenty of water for (at least) 15 minutes; for eyes, get medical attention. (Remove and wash clothing before re-use.)
Do not get in eyes, on skin, on clothing. Avoid contact with skin, eyes, and clothing. Avoid exposure to (concentrated) vapor.	In case of contact, immediately flush skin or eyes with plenty of water for (at least) 15 minutes; (for eyes,) get medical attention. (Remove and wash clothing before re-use.)
Avoid (prolonged or repeated) contact with skin. Wash thoroughly after handling. Avoid -txposure to (concentrated) vapor.	In case of contact, flush with (plenty of) water; (for eyes, get medical attention.)
Do not get in eyes, on skin, on clothing. Avoid contact with skin, eyes, and clothing.	In case of contact, immediately (remove all contaminated clothing and) flush skin or eyes with plenty of water for (at least) 15 minutes; (for eyes,) get medical attention. Wash clothing before re-use. [See NOTE above]
Wash thoroughly before eating or smoking. Wash thoroughly after handling. Do not breathe dust (vapor). Avoid breathing dust (vapor). Do not take internally.	[See NOTE above]

PART II

CONTAINER HANDLING AND STORAGE

Care should always be exercised in handling and storing containers of hazardous chemicals and in removing the contents. The Chemical Packaging Committee of the Manufacturing Chemists' Association, Inc., has recommended the general precautions given below for handling and storing certain classes of containers. Applicable phrases may be selected from these statements. These may be used either as separate labels or in combination with the precautionary labels illustrated in Part II. Where the properties of the substances require special or additional precautions, such instructions are indicated in some instances in conjunction with the individual label in Part II.

Metal Drum Handling and Storage (for liquids and semi-liquids)

- Keep plug up to prevent leakage.
- Keep drum out of sun and away from heat.
- Relieve internal pressure when received and at least weekly thereafter by slowly loosening plug. Retighten immediately.
- Drums should be grounded when being emptied.
- Do not drop or slide across sharp projection.
- Never use pressure to empty. Drum is not a pressure vessel.
- Keep lights, fire and sparks away from drums.
- Drum must not be washed out or used for other purposes.
- Replace plug after each withdrawal and return with empty drum.
- In case of spillage, flush with plenty of water.

Glass Carboy Handling and Storage

- Before moving carboy be sure closure is securely fastened.
- Avoid rough handling or dropping.
- Loosen closure carefully.
- Keep carboy out of sun and away from heat.
- Never use pressure to empty. Carboy is not a pressure vessel.
- Completely drain carboy before returning.
- In case of spillage, flush with plenty of water.

Wooden Barrel Handling and Storage (for liquids and semi-liquids)

- Keep barrel out of sun and away from heat.
- Store with bilge bung up.
- Never use pressure to empty.
- Drain completely.
- Keep barrel moist-shrinkage may cause leaks.
- In case of spillage, flush with plenty of water.

Cylinder Handling and Storage

- Keep cylinder out of sun and away from heat.
- Never drop cylinders.
- Keep cylinders locked vertically to prevent falling and/or dropping.
- Be sure connections are tight.
- ICC Regulations prohibit refilling cylinder without permission of owner.
- Have air-line respirator or self-contained oxygen respirator available for emergency.

Aerosol Containers

The term "aerosol container" is generally applied to a container which holds its contents under pressure and is equipped with a dispensing nozzle designed to release the container's contents through a very small orifice. While a true aerosol is a mist or spray of fine particles or droplets suspended in air, aerosol type containers are used for packaging and dispensing many products which do not form true aerosols on release. Thus, there are aerosol products dispensed as depositing sprays (paints or insecticides) or as semi-liquid froths (whipping cream or shaving lather). In all cases, aerosol containers require more care in handling and storage than similar unpressurized containers, and particularly require protection from elevated temperatures. When the contents are released as an aerosol or fine spray, there may be greater flammability or inhalation hazard than would be presented by the same product in other types of packaging and use.

The Chemical Specialties Manufacturers Association suggests the following precautionary text for the pressure hazard presented by a metal aerosol container:

WARNING! Contents under pressure. Do not puncture.
Exposure to heat or prolonged exposure to sun may cause bursting.
Do not throw into fire or incinerator.

Note: *Additional requisite cautions for statements as to hazards to persons and property, the safe discharge of contents, etc., will depend upon the particular product.*

Appropriate modification of the above text may be required for an aerosol container made of a nonmetallic material. Also, additional precautionary labeling may be needed to warn against hazards presented by the contents of an aerosol container after release. Special test procedures developed by the Chemical Specialties Manufacturers Association are used in determining the flammability hazards of products in aerosol containers.

PART III

The Manufacturing Chemists' Association Manual L-1 upon which Regulation No. 2 is based made a number of changes in the illustrative labels included in its 1956 Manual upon which Safety Regulation No. 2 effective 1 August 1958 (now superseded) was based. To describe the changes made in the illustrative labels, below is listed the chemical substances involved.

The fact that a label text formerly used is deleted from this Regulation does not imply that the material no longer requires precautionary labeling. Furthermore, the omission of a label text for a particular product does not indicate that the product does not require precautionary labeling.

LABELS ADDED

Acrolein	Lead Oxide (Red Lead)
Benzidine Hydrochloride	Methyl Acrylate
Benzidine Sulfate	Methylamines, Anhydrous
Benzoyl Peroxide	Methylamines, Aqueous Solutions
Beryllium Oxide Powder	Pentaborane
Butyllithium (normal)	Phosphorus Pentasulfide
Calcium Cyanide	Potassium Dichromate
Decaborane	Titanium Trichloride, Anhydrous
Diborane	Tolyene Diisocyanate
Dichlorobenzene (ortho)	Vanadium Tetrachloride
Ethyl Acrylate	Vinyl Acetate
Isopropylamine	Zirconium Metal Powder

LABELS REVISED

Acetaldehyde	Caustic Soda
Acetic Acid, Glacial	Chlorine
Acetic Anhydride	Chlorosulfonic Acid
Acetyl Chloride	Chromic Acid [Chromium Trioxide]
Acrylonitrile	(now Chromium Trioxide [Chromic Acid])
Allyl Alcohol	Cresol (Cresylic Acid)
Allyl Chloride	Cyanides, Inorganic
Aluminum Chloride, Anhydrous	Cyclohexane
Ammonium Hydroxide	Dichloroethylene
iso-Amyl Acetate (now Amyl Acetate, Mixed Isomers)	Dichloroethyl Ether
Aniline	Diethylamine
Antimony Trichloride	Diethylenetriamine
Barium Chloride	Dimethylamine, Anhydrous
Benzyl Chloride	Dimethyl Sulfate
Bromine	Dioxane (1,4-Diethylene Dioxide)
Butadiene (now Butadiene, Inhibited)	Ethyl Acetate
Butyl Alcohol (normal or secondary)	Ethylene Chlorohydrin (Anhydrous or 38%)
n-Butylamine (now Butylamine, normal)	Ethylene Dichloride
Butyraldehyde	Ethylene Oxide
Caustic Potash	

LABELS REVISED

Formaldehyde Solution	Phosphorus
Hydrochloric Acid (Muriatic Acid)	Phosphorus Pentachloride
Hydrocyanic Acid	Phthalic Anhydride
Hydrogen Chloride, Anhydrous	Potassium Hydroxide
Hydrogen Peroxide 7.4%	iso-Propyl Ether (now Isopropyl Ether)
Hydrogen Peroxide (stronger than 7.4% but not exceeding 52%)	Pyridine
Hydrogen Sulfide	Silver Nitrate
Lead Monoxide (Litharge)	Sodium Cyanide
Mercuric Chloride (Mercury Bichloride)	Sodium Fluoride
Methanol	Sodium Hydrosulfite
Methyl Bromide	Sodium Hydroxide
Methyl Chloride	Sodium Orthosilicate
Methyl Ethyl Ketone	Sodium Sesquisilicate, Anhydrous
Methyl Methacrylate Monomer	Sodium Sulfhydrate
Methyl Morpholine	Sodium Sulfide
Mixed Acid (Sulfuric and Nitric)	Sulfur Chloride
Morpholine	Sulfur Dichloride
Muriatic Acid	Sulfuryl Chloride
Naphthylamine (alpha)	Tar Acids
Paraformaldehyde	Thionyl Chloride
Phenol	Toluene (Toluol)
Phosphoric Acid	Toluidine (ortho or meta)
Phosphoric Anhydride (now Phosphorus Pentoxide)	Toluidine (para)
	Xylene (Xylol)

LABELS DELETED

Ammonia, Anhydrous	Methyl Cyclohexanol
Barium Nitrate	Methyl Cyclohexanone
Benzidine	Methyl iso-Propyl Ketone
1,2-Dichloroethane	Methylene Chloride
Di-iso-Butyl Ketone	Nitrogen Dioxide
Dimethylaniline	Nitrophenol
Dipropyl Ketone	Pentachlorophenol
Ethyl Formate	Petroleum Naphthas and Solvents, Industrial
Ethylene Dibromide	Phenetidine (ortho or para)
Ethylene Glycol Monomethyl Ether	iso-Propyl Acetate
Mesityl Oxide	Propylene Chlorohydrin
Methyl Amyl Acetate	Sodium Fluosilicate
Methyl Amyl Alcohol	Tetrachlorophenol
Methyl n-Amyl Ketone	Trichlorophenol
Methyl iso-Butyl Ketone	

ILLUSTRATIVE WARNING LABELS FOR INDUSTRIAL CHEMICALS

The warning labels in this part of the appendix have been prepared by the Manufacturing Chemists' Association, Inc. to demonstrate the practical application of labeling requirements to a number of chemical products intended for industrial use. The user should familiarize himself with the requirements of Safety Regulation No. 2 before adapting any of the label statements contained herein. The chemicals were selected to illustrate labeling for the major types of hazards commonly encountered. Consequently, the listing covers only a relatively few of the hazardous chemicals for which warning labels are necessary. In many cases, these labels are applicable to other products, some of which are listed with appropriate cross references.

The labels are based on the properties of the named chemicals; the presence of other substances including impurities, may alter these properties and necessitate additional or different precautionary information.

General information regarding the handling and storage of containers is not included on these labels.

First aid treatment is given for a few products only. Such information may be desirable on other products. Where "clothing" is mentioned in first aid instructions, it should be understood to mean all articles of clothing, including shoes, garters, and other accessories. Shoes are specifically named in some instructions because of special hazards arising from absorption of the chemical by leather.

ACETALDEHYDE

**DANGER! EXTREMELY FLAMMABLE
MAY FORM EXPLOSIVE PEROXIDES
UNDER AIR PRESSURE**

Keep away from heat, sparks, and open flame.

Keep container closed.

Use with adequate ventilation.

Avoid prolonged breathing of vapor.

Cool to below 68 ° F. before opening.

Do not use air pressure to transfer.

ACETIC ACID, GLACIAL

DANGER! CAUSES SEVERE BURNS

Do not get liquid or vapor in eyes, on skin, on clothing.

Keep away from heat and open flame.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

Glacial Acetic Acid freezes at 62 ° F., forming hard lumps which may break carboy when moved.

Store in area maintained above 62 ° F.

If frozen, thaw by carefully moving carboy to warm area.

ACETIC ACID, 80%

DANGER! CAUSES SEVERE BURNS

Do not get liquid or vapor in eyes, on skin, on clothing.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

ACETIC ACID, 56% - 70%

WARNING! MAY CAUSE BURNS

Avoid contact with skin, eyes, and clothing.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

ACETIC ACID, 28%

CAUTION! MAY CAUSE BURNS

Avoid contact with skin, eyes, and clothing.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

ACETIC ANHYDRIDE

**DANGER! CAUSES SEVERE BURNS
VAPOR HARMFUL**

Do not get liquid or vapor in eyes, on skin, on clothing.

Do not breathe vapor.

In case of contact, immediately remove contaminated clothing and flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use.

ACETONE

DANGER! EXTREMELY FLAMMABLE

Keep away from heat, sparks, and open flame.

Keep container closed.

Use with adequate ventilation.

Avoid prolonged or repeated contact with skin.

ACETYL CHLORIDE

**DANGER! FLAMMABLE
CAUSES SEVERE BURNS**

Keep away from heat, sparks, and open flame.

Keep container closed.

Do not get in eyes, on skin, on clothing.

Avoid exposure to concentrated vapor.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

Do not allow water to get into container because of violent reaction.

ACRYLONITRILE

**DANGER! VAPOR HAZARDOUS
FLAMMABLE**

Do not breathe vapor.

Do not get in eyes, on skin, on clothing.

Use only with adequate ventilation.

Keep away from heat, sparks, and open flame.

Keep container closed.

POISON

First Aid

ACROLEIN

**DANGER! EXTREMELY FLAMMABLE
MAY BE FATAL IF INHALED
LIQUID CAUSES SEVERE BURNS**

Keep away from heat, sparks, and open flame.

Keep container closed.

Do not breathe vapor.

Do not get in eyes, on skin, on clothing.

Use only with adequate ventilation.

In case of contact, immediately remove contaminated clothing, including shoes, and flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing thoroughly before re-use.

POISON -I:-

call A Physician

First Aid

If inhaled: Move patient to fresh air; if breathing becomes difficult, start oxygen inhalation through suitable equipment.

If swallowed: If conscious, make patient vomit immediately (finger down throat or give warm mustard water or salt water freely).

General: Keep patient warm; if conscious, give coffee.

ALLYL ALCOHOL

**DANGER! EXTREMELY HAZARDOUS LIQUID AND VAPOR
RAPIDLY ABSORBED THROUGH SKIN
FLAMMABLE**

Do not get in eyes, on skin, on clothing.

Do not breathe vapor.

Do not take internally.

Keep away from heat, sparks, and open flame.

Keep container closed.

In case of contact, immediately remove all contaminated clothing and flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use.

-I:-POISON -A-

call A Physician

First Aid

ALLYL CHLORIDE

**DANGER! EXTREMELY FLAMMABLE
VAPOR HARMFUL**

Keep away from heat, sparks, and open flame.

Keep container closed.

Use only with adequate ventilation.

Do not get in eyes, on skin, on clothing.

Do not breathe vapor.

In case of contact, immediately remove all contaminated clothing and flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use.

ALUMINUM CHLORIDE, ANHYDROUS

**WARNING! MAY CONTAIN GAS UNDER PRESSURE
CONTACT WITH WATER OR MOIST AIR
LIBERATES HYDROCHLORIC ACID GAS
CAUSES BURNS**

Loosen closure cautiously before opening.

Avoid contact with eyes, skin, or clothing.

Keep container tightly closed.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

AMMONIA, AQUA-

Same label as **AMMONIUM HYDROXIDE**

AMMONIUM DICHROMATE

**WARNING! FLAMMABLE
HARMFUL DUST
MAY CAUSE RASH OR EXTERNAL ULCERS**

Keep away from heat, sparks, and open flame.

Keep container closed.

Avoid contact with skin and eyes.

Avoid breathing dust or solution spray.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use.

Use fresh clothing daily. Take hot shower after work using plenty of soap.

AMMONIUM HYDROXIDE

**WARNING! LIQUID CAUSES BURNS
VAPOR EXTREMELY IRRITATING**

Loosen closure cautiously before opening.

Avoid breathing vapor.

Avoid contact with eyes, skin, and clothing.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

AMYL ACETATE (mixed isomers)

CAUTION!

Keep away from heat and open flame.

Avoid prolonged breathing of vapor.

Use with adequate ventilation.

Avoid prolonged or repeated contact with skin.

ANILINE

**DANGER! EXTREMELY HAZARDOUS LIQUID AND VAPOR
RAPIDLY ABSORBED THROUGH SKIN**

Do not get in eyes, on skin, on clothing.

Avoid breathing vapor.

Use only with adequate ventilation.

In case of contact, immediately remove all contaminated clothing, including shoes, and flush skin or eyes with plenty of water for at least 15 minutes; get medical attention. Wash clothing before re-use.

.-- POISON .--

call A Physician

First Aid

ANISIDINE (ortho)

**WARNING! HAZARDOUS LIQUID AND VAPOR
ABSORBED THROUGH SKIN**

Avoid contact with skin, eyes, and clothing.

Avoid breathing vapor.

Use only with adequate ventilation.

In case of contact, flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Remove and wash clothing before re-use.

ANISIDINE (para)

**WARNING! HAZARDOUS SOLID
ABSORBED THROUGH SKIN**

Avoid contact with skin, eyes, and clothing.

Avoid breathing dust.

Use only with adequate ventilation.

In case of contact, flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Remove and wash clothing before re-use.

ANTIMONY TRICHLORIDE

**DANGER! CAUSES SEVERE BURNS
VAPOR HAZARDOUS**

Do not get in eyes, on skin, on clothing.

Do not breathe vapor.

Keep container closed.

In case of contact, immediately remove all contaminated clothing and flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use.

ARSENIC TRIOXIDE

DANGER! MAY BE FATAL IF SWALLOWED

Avoid breathing dust or spray mist.

Avoid contact with skin, eyes, and clothing.

Wash thoroughly after handling.

.... POISON

Call A Physician

First Aid

BARIUM CHLORIDE

DANGER! MAY BE FATAL IF SWALLOWED

Do not take internally.

Avoid breathing dust.

Wash thoroughly after handling.

.... POISON

Call A Physician

First Aid

If swallowed: Give Epsom salt or sodium sulfate in water.

BENZENE (BENZOL)

**DANGER! EXTREMELY FLAMMABLE
VAPOR HARMFUL**

Keep away from heat, sparks, and open flame.

Keep container closed.

Use only with adequate ventilation.

Avoid prolonged or repeated breathing of vapor.

Avoid prolonged or repeated contact with skin.

POISON f:-

Call A Physician

First Aid

BENZIDINE HYDROCHLORIDE

**DANGER! HAZARDOUS SOLID
HARMFUL IF SWALLOWED, INHALED, OR
ABSORBED THROUGH SKIN
REPEATED ABSORPTION MAY RESULT IN
BLADDER TUMORS**

Do not get in eyes, on skin, on clothing.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use.

Take hot shower after work, using plenty of soap.

BENZIDINE SULFATE -

Same label as **BENZIDINE HYDROCHLORIDE**

BENZOYL CHLORIDE

**WARNING! CAUSES BURNS
VAPOR IRRITATING**

Avoid contact with skin and eyes.

Avoid breathing vapor.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

BENZOYL PEROXIDE

**DANGER! FLAMMABLE SOLID
OXIDIZING MATERIAL
HEAT, SHOCK, OR CONTACT WITH OTHER
MATERIALS MAY CAUSE FIRE OR
EXPLOSIVE DECOMPOSITION**

BEFORE USING, READ MCA CHEMICAL SAFETY DATA SHEET SD-81

Store in a cool place in original container and protect from direct sunlight.

Keep away from heat, sparks, and open flame.

Do not add to hot materials; do not grind or subject to frictional heat or shock-explosive decomposition may result.

Prevent contamination with readily oxidizable materials and polymerization accelerators.

Avoid contact with skin, eyes, and clothing.

For Wet Benzoyl Peroxide change the heading to read:

BENZOYL PEROXIDE (Wet)

Use label appearing above for Benzoyl Peroxide inserting immediately above the line:

*Store in a cool place . . .
the line:*

Keep container closed to prevent drying out.

BENZYL CHLORIDE (Stabilized)

WARNING! CAUSES BURNS

Avoid contact with skin, eyes, and clothing.

Avoid breathing vapor.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

BENZYL CHLORIDE (Unstabilized)

**WARNING! CAUSES BURNS
CONTAMINATION MAY RESULT IN
DANGEROUS PRESSURE**

Keep dry and handle only in suitable equipment to prevent metallic contamination. Consult manufacturer.

Avoid contact with skin, eyes, and clothing.

Avoid breathing vapor.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

BERYLLIUM OXIDE POWDER

DANGER! HAZARDOUS DUST

Do not breathe dust.

Use with adequate ventilation.

Avoid contact with skin, eyes, and clothing.

Wash thoroughly after handling. Wash clothing before re-use.

Keep container tightly closed. Flush container clean before discarding.

Avoid spillage. If any occurs, carefully wet down and remove.

--- POISON f:-

call A Physician

First Aid

BROMINE

**DANGER! CAUSES SEVERE BURNS
VAPOR HAZARDOUS**

Do not get in eyes, on skin, on clothing.

Do not breathe vapor.

Use only with adequate ventilation.

Wear goggles, neoprene rubber gloves, and rubber protective clothing when handling.

In case of contact, immediately remove all contaminated clothing, including shoes, and flush skin with plenty of water for at least 15 minutes. Flush eyes for at least 30 minutes. Get medical attention in all cases. Wash clothing before re-use.

If inhaled, move patient to fresh air, keep him warm and quiet until physician arrives.

BUTADIENE (Inhibited)

**DANGER! EXTREMELY FLAMMABLE
MAY FORM EXPLOSIVE PEROXIDES ON
EXPOSURE TO AIR**

Keep away from heat, sparks, and open flame.

Keep container closed.

Use with adequate ventilation.

BUTYL ACETATE (normal) -

Same label as AMYL ACETATE (mixed isomers)

BUTYL ALCOHOL (normal or secondary)

WARNING! LIQUID CAUSES EYE BURNS

Keep away from heat and open flame.

Avoid contact with the eyes.

Avoid prolonged breathing of vapor.

Use with adequate ventilation.

Avoid prolonged or repeated contact with skin.

In case of contact with eyes, immediately flush with plenty of water for at least 15 minutes.

BUTYL ALCOHOL (tertiary) - *Same label as* ETHYL ACETATE

BUTYLAMINE (normal)

WARNING! FLAMMABLE CAUSES BURNS

Keep away from heat, sparks, and open flame.

Keep container closed.

Use with adequate ventilation.

Avoid breathing vapor.

Avoid contact with skin, eyes, and clothing.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Remove and wash clothing before re-use.

BUTYL CATECHOL (para-tertiary)

WARNING! CAUSES SKIN IRRITATION CAUSES BURNS WHEN MOIST

Do not get in eyes, on skin, on clothing.

In case of contact, immediately wash skin with soap and plenty of water; flush eyes with water for at least 15 minutes and get medical attention.

BUTYL CHLORIDE (normal)

DANGER! EXTREMELY FLAMMABLE

Keep away from heat, sparks, and open flame.

Keep container closed.

Use with adequate ventilation.

Avoid prolonged breathing of vapor.

Avoid prolonged or repeated contact with skin.

BUTYL ETHER (normal)

**CAUTION! TENDS TO FORM EXPLOSIVE PEROXIDES
ESPECIALLY WHEN ANHYDROUS**

Keep away from heat and open flame.

Use with adequate ventilation.

Avoid prolonged breathing of vapor.

Avoid prolonged or repeated contact with skin.

Do not allow to evaporate to near dryness. Addition of water or appropriate reducing agents will lessen peroxide formation.

BUTYLLITHIUM (normal) (25% or less in hydrocarbon solvents)

**DANGER! EXTREMELY FLAMMABLE
IGNITES ON CONTACT WITH MOIST AIR
CAUSES BURNS**

DO NOT HANDLE OR USE UNTIL SAFETY PRECAUTIONS RECOMMENDED BY MANUFACTURER HAVE BEEN READ AND UNDERSTOOD.

Handle under inert gas atmosphere in DRY equipment.

Keep away from heat, sparks, and open flame.

Avoid spillage and contact with moisture or combustibles.

Do not get in eyes, on skin, on clothing.

Wear goggles and protective clothing when handling.

In case of fire, use CO₂ fire extinguisher.

In case of contact, immediately flush skin with plenty of water; for eyes, flush with plenty of water for at least 15 minutes and get prompt medical attention. Remove and wash clothing before re-use.

BUTYRALDEHYDE (iso or normal)

**DANGER! EXTREMELY FLAMMABLE
VAPOR HARMFUL**

Keep away from heat, sparks, and open flame.

Keep container closed.

Use with adequate ventilation.

Avoid contact with eyes, skin, or clothing.

In case of contact, immediately remove contaminated clothing, including shoes, and flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing thoroughly before re-use.

CALCIUM CYANIDE

DANGER! POISONOUS SOLID LIBERATES POISONOUS GAS

Do not take internally.

Do not breathe gas or dust.

Do not get in eyes, on skin, on clothing.

Wash thoroughly after handling.

Keep container tightly closed and away from water or acids.

Clean up spillage immediately.

Keep away from feed or food products.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

Wash contaminated clothing before re-use.

POISON

First Aid

Carry patient to fresh air.

Have him lie down.

Remove contaminated clothing but keep patient warm.

Start treatment immediately.

Call a physician.

Antidote

If Cyanide Gas is inhaled: Break an amyl nitrite pearl in a cloth and hold lightly under nose for 15 seconds. Repeat 5 times at about 15-second intervals. Use artificial respiration if breathing has stopped.

If Cyanide is swallowed: Break an amyl nitrite pearl in a cloth and hold lightly under nose for 15 seconds. If patient is conscious, or when consciousness returns, give emetic (1 tablespoonful of salt to each glass of warm water) and repeat until vomit fluid is clear. Repeat inhalation of amyl nitrite 5 times at about 15-second intervals. Use artificial respiration if breathing has stopped.

Never give anything by mouth to an unconscious person.

CARBON DIOXIDE, SOLID ("DRY ICE")

WARNING! EXTREMELY COLD (109° F. below zero)
CAUSES SEVERE BURNS
LIBERATES HEAVY GAS WHICH MAY CAUSE
SUFFOCATION

Do not get on skin or hands.

Do not taste.

Do not put in stoppered or closed containers.

Do not enter places where used or stored until adequately ventilated.

CARBON DISULFIDE

DANGER! EXTREMELY FLAMMABLE
VAPOR HARMFUL
HIGHLY VOLATILE

Keep away from fire, sparks, or heated surfaces.

Store in cool place and keep container closed.

Use only with adequate ventilation.

Avoid breathing vapor.

Avoid contact with skin and eyes.

4 POISON 4

Call A Physician
First Aid

CARBON TETRACHLORIDE

DANGER! HAZARDOUS VAPOR AND LIQUID
MAY BE FATAL IF INHALED OR SWALLOWED

Use only with adequate ventilation.

Do not breathe vapor.

Avoid prolonged or repeated contact with skin.

Do not take internally.

4 POISON 4

Call A Physician
First Aid

CAUSTIC POTASH-

Same label as **SODIUM HYDROXIDE**

CAUSTIC SODA -

Same label as **SODIUM HYDROXIDE**

CHLORAL

**DANGER! EXTREMELY HAZARDOUS LIQUID AND VAPOR
INHALATION MAY CAUSE DELAYED FATAL
LUNG INJURY**

Do not get in eyes, on skin, on clothing.

Do not breathe vapor.

Use only with adequate ventilation.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

In case of inhalation or suspicion of inhalation, move patient at once to fresh air and **call a physician**. Keep patient absolutely quiet and start oxygen inhalation through suitable equipment.

**CHLORINATED DIPHENYL (MONO, DI, or TRI) -
Same label as CHLORINATED NAPHTHALENE**

**CHLORINATED DIPHENYL OXIDE (MONO, DI, or TRI) -
Same label as CHLORINATED NAPHTHALENE**

**CHLORINATED NAPHTHALENE (For TRI and HIGHER
CHLORINATED NAPHTHALENES)**

CAUTION!

Avoid repeated contact with skin.

Avoid repeated inhalation of fumes and dust.

CHLORINE

**DANGER! HAZARDOUS LIQUID AND GAS UNDER
PRESSURE**

DO NOT HANDLE OR USE UNTIL SAFETY PRECAUTIONS RECOMMENDED BY MANUFACTURER HAVE BEEN READ AND UNDERSTOOD.

Do not breathe air containing this gas.

Do not get in eyes or on skin.

Do not heat cylinders.

Have available emergency gas masks approved by U.S. Bureau of Mines for Chlorine service.

In case of exposure, move patient to fresh air, keep him warm and quiet, and **call a physician**.

CHLOROBENZENE (MONO)

WARNING! VAPOR HARMFUL

Keep away from heat and open flame.

Use only with adequate ventilation.

Avoid contact with skin and clothing.

Avoid prolonged breathing of vapor.

CHLOROFORM

WARNING! VAPOR HARMFUL

Use only with adequate ventilation.

Avoid breathing vapor.

Avoid prolonged or repeated contact with skin.

Do not take internally.

CHLOROPHENOL (MONOCHLOROPHENOL) (ortho, meta, or para) -Some label as CRESOL

CHLOROSULFONIC ACID

DANGER! CAUSES SEVERE BURNS

Do not get in eyes, on skin, on clothing.

Avoid breathing vapor.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

Do not allow water to get into container because of violent reaction.

CHLOROTOLUENE (MONO)

CAUTION! VAPOR HARMFUL

Keep away from heat and open flame.

Use with adequate ventilation.

Avoid prolonged breathing of vapor.

CHROMIUM TRIOXIDE (CHROMIC ACID)

DANGER! STRONG OXIDANT
CONTACT WITH OTHER MATERIAL MAY
CAUSE FIRE
MAY CAUSE BURNS OR EXTERNAL ULCERS

Keep container closed.

Do not get in eyes, on skin, on clothing.

Do not breathe dust or mist from solutions.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use.

Use fresh clothing daily. Take hot shower after work, using plenty of soap.

CREOSOTE OIL (COAL TAR CREOSOTE)

CAUTION! MAY CAUSE SKIN IRRITATION

Avoid prolonged or repeated contact with skin.

Avoid prolonged breathing of vapor.

Use with adequate ventilation.

CRESOL (CRESYLIC ACID)

DANGER! HAZARDOUS LIQUID
RAPIDLY ABSORBED THROUGH SKIN
CAUSES SEVERE BURNS

Do not get in eyes, on skin, on clothing.

Avoid breathing vapor.

Do not take internally.

In case of contact, immediately remove all contaminated clothing, including shoes, and flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use.

CYCLOHEXANE

DANGER! EXTREMELY FLAMMABLE

Keep away from heat, sparks, and open flame.

Keep container closed.

Use with adequate ventilation.

Avoid prolonged breathing of vapor.

CYANIDES, INORGANIC (Excluding HYDROCYANIC ACID and CALCIUM CYANIDE)

(NAME OF CYANIDE)

DANGER! POISONOUS SOLID
CONTACT WITH ACID LIBERATES POISONOUS GAS

Do not breathe gas or dust.

Do not take internally.

Avoid contact with eyes and skin.

Wash thoroughly after handling.

Keep container closed and away from acids. Store in a dry place.

Keep away from feed and foodstuffs.

In case of contact with eyes, flush with plenty of water for at least 15 minutes and get medical attention.

POISON 4

First Aid

Carry patient to fresh air.

Have him lie down.

Remove contaminated clothing but keep patient warm.

Start treatment immediately.

Call a physician.

Antidote

If Gas is inhaled: Break an amyl nitrite pearl in a cloth and hold lightly under nose for 15 seconds. Repeat 5 times at about 15-second intervals. Use artificial respiration if breathing has stopped.

If swallowed: Break an amyl nitrite pearl in a cloth and hold lightly under nose for 15 seconds. If patient is conscious, or when consciousness returns, give emetic (1 tablespoonful of salt to each glass of warm water) and repeat until vomit fluid is clear. Repeat inhalation of amyl nitrite 5 times at about 15-second intervals. Use artificial respiration if breathing has stopped.

Never give anything by mouth to an unconscious person.

CYCLOHEXANOL

CAUTION! VAPOR HARMFUL

Use only with adequate ventilation.

Avoid prolonged breathing of vapor.

Avoid prolonged or repeated contact with skin.

CYCLOHEXANONE

CAUTION! VAPOR HARMFUL

Keep away from heat and open flame.

Use only with adequate ventilation.

Avoid prolonged breathing of vapor.

Avoid prolonged or repeated contact with skin.

DECABORANE

DANGER! HAZARDOUS SOLID AND VAPOR POISONOUS IF INHALED, SWALLOWED, OR ABSORBED THROUGH SKIN FORMS SHOCK-SENSITIVE MIXTURES WITH CERTAIN OTHER MATERIALS

DO NOT HANDLE OR USE UNTIL SAFETY PRECAUTIONS RECOMMENDED BY MANUFACTURER HAVE BEEN READ AND UNDERSTOOD.

Always wear a self-contained breathing apparatus or full-face airline respirator when using this chemical.

Do not get in eyes, on skin, on clothing.

Do not breathe vapor.

Keep from contact with oxidizing materials, highly oxygenated or halogenated solvents, organic compounds containing reducible functional groups, or aqueous ammonia.

In case of contact, immediately wash skin with soap and plenty of water. Flush eyes with water for at least 15 minutes and get medical attention. Remove and wash clothing before re-use.

--- POISON ---

call A Physician

First Aid

Move patient to fresh air; keep him warm and quiet.

If swallowed: If conscious, give a tablespoonful of salt in a glass of warm water and repeat until vomit fluid is clear.

Note to physician: Treat symptomatically. Symptoms may be delayed up to 48 hours after suspected exposure. Allow rest; keep under observation. Administration of methocarbamol or other muscle relaxants may be helpful immediately following exposure and in absence of symptoms.

DIBORANE

**DANGER! EXTREMELY FLAMMABLE GAS UNDER PRESSURE
EXTREMELY IRRITATING IF INHALED
REACTS VIOLENTLY WITH OXIDIZING MATERIALS**

DO NOT HANDLE OR USE UNTIL SAFETY PRECAUTIONS RECOMMENDED BY MANUFACTURER HAVE BEEN READ AND UNDERSTOOD.

Keep away from heat, sparks, and open flame.

Do not breathe gas.

Use only with adequate ventilation.

Have available emergency self-contained breathing apparatus, or full-face air-line respirator when using this chemical.

Keep from contact with oxidizing materials.

Note: This gas deadens the sense of smell.

Do not depend on odor to detect presence of gas.

POISON

Call A Physician

First Aid

Move patient to fresh air; keep him warm and quiet.

Note to physician: Treat as irritant gas. Administration of oxygen and bronchodilators may be helpful.

DICHLOROBENZENE (ortho)

CAUTION! VAPOR IRRITATING

Avoid prolonged breathing of vapor.

Avoid prolonged or repeated contact with skin.

If liquid gets in eyes, immediately flush thoroughly with plenty of water.

DICHLOROETHYLENE

WARNING! FLAMMABLE

Keep away from heat, sparks, and open flame.

Keep container closed.

Use with adequate ventilation.

Avoid prolonged or repeated breathing of vapor.

Avoid prolonged or repeated contact with skin.

Do not take internally.

DICHLOROETHYL ETHER

**DANGER! MAY BE FATAL IF SWALLOWED, INHALED,
OR ABSORBED THROUGH SKIN**

Do not get on skin or clothing.

Do not breathe vapor.

Use only with adequate ventilation.

Do not take internally.

In case of contact, immediately remove contaminated clothing and
flush skin or eyes with plenty of water for at least 15 minutes.

Wash clothing before re-use.

4 POISON 4

Call A Physician

First Aid

2,4-DICHLOROPHENOL

WARNING! CAUSES BURNS

Avoid contact with eyes, skin, and clothing.

Avoid breathing vapor.

Do not take internally.

In case of contact, immediately flush skin or eyes with plenty of water
for at least 15 minutes; for eyes, get medical attention. Remove
and wash clothing before re-use.

DIETHYLAMINE - *Same label as METHYLAMINES,* AQUEOUS SOLUTIONS

DIETHYLENETRIAMINE

DANGER! CAUSES SEVERE EYE AND SKIN BURNS

Do not get in eyes, on skin, on clothing.

Avoid prolonged or repeated breathing of vapor.

In case of contact, immediately flush eyes or skin with plenty of
water for at least 15 minutes; for eyes, get prompt medical
attention.. Remove contaminated clothing, including shoes. Wash
clothing before re-use; discard contaminated shoes.

DIMETHYLAMINE, ANHYDROUS

DANGER! EXTREMELY FLAMMABLE
HAZARDOUS LIQUID AND VAPOR UNDER
PRESSURE
LIQUID CAUSES BURNS
VAPOR EXTREMELY IRRITATING

Keep away from heat, sparks, and open flame.

Use only with adequate ventilation.

Do not breathe vapor.

Do not get in eyes, on skin, on clothing.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. Wash clothing before re-use.

Call physician at once in case of burns, especially to eyes, nose, and throat, or if patient is unconscious.

Have air-line respirator or self-contained oxygen respirator available for emergency.

DIMETHYL SULFATE

DANGER! EXTREMELY HAZARDOUS LIQUID AND VAPOR
CAUSES SEVERE BURNS

Do not get in eyes, on skin, on clothing.

Do not breathe vapor.

Use only with adequate ventilation.

Wear goggles and rubber gloves when handling.

In case of spillage, cover immediately with dry soda ash.

POISON ...

Call A Physician

First Aid

Start treatment immediately.

Eyes: Flush with water for at least 15 minutes.

Skin: Remove all contaminated clothing and flush skin with water for at least 15 minutes.

Inhalation: If breathing becomes difficult, start oxygen inhalation through suitable equipment.

DIOXANE (1,4-DIETHYLENE DIOXIDE)

WARNING! FLAMMABLE
VAPOR HARMFUL
TENDS TO FORM EXPLOSIVE PEROXIDES
ESPECIALLY WHEN ANHYDROUS

Keep away from heat, sparks, and open flame.
Keep container closed.
Use only with adequate ventilation.
Avoid prolonged breathing of vapor.
Avoid prolonged or repeated contact with skin.
Do not allow to evaporate to near dryness. Addition of water or appropriate reducing agent will lessen peroxide formation.

ETHYL ACETATE

WARNING! FLAMMABLE

Keep away from heat, sparks, and open flame.
Keep container closed.
Use with adequate ventilation.
Avoid prolonged breathing of vapor.
Avoid prolonged or repeated contact with skin.

ETHYL ACRYLATE

(Inhibited with)

WARNING! FLAMMABLE
VAPOR HARMFUL
MAY IRRITATE SKIN AND EYES

Keep away from heat, sparks, and open flame.
Keep container closed.
Use only with adequate ventilation.
Avoid breathing vapor.
Avoid contact with skin, eyes, and clothing.
In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Remove and wash contaminated clothing before re-use.

ETHYL BROMIDE

WARNING! VAPOR HARMFUL

Use only with adequate ventilation.
Avoid prolonged breathing of vapor.
Keep container closed, out of sun, and away from heat.

ETHYL CHLORIDE

DANGER! EXTREMELY FLAMMABLE

Keep away from heat, sparks, and open flame.

Use with adequate ventilation.

Keep container closed, out of sun, and away from heat.

ETHYL ETHER

DANGER! EXTREMELY FLAMMABLE

HIGHLY VOLATILE

TENDS TO FORM EXPLOSIVE PEROXIDES

ESPECIALLY WHEN ANHYDROUS

Keep away from heat, sparks, and open flame.

Keep container tightly closed.

Do not allow to evaporate to near dryness. Addition of water or appropriate reducing agent will lessen peroxide formation.

ETHYLENE CHLOROHYDRIN (ANHYDROUS or 38%)

DANGER! EXTREMELY HAZARDOUS LIQUID AND VAPOR

MAY BE FATAL IF SWALLOWED, INHALED OR

ABSORBED THROUGH SKIN

CAUSES BURNS TO EYES

Do not get in eyes, on skin, on clothing. Ordinary rubber protective clothing, including gloves, will not prevent skin absorption.

Do not breathe vapor.

Use only with adequate ventilation.

Do not take internally.

Keep away from heat and open flame.

In case of contact, immediately remove all contaminated clothing and flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use.

... **POISON 4**

Call A Physician

First Aid

If swallowed: If conscious, make patient vomit immediately by putting finger down throat or by giving warm mustard water or salt water freely.

General: Keep patient warm; if conscious, give black coffee.

Note to Physician: Do not give adrenalin.

ETHYLENEDIAMINE

DANGER! CAUSES SEVERE EYE AND SKIN BURNS

Do not get in eyes, on skin, on clothing.

Avoid breathing vapor.

Keep away from heat and open flame.

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes; for eyes, get prompt medical attention. Remove contaminated clothing, including shoes. Wash clothing before re-use; discard contaminated shoes.

This product freezes at approximately 50 ° F.

ETHYLENE DICHLORIDE

**WARNING! FLAMMABLE
VAPOR HARMFUL**

Keep away from heat, sparks, and open flame.

Keep container closed.

Use only with adequate ventilation.

Avoid prolonged or repeated breathing of vapor.

Avoid prolonged or repeated contact with skin.

Do not take internally.

ETHYLENE OXIDE

**DANGER! EXTREMELY FLAMMABLE
VAPOR HARMFUL
MAY CAUSE BURNS**

Keep away from heat, sparks, and open flame.

Keep container closed.

Avoid breathing vapor.

Avoid contact with skin, eyes, and clothing.

In case of contact, immediately remove all contaminated clothing, including shoes, and flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use. Discard contaminated shoes.

FORMALDEHYDE SOLUTION

**WARNING! CAUSES IRRITATION OF SKIN, EYES, NOSE,
AND THROAT**

Avoid prolonged or repeated contact.

Avoid prolonged breathing of vapor.

Use with adequate ventilation.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

.._ POISON .._

Call A Physician

First Aid

If swallowed: Give a tablespoonful of salt in a glass of warm water and repeat until vomit fluid is clear. Give milk or white of egg beaten with water.

FORMIC ACID -

Same label as **HYDROCHLORIC ACID**

HYDROCHLORIC ACID

WARNING! CAUSES BURNS

Avoid contact with skin and eyes.

Avoid breathing vapor.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

HYDROCYANIC ACID

**DANGER! EXTREMELY HAZARDOUS LIQUID AND GAS
EXTREMELY FLAMMABLE
MAY BE FATAL IF SWALLOWED, INHALED,
OR ABSORBED THROUGH SKIN**

USE ONLY IN A CLOSED SYSTEM.

Keep away from heat, sparks, and open flame.

Do not take internally.

Do not breathe gas.

Do not get in eyes, on skin, on clothing.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash contaminated clothing before re-use.

POISON f:-

First Aid

Carry patient to fresh air.

Have him lie down.

Remove contaminated clothing but keep patient warm.

Start treatment immediately.

Call a physician.

Antidote

If Cyanide Gas is inhaled: Break an amyl nitrite pearl in a cloth and hold lightly under nose for 15 seconds. Repeat 5 times at about 15-second intervals. Use artificial respiration if breathing has stopped.

If Cyanide is swallowed: Break an amyl nitrite pearl in a cloth and hold lightly under nose for 15 seconds. If patient is conscious, or when consciousness returns, give emetic (1 tablespoonful of salt to each glass of warm water) and repeat until vomit fluid is clear. Repeat inhalation of amyl nitrite 5 times at about 15-second intervals. Use artificial respiration if breathing has stopped.

Never give anything by mouth to an unconscious person.

HYDROFLUORIC ACID, ANHYDROUS

**DANGER! EXTREMELY HAZARDOUS LIQUID AND VAPOR
CAUSES SEVERE BURNS WHICH MAY NOT BE
IMMEDIATELY PAINFUL OR VISIBLE**

Do not get in eyes, on skin, on clothing.

Do not breathe vapor.

Store out of sun and away from direct heat.

**UNLOAD ONLY IN ACCORDANCE WITH PRACTICE RECOMMENDED
IN MANUFACTURING CHEMISTS' ASSOCIATION, INC. MANUAL
H-10. Read also MCA Chemical Safety Data Sheet SD-25.**

First Aid, In Case of Contact or Suspicion of Contact.

Always have on hand a supply of Magnesia paste (magnesium oxide and glycerin).

Skin: Immediately flush with large quantities of cold water until all acid is removed (up to 3-4 hours or until medical attention is obtained), paying particular attention to skin under nails. In case medical attention is delayed, apply a mixture of glycerin with either magnesium oxide or milk of magnesia. Get medical attention. Remove and wash clothing before re-use.

Eyes: Immediately flush with cool water for 15-30 minutes; Prompt medical attention is absolutely necessary.

HYDROFLUORIC ACID, AQUEOUS

**DANGER! HAZARDOUS LIQUID AND VAPOR
CAUSES SEVERE BURNS WHICH MAY NOT BE
IMMEDIATELY PAINFUL OR VISIBLE**

(In addition to above Statements, also include balance of precautionary label recommended for HYDROFLUORIC ACID, ANHYDROUS)

HYDROGEN CHLORIDE, ANHYDROUS

**DANGER! HAZARDOUS LIQUID AND GAS UNDER PRESSURE
CAUSES BURNS
EXTREMELY IRRITATING**

Do not breathe gas.

Do not get in eyes or on skin.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

NOTE: Suck-back Into Cylinder May Cause Explosion. Under no circumstances should the cylinder delivery tube be inserted in a liquid or gas without a vacuum break or other protective apparatus in the line to prevent suck-back.

HYDROGEN PEROXIDE (*stronger than 7.4% but not exceeding 52%*)

CAUTION! STRONG OXIDANT

Avoid contact with skin and eyes-wear rubber gloves and goggles.
Avoid contact with combustible materials. Drying of this concentrated product on clothing or combustible materials may cause Are.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Remove and wash clothing at once.

Avoid contamination from any source, including metals, dust, and organic materials. Such contamination may cause rapid decomposition, generation of large quantities of oxygen gas, and high pressures.

Store in original closed container.

Be sure that the container vent is working satisfactorily.

Do not add any other product to this container.

When empty, rinse thoroughly with clean water.

HYDROGEN PEROXIDE, HIGH STRENGTH (*over 52%*)

DANGER! POWERFUL OXIDANT CAUSES SEVERE BURNS

Do not get in eyes, on skin, on clothing. Wear goggles, rubber gloves, protective outer clothing, and heavy rubber shoes.

Keep from contact with combustible materials. Spills on clothing or combustible materials will cause Are. Flush spillage with water.

Keep from contamination from any source, including metals, dust, and organic materials. Such contamination can cause rapid decomposition, generation of high pressures or formation of explosive mixtures.

In case of contact, immediately remove all contaminated clothing and flush skin or eyes with plenty of water for at least 15 minutes. GET MEDICAL ATTENTION. Wash clothing promptly and thoroughly.

HANDLING INSTRUCTIONS

Do Not Open Unless You Have Been Properly Instructed.

Store in original closed container.

Store container in a cool, clean place.

Keep drum in upright position.

Do not roll drum on side.

Wash leakage with water.

Put nothing else in this container.

When Empty, Drain And Flush Container Thoroughly With Clean Water ... Replace Bungs Securely.

HYDROGEN PEROXIDE 7.4%

CAUTION! STRONG OXIDANT

Avoid contact with skin and eyes-wear rubber gloves and goggles. Avoid contamination from any source, including metals, dust, and organic materials. Such contamination may cause rapid decomposition, generation of large quantities of oxygen gas, and high pressures.

Store in original closed container.

Be sure that the container vent is working satisfactorily.

Do not add any other product to this container.

When empty, rinse thoroughly with clean water.

HYDROGEN SULFIDE

**DANGER! POISONOUS LIQUID AND GAS UNDER PRESSURE
FLAMMABLE**

BEFORE USING, READ MCA CHEMICAL SAFETY DATA SHEET SD-36

Do not breathe gas.

Keep away from heat, sparks, and open flame-may form explosive mixture with air.

NOTE: This gas deadens the sense of smell.

Do not depend on odor to detect presence of gas.

.._ POISON 4

Call A Physician

First Aid

Carry patient to fresh air.

If patient has stopped breathing, apply artificial respiration immediately.

Keep patient warm.

ISOPROPYLAMINE

**DANGER! EXTREMELY FLAMMABLE
VAPOR EXTREMELY HAZARDOUS
LIQUID CAUSES BURNS**

Keep away from heat, sparks, and open flame.

Keep container closed.

Do not breathe vapor.

Use only with adequate ventilation.

Do not get in eyes, on skin, on clothing.

In case of contact, immediately remove contaminated clothing, including shoes, and flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use.

ISOPROPYL ETHER - *Same label as* ETHYL ETHER

LEAD ACETATE

WARNING! HARMFUL DUST

Avoid breathing dust.

Wash thoroughly before eating or smoking.

Keep away from feed or food products.

LEAD MONOXIDE (LITHARGE) - *Same label as* LEAD ACETATE

LEAD OXIDE (RED LEAD)- *Same label as* LEAD ACETATE

MALEIC ANHYDRIDE

WARNING! CAUSES BURNS

Avoid contact with skin, eyes, and clothing.

Avoid exposure to concentrated vapor.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

MERCURIC CHLORIDE (MERCURY BICHLORIDE)

DANGER! HARMFUL DUST

MAY BE FATAL IF SWALLOWED

Do not breathe dust or vapor.

Avoid contact with eyes or prolonged contact with skin.

Keep away from feed or food products.

Wash thoroughly before eating or smoking.

Use fresh clothing daily. Take hot shower after work, using plenty of soap.

-:I:-POISON -:1:-

cau A Physician

First Aid

METHANOL

**DANGER! FLAMMABLE
VAPOR HARMFUL
MAY BE FATAL OR CAUSE BLINDNESS
IF SWALLOWED
CANNOT BE MADE NONPOISONOUS**

Keep away from heat, sparks, and open flame.
Keep container closed.
Avoid prolonged or repeated breathing of vapor.
Use only with adequate ventilation.

POISON

**Call A Physician
First Aid**

If **swallowed**: Give a tablespoonful of salt in a glass of warm water and repeat until vomit fluid is clear. Give two teaspoonfuls of baking soda in a glass of water. Have patient lie down and **keep** warm. Cover eyes to exclude light.

METHANOL MIXTURES

For products containing methanol in proportion sufficient to create hazard because of methanol content, use applicable statements as above, with addition of:

CONTAINS OVER..... ¼ OF METHANOL

The word "FLAMMABLE" may be omitted from the Statement of Hazards if the product has a flash point above 80 °F.

METHYL ACRYLATE

(Inhibited with)

**WARNING! FLAMMABLE
VAPOR HARMFUL
MAY IRRITATE SKIN AND EYES**

Keep away from heat, sparks, and open flame.
Keep container closed.
Use only with adequate ventilation.
Avoid breathing vapor.
Avoid contact with skin, eyes, and clothing.
In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Remove and wash contaminated clothing before re-use.

METHYLAMINES, ANHYDROUS-

Same label as DIMETHYLAMINE, ANHYDROUS

METHYLAMINES, AQUEOUS SOLUTIONS

**DANGER! EXTREMELY FLAMMABLE
MAY CAUSE SKIN IRRITATION**

Keep away from heat, sparks, and open flame.

Keep container closed.

Use with adequate ventilation.

Avoid exposure to vapor.

Avoid contact with skin and eyes.

In case of contact, flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

METHYL BROMIDE

**DANGER! VAPOR EXTREMELY HAZARDOUS
HIGHLY VOLATILE
CAUSES BURNS**

Do not breathe vapor.

Do not get in eyes, on skin, on clothing.

Keep away from heat.

In case of contact, immediately remove all contaminated clothing, including shoes, and wash skin thoroughly with soap and water; for eyes, flush with plenty of water for at least 15 minutes; get medical attention. Do not re-use shoes or clothing until free from all contamination.

--- POISON ---

Call A Physician

First Aid

Remove patient to fresh air.

Keep lying down and warm.

Use artificial respiration if breathing has stopped.

Get **IMMEDIATE** medical attention.

Use oxygen inhalator only at the direction of a physician.

On Can Label Add:

IMPORTANT! The contents of this can are under pressure. Do not use ordinary can opener. Special handling equipment is available.

Contact(NAME OF MFG. CO. OR).....for information on equipment and proper use.

METHYL CHLORIDE

**WARNING! FLAMMABLE LIQUID AND GAS UNDER PRESSURE
VAPOR HARMFUL**

Keep away from heat, sparks, and open flame.

Use only with adequate ventilation.

Avoid breathing vapor.

Avoid contact with skin.

METHYL ETHYL KETONE -

Same *label* as ETHYL ACETATE

METHYL METHACRYLATE MONOMER

**WARNING! FLAMMABLE
MAY CAUSE SKIN IRRITATION**

Keep away from heat, sparks, and open flame.

Keep container closed.

Use with adequate ventilation.

Avoid prolonged breathing of vapor.

Avoid contact with skin, eyes, and clothing.

METHYL MORPHOLINE

**WARNING! HAZARDOUS LIQUID AND VAPOR
MAY CAUSE SKIN IRRITATION
FLAMMABLE**

Use with adequate ventilation.

Avoid exposure to vapor.

Avoid contact with skin and eyes.

Keep away from heat, sparks, and open flame.

Keep container closed.

MIXED ACID (SULFURIC and NITRIC)

**DANGER! CAUSES SEVERE BURNS
VAPOR EXTREMELY HAZARDOUS
MAY CAUSE NITROUS GAS POISONING
SPILLAGE MAY CAUSE FIRE OR LIBERATE
DANGEROUS GAS**

Do not breathe vapor.

Do not get in eyes, on skin, on clothing.

In case of contact, immediately flush skin or eyes with plenty of water
for at least 15 minutes; get medical attention.

MONO-COMPOUNDS —

See alternative chemical name, e.g.,

CHLOROPHENOL *for* **MONOCHLOROPHENOL**

MORPHOLINE

**WARNING! CAUSES EYE BURNS
MAY CAUSE SKIN IRRITATION
ABSORPTION THROUGH SKIN HARMFUL**

Do not get in eyes.

Avoid contact with skin or clothing.

Keep away from heat and open flame.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Remove contaminated clothing and wash before re-use.

MURIATIC ACID -

Same label as **HYDROCHLORIC ACID**

NAPHTHYLAMINE (alpha) (*containing* beta-NAPHTHYLAMINE) —

Same label as **NAPHTHYLAMINE** (beta)

NAPHTHYLAMINE (beta)

**WARNING! HARMFUL DUST AND VAPOR
REPEATED ABSORPTION MAY RESULT IN
BLADDER TUMORS**

Use only with adequate ventilation.

Avoid breathing dust or vapor.

Avoid contact with skin.

Wear fresh clothing daily. Take hot shower after work, using plenty of soap.

NITRIC ACID

**DANGER! CAUSES SEVERE BURNS
VAPOR EXTREMELY HAZARDOUS
MAY CAUSE NITROUS GAS POISONING
SPILLAGE MAY CAUSE FIRE OR LIBERATE
DANGEROUS GAS**

Do not breathe vapor.

Do not get in eyes, on skin, on clothing.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; get medical attention.

NITROANILINE (ortho, meta, or para)

**DANGER! HAZARDOUS SOLID AND VAPOR
RAPIDLY ABSORBED THROUGH SKIN**

Do not get in eyes, on skin, on clothing.

Avoid breathing dust or vapor.

Use only with adequate ventilation.

In case of contact, immediately remove all contaminated clothing, including shoes, and flush skin or eyes with plenty of water for at least 15 minutes; get medical attention. Wash clothing before re-use.

NITROBENZENE - Same label as ANILINE

OLEUM (FUMING SULFURIC ACID)

DANGER! CAUSES SEVERE BURNS

Do not get in eyes, on skin, on clothing.

Avoid breathing vapor.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

Do not add water to contents while in a container because of violent reaction.

OXALIC ACID

**WARNING! HARMFUL IF SWALLOWED
CAUSES SKIN IRRITATION**

Avoid breathing dust.

Avoid contact with skin and eyes.

Do not take internally.

Keep away from feed or food products.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

PARAFORMALDEHYDE

**WARNING! CAUSES IRRITATION OF SKIN, EYES, NOSE,
AND THROAT**

Avoid prolonged or repeated contact.

Avoid breathing dust or prolonged breathing of vapor.

Use with adequate ventilation.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

--- POISON ---

call a Physician Immediately

First Aid

If swallowed: Give a tablespoonful of salt in a glass of warm water and repeat until vomit fluid is clear. Give milk, or white of egg beaten with water.

PARALDEHYDE

CAUTION! VAPOR HARMFUL

Use only with adequate ventilation.

Avoid prolonged or repeated breathing of vapor.

Keep away from heat and open flame.

Do not take internally.

Solidifies at about 54° F. (12° C.) and may break container.

Store in a moderately warm place.

PENTABORANE

**DANGER! POISONOUS IF INHALED, SWALLOWED, OR
ABSORBED THROUGH SKIN
EXTREMELY FLAMMABLE LIQUID UNDER PRESSURE
FORMS SHOCK-SENSITIVE MIXTURES WITH
CERTAIN OTHER MATERIALS**

DO NOT HANDLE OR USE UNTIL SAFETY PRECAUTIONS RECOMMENDED BY MANUFACTURER HAVE BEEN READ AND UNDERSTOOD.

Always wear self-contained breathing apparatus or full-face air-line respirator when using this chemical.

Do not get in eyes, on skin, on clothing.

Do not breathe vapor.

Keep away from heat, sparks, and open flame.

Keep from contact with oxidizing materials, highly oxygenated or halogenated solvents, and organic compounds containing reducible functional groups.

In case of contact, immediately wash skin with soap and plenty of water. Flush eyes with plenty of water for at least 15 minutes and get medical attention. Remove and wash clothing before re-use.

POISON

Call A Physician

First Aid

Move patient to fresh air; keep him warm and quiet.

Note to physician: Treat symptomatically. Symptoms may be delayed up to 48 hours after suspected exposure. Allow rest; keep under observation. Administration of methocarbamol or other muscle relaxants may be helpful immediately following exposure and in absence of symptoms.

PERCHLORIC ACID

**DANGER! STRONG OXIDANT
CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE
OR EXPLOSION, ESPECIALLY IF HEATED
CAUSES SEVERE BURNS**

Keep container closed and away from heat.

Store separately from, and avoid contact with, dehydrating agents and other materials.

Do not get in eyes, on skin, on clothing.

In case of spillage, flush with plenty of water and remove contaminated articles.

In case of contact, immediately remove all contaminated clothing and flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use.

**PERCHLOROETHYLENE {TETRACHLOROETHYLENE} -
Same label as TRICHLOROETHYLENE**

PHENOL

**DANGER! HAZARDOUS LIQUID OR SOLID
RAPIDLY ABSORBED THROUGH SKIN
CAUSES SEVERE BURNS**

Do not get in eyes, on skin, on clothing.

Avoid breathing vapor.

Do not take internally.

In case of contact, immediately remove all contaminated clothing, including shoes, and flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use.

.._ **POISON** 
Call A Physician
First Aid

PHENYLENEDIAMINE {meta or para}

CAUTION! MAY CAUSE SKIN IRRITATION

Avoid contact with skin and eyes.

Avoid breathing dust.

PHOSPHORIC ACID

CAUTION! CAUSES SKIN IRRITATION

Avoid contact with skin and eyes.

In case of contact, flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

PHOSPHORUS, White or Yellow (For Wet Shipments)

DANGER! CAUSES SEVERE BURNS

Contents packed under water and will ignite if water is removed.

Do not get on skin or in eyes.

Wear heavy rubber gloves and goggles or face shield.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; keep skin area wet until medical attention is obtained.

.._ **POISON** .._
Call A Physician
First Aid

PHOSPHORUS OXYCHLORIDE

**DANGER! CAUSES SEVERE BURNS
VAPOR EXTREMELY IRRITATING**

Do not breathe vapor.

Do not get in eyes, on skin, on clothing.

In case of contact, immediately remove all contaminated clothing and flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use.

In case of spillage, flood carefully with LARGE VOLUME of water and provide adequate ventilation.

Do not add water to contents while in a container because of violent reaction.

Do not open unless you have been properly instructed.

Do not use this container for any other product.

PHOSPHORUS PENTACHLORIDE

**WARNING! HAZARDOUS DUST
CAUSES BURNS**

Do not breathe dust.

Do not get on skin or in eyes.

Wear rubber gloves and goggles.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

Open container carefully.

Do not add water to contents while in a container because of violent reaction.

PHOSPHORUS PENTASULFIDE

**WARNING! HARMFUL DUST
CONTACT WITH WATER OR ACID SLOWLY
LIBERATES POISONOUS AND FLAMMABLE
HYDROGEN SULFIDE GAS**

Avoid breathing dust or evolved gas.

Avoid contact with skin, eyes, and clothing.

Use only with adequate ventilation.

Keep container tightly closed.

Avoid friction or rough handling because of fire hazard. Smother fires with Carbon Dioxide or Sand.

PHOSPHORUS PENTOXIDE (PHOSPHORIC ANHYDRIDE)

WARNING! CAUSES BURNS

Avoid contact with skin and eyes.

Wear rubber gloves and goggles.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

Open container carefully.

Do not add water to contents while in a container because of violent reaction.

PHOSPHORUS TRICHLORIDE

DANGER! CAUSES SEVERE BURNS VAPOR EXTREMELY IRRITATING CONTACT WITH WATER MAY CAUSE FLASH FIRE

Do not get in eyes, on skin, on clothing.

Do not breathe vapor.

In case of contact, immediately remove all contaminated clothing and flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use.

In case of spillage, flood carefully with LARGE VOLUME of water and provide adequate ventilation.

Do not add water to contents while in a container because of violent reaction and possible flash fire.

Do not open unless you have been properly instructed.

Do not clean or re-use this container.

PHTHALIC ANHYDRIDE (SOLID)

CAUTION! MAY CAUSE SKIN IRRITATION

Avoid prolonged or repeated contact with skin.

Avoid breathing dust.

POTASSIUM DICHROMATE-

Same label as SODIUM DICHROMATE

POTASSIUM HYDROXIDE -

Same label as SODIUM HYDROXIDE

PROPYLENE —

Same label as ETHYL CHLORIDE

PYRIDINE

**WARNING! FLAMMABLE
VAPOR HARMFUL**

Keep away from heat, sparks, and open flame.
Keep container closed.
Use only with adequate ventilation.
Avoid prolonged or repeated breathing of vapor.
Avoid prolonged or repeated contact with skin.

SILVER NITRATE

WARNING! MAY CAUSE BURNS

Avoid contact with skin and eyes.
In case of contact, flush skin or eyes with water for at least 15 minutes; for eyes, get medical attention.

.... POISON
Call A Physician
First Aid

SODIUM METAL

**DANGER! REACTS VIOLENTLY WITH WATER LIBERATING
AND IGNITING HYDROGEN
MAY CAUSE BURNS**

Keep from any possible contact with water.
Keep container tightly closed.
Do not get in eyes or on skin.
Wear goggles and DRY gloves when handling.
In case of fire, smother with DRY SODA ASH-NEVER USE WATER
OR CHEMICAL FIRE EXTINGUISHERS.
Dispose of SODIUM by burning carefully in an open fire.

First Aid

Skin: Remove SODIUM and flush affected area with water.

Eyes: IMMEDIATELY flush eyes with plenty of water for 15 minutes.
Get medical attention.

SODIUM CHLORATE

WARNING! STRONG OXIDANT
CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE

Clothing and vegetation contaminated with chlorate or its solutions are DANGEROUSLY FLAMMABLE. Remove clothing and wash thoroughly with water. Keep persons and animals off treated areas. Spillage may cause fires. Do not get on floor. Sweep up and remove immediately.

When not in use, keep tightly closed in original metal container.

Keep away from fire.

Store separately from flammable material.

SODIUM CYANIDE -

Same label as **CYANIDES, INORGANIC**

SODIUM DICHROMATE

WARNING! HARMFUL DUST
MAY CAUSE RASH OR EXTERNAL ULCERS

Keep container closed.

Avoid contact with skin and eyes.

Avoid breathing dust or solution spray.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Wash clothing before re-use.

Use fresh clothing daily. Take hot shower after work, using plenty of soap.

SODIUM FLUORIDE

WARNING! MAY BE FATAL IF SWALLOWED

Avoid breathing dust.

Wash thoroughly after handling.

Clean up spillage.

SODIUM HYDROSULFITE

CAUTION! MAY IGNITE IF ALLOWED TO BECOME DAMP

Keep container tightly closed.

Use only dry, clean utensils in handling.

Store in a cool, dry place.

In case of fire, smother with SODA ASH, DRY SAND, or CARBON DIOXIDE. Dispose of by flushing away with a LARGE VOLUME of water under adequate ventilation.

SODIUM HYDROXIDE

DANGER! CAUSES SEVERE BURNS TO SKIN AND EYES

Do not get in eyes, on skin, on clothing.

Do not take internally.

When handling, wear goggles or face shield. While making solutions, add slowly to surface of solution to avoid violent spattering.

In case of contact, immediately flush skin with plenty of water; for eyes, flush with plenty of water for at least 15 minutes and get medical attention.

SODIUM ORTHOSILICATE

WARNING! CAUSES SEVERE BURNS TO SKIN AND EYES

Avoid contact with skin, eyes, and clothing.

Do not take internally.

When handling, wear goggles or face shield. While making solutions, add slowly to surface of solution to avoid violent spattering.

In case of contact, immediately flush skin with plenty of water; for eyes, flush with plenty of water for at least 15 minutes and get medical attention.

SODIUM SESQUISILICATE, ANHYDROUS-

Some *label as* SODIUM ORTHOSILICATE

SODIUM SULFHYDRATE-

Some *label as* SODIUM SULFIDE

SODIUM SULFIDE (*Containing 35% or more combined water*)

DANGER! CONTACT WITH ACID LIBERATES POISONOUS GAS BURNS SKIN AND EYES

Do not breathe dust or gas.

Do not get in eyes, on skin, on clothing.

Keep container closed and away from acid and heat.

Sweep up spillage. Do not flush to sewer which may contain acid.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention. Remove and wash clothing before re-use.

STYRENE MONOMER

CAUTION! VAPOR HARMFUL

Keep away from heat and open flame.

Use only with adequate ventilation.

Avoid prolonged breathing of vapor.

Avoid prolonged or repeated contact with skin.

SULFUR CHLORIDE

WARNING! CAUSES BURNS VAPOR IRRITATING

Avoid contact with eyes, skin, and clothing.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

Do not allow water to get into container because of violent reaction.

SULFUR DICHLORIDE -

Same *label* as SULFUR CHLORIDE

SULFURIC ACID

DANGER! CAUSES SEVERE BURNS

Do not get in eyes, on skin, on clothing.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

Do not add water to contents while in a container because of violent reaction.

SULFURYL CHLORIDE -

Same *label* as SULFUR CHLORIDE

TAR ACIDS -Some *label* as CRESOL

TETRACHLOROETHANE

DANGER! VAPOR EXTREMELY HAZARDOUS

Use only in completely enclosed system.

Do not breathe vapor.

Do not get in eyes, on skin, on clothing.

Do not take internally.

-:I- POISON -:I-

call A Physician

First Aid

TETRACHLOROETHYLENE {PERCHLOROETHYLENE} -

Same label as **TRICHLOROETHYLENE**

TETRAETHYLENEPENTAMINE -

Same label as **DIETHYLENETRIAMINE**

THIONYL CHLORIDE-

Same label as **SULFUR CHLORIDE**

TITANIUM TRICHLORIDE, ANHYDROUS

**DANGER! SOLID MAY IGNITE SPONTANEOUSLY IN AIR
VAPOR CAUSES IRRITATION OF SKIN, EYES,
NOSE, AND THROAT**

DO NOT HANDLE OR USE UNTIL SAFETY PRECAUTIONS RECOMMENDED BY MANUFACTURER HAVE BEEN READ AND UNDERSTOOD.

Keep away from heat, sparks, and open flame.

Do not get in eyes, on skin, on clothing.

Do not breathe vapor or dust.

Keep container closed; open container carefully and only in dry oxygen-free or inert atmosphere.

Wear rubber gloves and face shield or safety goggles.

In case of contact, immediately remove from skin with dry cloth followed by flushing with plenty of water for at least 15 minutes; for eyes, flush with plenty of water for at least 15 minutes; get medical attention. Remove contaminated clothing and wash before re-use.

TOLUENE {TOLUOL}

**WARNING! FLAMMABLE
VAPOR HARMFUL**

Keep away from heat, sparks, and open flame.

Keep container closed.

Use only with adequate ventilation.

Avoid prolonged breathing of vapor.

Avoid prolonged or repeated contact with skin.

TOLUIDINE (ortho or meta)

**DANGER! HAZARDOUS LIQUID AND VAPOR
RAPIDLY ABSORBED THROUGH SKIN**

Do not get in eyes, on skin, on clothing.

Avoid breathing vapor.

Use only with adequate ventilation.

In case of contact, immediately remove all contaminated clothing, including shoes, and flush skin or eyes with plenty of water for at least 15 minutes; get medical attention. Wash clothing before re-use.

TOLUIDINE (para) - *Same label as* NITROANILINE

TOLYLENE DIISOCYANATE

**DANGER! HAZARDOUS LIQUID AND VAPOR
CAUSES BURNS**

Keep container closed.

Do not get in eyes, on skin, on clothing.

Do not breathe vapor.

Use only with adequate ventilation.

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes; for eyes, get medical attention. Remove and wash clothing before re-use.

TRICHLOROETHYLENE

WARNING! VAPOR HARMFUL

Use only with adequate ventilation.

Avoid prolonged or repeated breathing of vapor.

Avoid prolonged or repeated contact with skin.

Do not take internally.

TRIETHYLENETETRAMINE -

***Same label as* DIETHYLENETRIAMINE**

TRIMETHYLAMINE, ANHYDROUS -

***Same label as* DIMETHYLAMINE, ANHYDROUS**

TRIMETHYLCYCLOHEXANOL —

***Same label as* CYCLOHEXANOL**

VANADIUM TETRACHLORIDE

**DANGER! EXTREMELY HAZARDOUS LIQUID AND VAPOR
ABSORPTION THROUGH SKIN MAY BE FATAL
CAUSES SEVERE BURNS
MAY CONTAIN GAS UNDER PRESSURE**

DO NOT HANDLE OR USE UNTIL SAFETY PRECAUTIONS RECOMMENDED BY MANUFACTURER HAVE BEEN READ AND UNDERSTOOD.

Open container carefully and only in dry oxygen-free or inert atmosphere.

Do not get in eyes, on skin, on clothing.

Do not breathe vapor.

Do not take internally.

Wear rubber gloves and face shield or safety goggles.

In case of contact, immediately remove from skin with dry cloth followed by flushing with plenty of water for at least 15 minutes; for eyes, flush with plenty of water for at least 15 minutes; get medical attention. Remove contaminated clothing and wash before re-use.

.._ POISON -A-
call A Physician
First Aid

VINYL ACETATE

DANGER! EXTREMELY FLAMMABLE

Keep away from heat, sparks, and open flame.

Keep container closed.

Use with adequate ventilation.

Avoid prolonged or repeated breathing of vapor.

Avoid prolonged or repeated contact with skin.

VINYL CHLORIDE

**DANGER! EXTREMELY FLAMMABLE LIQUID AND GAS
UNDER PRESSURE**

Keep away from heat, sparks, and open flame.

Keep container closed.

Use with adequate ventilation.

Avoid prolonged breathing of vapor.

XYLENE (XYLOL)

WARNING! FLAMMABLE

Keep away from heat, sparks, and open flame.

Keep container closed.

Use with adequate ventilation.

Avoid prolonged breathing of vapor.

Avoid prolonged or repeated contact with skin.

XYLIDINES - *Same label as TOLUIDINE (ortho or meta)*

ZINC CHLORIDE (Granular, Fused, or Solution)

WARNING! MAY CAUSE SEVERE SKIN IRRITATION

Avoid contact with skin or eyes.

In case of contact, flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

ZIRCONIUM METAL POWDER (*Minimum 25% Water*)

DANGER! FLAMMABLE SOLID

MAY EXPLODE IF WATER CONTENT IS 10% OR BELOW

Keep wet in storage-dry powder may be ignited by friction, static electricity, or heat.

DO NOT ATTEMPT TO LOOSEN OR REMOVE MATERIAL FROM CONTAINER WITH ANY TOOL.

Keep away from heat, sparks, and open flame.

Keep from freezing.

In case of spillage, keep wet and remove carefully.

In case of fire, smother with foam-type fire extinguisher or sand.

Do not use carbon tetrachloride, CO₂ extinguishers or water.

Wear goggles or face shield and fire-retardant clothing when handling.