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WARNING
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Guide to Precautionary Labeling of Hazardous Chemicals

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GUIDE TO PRECAUTIONARY LABELING OF HAZARDOUS CHEMICALS



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The information, recommendations, and illustrative labels contained in Manual L-1 have been compiled from sources believed to be reliable and to represent the best current opinion on the subject. No warranty, guarantee, or representation is made by the Association as to the absolute correctness or sufficiency of any information, recommendation, or illustrative labels herein, and the Manufacturing Chemists' Association, Inc. assumes no responsibility in connection therewith; nor can it be assumed that all necessary warnings and precautionary measures are contained in this Guide, or that other or additional measures may not be required under particular or exceptional conditions or circumstances.

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MCA PRECAUTIONARY LABELING ACTIVITY

A Review

Accidental experience and willful experiment led man early to recognize the hazards which typify some substances. In 1450, Scotland enacted one of the first statutes governing product hazard. The Court Apothecary then ruled "that all persons are forbidden under the pain of treason to bring home poisons for any use by which Christian man or woman can take harm." From such beginnings came today's laws and regulations covering the identification of hazardous substances.

One of the earliest United States statutes in the chemical field was the Federal Caustic Poison Act (1927). It covered twelve caustic or corrosive substances in certain concentrations, in containers "suitable for household use." Interpretation and enforcement was by the Food and Drug Administration. In its simplest terms, packages of the specified materials were required by law to carry labels containing the word "POISON" in particular type size along with an "antidote" statement.

The year 1932 saw the introduction into Congress of a Volatile Poisons Bill. A first draft contained a general definition of hazardous materials. A subsequent one followed the earlier plan of listing specific chemicals. The second draft authorized the Surgeon General to enlarge the list after investigation. While these bills did not become law, they marked a sharp acceleration in the evolution of precautionary labeling and its recognition by statutory requirement in the United States. With this came renewed awareness of responsibility by producers and by industry groups such as the Manufacturing Chemists' Association, Inc.

From such group activity came the Chemical Products Agreement Committee appointed by the Surgeon General. The work of this group evolved the voluntary "Surgeon General's Agreements" entered into by the U.S. chemical industry in 1934-35. The texts of the precautionary labels to be used on specific products were agreed upon and made a part of executed agreements. These continued in effect and were honored by industry until 1952. The Surgeon General then agreed to their replacement by broader and more widely applicable practices formulated through the continued work of MCA and its Labels and Precautionary Information Committee.

The Manufacturing Chemists' Association, Inc., and its members, had early recognized the place of precautionary labeling in relations both with its customers and with state and federal governments. There were

numerous strong reasons for taking the initiative in this phase of chemical marketing. The industry had an outstanding safety record in its manufacturing units. The Association believed this safety record could be projected to the plants and homes of its customers to their mutual benefit. There was always the shadow of litigation that faces any producer as the result of real or fancied injury by a product. Chemical manufacturers had already seen the possible alternative of federal and state legislation which might or might not be wisely framed. MCA chose the path of self-correction. In 1944 it convened a conference on a chemical precautionary labeling code. Attended by over ninety member representatives, it resulted in the formation of the Labels and Precautionary Information Committee of the Association. This committee continues as the group longest active in this endeavor. One of its earliest concerns was the compilation of a manual on precautionary labeling practices for chemicals. First issued in March 1945, Manual L-1 of the MCA LAPI Committee has become a widely recognized text on this subject.

MANUAL L-1

PRECAUTIONARY LABELING OF HAZARDOUS CHEMICALS

Introduction

Many products present no hazard in normal handling and storage. For these products, no precautionary statements are necessary on the label. 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 is practicable, reach every person using, handling, or storing hazardous substances.

The most practical means of disseminating this information appears to be by precautionary labels, affixed to containers of hazardous substances, bearing appropriate precautionary statements expressed as simply and briefly as possible. 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. Such information may be found in the producers' technical bulletins or in the Manufacturing Chemists' Association's Chemical Safety Data Sheets.

To achieve uniform and adequate labeling of hazardous substances, the Labels and Precautionary Information (LAPI) Committee of the Manufacturing Chemists' Association, Inc. (MCA) offers Manual L-1

as a guide in preparing precautionary label texts. Part I sets forth general principles. Part II presents precautionary texts selected to illustrate the application of these principles to the major types of hazards encountered. Part III presents precautionary texts illustrating the labeling of a group of substances used in the pesticide (economic poison) field.

The labeling of radio-active materials is a complex problem outside the scope of this Guide. In preparing precautionary labels for such materials, it is suggested that reference be made to the series of handbooks published by the United States Department of Commerce, National Bureau of Standards, covering the safe handling of radio-active materials.

The Surgeon General of the United States Public Health Service has discontinued the labeling agreements entered into some years ago with the manufacturers of a few specific chemicals. This was done because today adequate precautionary labels are in general use by the producers. The United States Public Health Service has approved the principles of precautionary labeling developed by MCA and continues its interest in this field in cooperation with the Association. It is felt that cooperation on the present broad basis will best serve the purpose intended when the earlier more specific agreements were made.

This Guide will be found extremely useful in the preparation of precautionary text for any hazardous chemical even though the *General Principles* and illustrative texts were designed originally for hazardous chemicals intended for industrial users. The precautionary texts as presented in this Guide should be used in addition to, or in combination with any specific wording required by law. Since individual statutes, regulations, or ordinances may require that particular information be included in a label, that certain information be displayed in a particular manner, or that a specific label be affixed to a container, the use of the *General Principles* or the illustrative texts in this Guide will not necessarily insure compliance with such laws. The specific requirements of each such law and regulations issued thereunder must be observed in order to insure compliance. Such laws include the Federal Hazardous Substances Labeling Act and similar state and municipal legislation; the Federal Insecticide, Fungicide, and Rodenticide Act and similar state legislation; Interstate Commerce Commission Regulations for Transportation of Explosives and Other Dangerous Articles; and others.

DEFINITIONS

Laws making precautionary labeling mandatory mark the evolution of labeling from its earliest beginnings. Complementary to the development of such codes has been the definition of terms used in specifying such labeling. This part of the development has received extensive study by the MCA Labels and Precautionary Information Committee. This has resulted in the following definitions encompassing the modes in which substances are hazardous and the types of materials which exhibit such behavior.

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.

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.

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.

Economic Poison (Pesticide)—(1) Any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, weeds, or other forms of plant or animal life or viruses, except viruses on or in living man or other animals, and (2) any substance or mixture of substances intended for use as a plant regulator, defoliant or desiccant.

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.

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.

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.

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.

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.

Irritant (Physiological)—Any substance which on immediate, prolonged, or repeated contact with normal living tissue will induce a local inflammatory reaction.

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.

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.

Oxidizing Material—A substance that yields oxygen readily to stimulate the combustion of organic matter.

Pesticide—Same as **Economic Poison**

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 the 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.

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.

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.

Vapor—The gaseous form of a substance which is normally in the solid or liquid state. A vapor diffuses.

PART I

Preparation of Precautionary Labels

General Principles

The following **General Principles** serve as a guide in the preparation of precautionary labels for hazardous substances.

- (1) Each hazardous substance presents a distinct problem and must be treated individually in the light of its own characteristics. Conclusions regarding the hazards of a product cannot safely be drawn either from the properties of the materials from which it is formed or by analogies based upon chemical structure.

Mixtures of two or more chemicals may have properties that vary in kind or degree from those of the individual components. Any precautionary label for mixtures should be based on the properties of the finished product.

Impurities may contribute hazardous properties and should not be overlooked.

- (2) All statements on precautionary labels should be brief, accurate, and expressed in simple, easily understood terms.
- (3) Precautionary labeling should be used only when and to the extent necessary. The language should be practical, not based alone upon the inherent properties of a product, but directed toward the avoidance of hazards resulting from such use, handling, and storage as may reasonably be anticipated. The use of precautionary labels for relatively harmless products, or the use of unnecessary words, will develop a disregard for labels and defeat their purpose as surely as will failure to give adequate notice of hazards.
- (4) On labels for different products, uniformity in language to indicate the same hazards and same degree of hazard is most desirable in order to gain greater understanding through standardization.
- (5) The following subject matter should be considered for inclusion on a precautionary label:

A. **Name of Product.**

B. **Signal Word** designating degree of hazard—**DANGER!**, **WARNING!**, or **CAUTION!**

C. **Affirmative Statement of Hazards.**

D. **Precautionary Measures** covering actions to be followed or avoided.

E. **Instructions in Case of Contact or Exposure**, where advisable. (Note: Under some laws antidotes or first aid procedures are required when the word "**POISON**" is used.)

Instructions for the handling and storage of containers should also be considered for inclusion on the label. This is information relating to characteristics of the container as well as those of its contents, and is discussed separately under **Container Handling and Storage** on Page 24.

- (6) The inclusion of the word "**POISON**" and the skull and crossbones on a label should be limited to those cases where the product is a poison according to the definition appearing on Page 10, or where such use is prescribed by law. When used, this legend should be in addition to the other label warnings and should not take the place of the Signal Words **DANGER!**, **WARNING!**, and **CAUTION!** which are designed to show the relative degree of hazard.
- (7) A non-descriptive code designation or trade name should not be used as the only identification of a hazardous substance. If the complete chemical name is not shown, the label should clearly state the type of chemical, e.g., "**corrosive acid**", "**lead compound**".
- (8) Precautionary statements should be grouped together in a prominent location on the label and should be printed in easily legible type which is in contrast by typography, layout, or color with other printed matter on the label. The label should be affixed firmly to and in a conspicuous place on the container.

Preparation of Labels

In the preparation of a precautionary label, the compilation of all available relevant information on the product is a necessary first step. An adequate knowledge of the toxicity of the material (obtained from the literature or through laboratory tests) and data on physical and chemical properties, packaging, and methods of handling and use of the product are needed to make possible a description of the hazards. In the case of an established product, advantage should be taken of the experience of people involved in manufacturing, shipping, and using

the material. All the **General Principles** should be kept in mind and the following information considered for inclusion on the label:

A. **Name of Product** This is important information for the safety of handlers and users. It is preferable that the chemical name of the product be used. The recommendations of the American Chemical Society for nomenclature should be followed. 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 of a hazardous chemical. If the complete chemical name is not shown, the label should at least clearly state the type of chemical, e.g., "**corrosive acid**", "**lead compound**".

B. **Signal Word** This word is intended to draw attention to the presence of hazard, and to indicate the degree of severity. The Signal Words recommended are, in the order of diminishing severity of hazard:

- (1) **DANGER!**
- (2) **WARNING!**
- (3) **CAUTION!**

Degree of severity can be expressed only in relative terms. "**DANGER!**" is the strongest of the three words and should be used for those products presenting the most serious hazards. "**CAUTION!**" is recommended for those compounds presenting the least serious hazards. "**WARNING!**" is intermediate between "**DANGER!**" and "**CAUTION!**". Reference to the illustrative labels in Part II of this Guide will help in the selection of the proper Signal Word.

C. **Statement of Hazards** This statement should give notice of the hazards that are present in connection with the customary or reasonably anticipated handling or use of the product. Examples are:

CAUSES BURNS
VAPOR EXTREMELY HAZARDOUS

Many chemical products will present more than one type of hazard, in which case, appropriate statements for each significant type should be included on the label. In general, the most serious hazard should be stated first.

While any compound may be hazardous if improperly used, it is impractical to cover every possible contingency on a label. Efforts should be directed toward giving notice of the significant hazards. A minor hazard may frequently be covered clearly and briefly by an appropriate precautionary statement alone. In some cases, the total hazard of a product, while justifying one or more Precautionary Meas-

ures, may be of such order as to require no Statement of Hazard on the label.

D. **Precautionary Measures** These instructions are intended to supplement the Statement of Hazards by setting forth briefly measures to be taken to avoid injury or damage from stated hazards.

Examples are:

Keep away from heat, sparks, and open flame.
Avoid breathing dust.

Precautionary Measures may be included for hazards not considered of sufficient importance to require mention in the Statement of Hazards.

Statements similar to, "**Do not take internally.**" deserve special attention. They are seldom necessary where the Precautionary Measure to be followed is obvious as, for example, when the product is labeled "**POISON**" or the Statement of Hazards contains the words, "**MAY BE FATAL IF SWALLOWED**". On the other hand, the instruction may be desirable if the name, appearance, use, or other attributes of the chemical are likely to result in its being taken orally through accident or mistaken identity.

E. **Instructions in Case of Contact or Exposure** The primary purpose of precautionary labeling is to **prevent** injury or damage. However, Instructions in Case of Contact or Exposure may be included in those instances where the results 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.

Instructions should be limited to recognized first aid procedures based on simple methods and commonly available materials. Instructions for strictly medical treatment should be omitted except when specifically required by law or indicated by special circumstances.

Because of the serious and lasting effects that may result from eye injuries, a recommendation to get medical attention should accompany any specific instructions directed to treatment of the eyes.

In certain instances, simple remedial measures such as washing, or removal of clothing, may be included where they will serve to avoid serious injury following contact or exposure.

All precautionary information should appear on the label as a unit and should be printed in the order given above. The labels in Parts II and III illustrate suitable arrangements and indicate the relative promi-

nence that should be given to the individual statements. Such relative prominence may be achieved in a number of ways such as by variation in type size, color, or layout of the printed material.

Note: Some state laws and regulations require, on labels, the use of special or strictly defined antidotes or prescribe special ways in which these must be shown for certain hazardous substances. The requirements for any given poison may, therefore, vary greatly, and the impossibility of showing, in the illustrative labels, antidotes which might be nationally acceptable has led to the practice of indicating only the need for an appropriate first aid or antidote statement where the "**POISON-skull and crossbones**" legend is used.

Table 1, on Pages 20 and 21, is intended as a guide in the selection of precautionary statements for labels. Listed are classifications of materials according to the hazardous properties most frequently encountered. Opposite each classification are given Statements of Hazard, Precautionary Measures and, in most cases, Instructions in Case of Contact or Exposure. It is important to recognize that hazardous substances can have inherent in them more than one of such hazardous properties, and that the label wording for such products should include an appropriate combination of the pertinent statements.

As each hazardous substance must be treated individually in the light of its own characteristics and customary or reasonably anticipated handling or use, there will be many instances in which the illustrative statements in Table 1 will not be applicable, either because they do not accurately express the degree of hazard or because they fail to cover the particular characteristics. In such cases, suitable statements should be chosen to fit the situation. The illustrative labels in Part II of this Guide may be helpful in the choice of appropriate wording.

EXAMPLE OF LABEL PREPARATION

To give as complete an illustration as possible of the procedure to be used in writing a precautionary label, Ethylene Chlorohydrin has been selected. A study of available physical, chemical, and toxicological data shows that this chemical presents several hazards for consideration. It is a poison, as defined in this Guide, by skin absorption and is dangerously toxic by oral ingestion and by vapor inhalation. On contact it can cause serious damage to the eyes. There is a hazard of combustibility since the flashpoint of the liquid is 140°F., which is within the range of combustibility in Class of Hazard I-C in Table 1. A special hazard of Ethylene Chlorohydrin is its ability to penetrate ordinary rubber.

The selection of the Signal Word depends on the seriousness of the hazards and to a lesser extent on the number of hazards. In the case of Ethylene Chlorohydrin, both major hazards—its toxicity and its action on the eyes—are serious and acute. Therefore, the Signal Word "**DANGER!**" is indicated.

Since ethylene chlorohydrin is dangerous by any type of contact with the body, strong Statements of Hazard should be used. As far as possible, hazards should be listed in the order of decreasing importance. Thus, from Table 1, Classes of Hazard III, IX, and X, appropriate Statements of Hazard are selected to describe the various hazards.

From III:

**VAPOR EXTREMELY HAZARDOUS
VAPOR MAY BE FATAL IF INHALED**

From IX:

**EXTREMELY HAZARDOUS LIQUID
ABSORBED THROUGH SKIN**

From X:

MAY BE FATAL IF SWALLOWED

For brevity and better emphasis, the above statements are combined and rearranged:

**EXTREMELY HAZARDOUS LIQUID AND VAPOR
MAY BE FATAL IF SWALLOWED, INHALED, OR
ABSORBED THROUGH SKIN**

For the major hazard of eye damage, the appropriate Statement of Hazard as selected from Table 1, Class of Hazard VII, is modified to:

CAUSES BURNS TO EYES

The Statement of Hazard "**COMBUSTIBLE**" is not necessary (except as required by law), since the Precautionary Measure, "**Keep away from heat and open flame.**" is considered adequate.

Since ordinary rubber protective clothing, including gloves, will not eliminate the hazard of skin absorption, a special Precautionary Statement to this effect should be prepared and included.

Statements of Precautionary Measures are selected from Table 1, Column 3, Classes of Hazard I, III, VII, IX and X.

From I:

Keep away from heat and open flame.

From III:

Do not breathe vapor.
Use only with adequate ventilation.

From VII:

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

From IX:

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

From X:

Do not take internally.

Special Precautionary Statement prepared to cover special hazard of material:

Ordinary rubber protective clothing, including gloves, will not prevent skin absorption.

Instructions in Case of Contact or Exposure are selected from Table 1, Column 4, Class of Hazard IX:

From IX:

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.

Ethylene Chlorohydrin is a poison by absorption into the body by skin contact, therefore, the "POISON-skull and crossbones" legend is used, followed by first aid instructions:



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.

Thus, the completed precautionary label, combining and rearranging selected material according to **General Principles** as outlined in this Guide, will include the following components as shown below:

- ① Name of Product, ② Signal Word, ③ Statement of Hazards,
- ④ Precautionary Measures, ⑤ Instructions in Case of Contact or Exposure, ⑥ Poison Legend and ⑦ First Aid Statement

① **ETHYLENE CHLOROHYDRIN (ANHYDROUS OR 38%)**

- ② **DANGER!** **EXTREMELY HAZARDOUS LIQUID AND VAPOR MAY BE FATAL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN CAUSES BURNS TO EYES**

- ④ 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.

- ⑤ 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.

- ⑥  **POISON** 
Call A Physician

- ⑦ **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.

TABLE 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. Parenthetical words in the table express variations in kind or degree and are to be used where applicable. SEE EXAMPLE OF LABEL PREPARATION BEGINNING ON PAGE 16.

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" set forth on Page 10 or is required by law. If "POISON" is used, add a first aid or antidote statement as required.

Class of Hazard	Statements of Hazard	Precautionary Measures	Instructions in Case of Contact or Exposure
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	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. 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. 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.	IMPORTANT: Select applicable statement(s) only. Selection(s) to be based on necessity for prompt action in order to avoid serious effects. 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 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] If spilled on clothing, remove and wash before re-use. In case of exposure to high concentrations, move to fresh air. If affected by exposure, move to fresh air. If breathing has stopped, apply artificial respiration.
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]	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]
IV. Materials Giving Vapors Hazardous from Prolonged or Repeated Exposures or Exposure to High Concentrations	VAPOR HARMFUL CAUSES IRRITATION OF EYES, NOSE, AND THROAT	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.
V. Gases and Vapors Physiologically Inert	GAS (VAPOR) REDUCES OXYGEN AVAILABLE FOR BREATHING RELEASES HEAVY GAS (VAPOR) WHICH MAY CAUSE SUFFOCATION	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.
VI. Materials in Dust Form Hazardous from Inhalation or Contact	HAZARDOUS (HARMFUL) DUST HARMFUL IF INHALED CAUSES IRRITATION OF SKIN, EYES, NOSE, AND THROAT	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.)
VII. Corrosives	CAUSES SEVERE BURNS CAUSES BURNS MAY CAUSE BURNS	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.)
VIII. Irritants, Sensitizers	CAUSES SKIN IRRITATION MAY CAUSE SKIN IRRITATION	Avoid (prolonged or repeated) contact with skin. Wash thoroughly after handling. Avoid exposure to (concentrated) vapor.	In case of contact, flush with (plenty of) water; (for eyes, get medical attention.)
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]	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]
X. Materials Toxic if Swallowed	POISONOUS IF SWALLOWED MAY BE FATAL IF SWALLOWED HARMFUL IF SWALLOWED [See NOTE opposite page]	Wash thoroughly before eating or smoking Wash thoroughly after handling. Do not breathe dust (vapor). Avoid breathing dust (vapor). Do not take internally. [See Precautionary Measures, Page 15].	[See NOTE above]

*As required by law

CMA 045520

Labels for Small Commercial Packages

The **General Principles** governing the preparation of precautionary labels discussed in Part I and the illustrative labels in Part II of this Guide have been developed primarily for bulk packages of chemicals intended for industrial use. The **General Principles** may be applied, however, to chemicals packaged in small containers. These may include, among others, hazardous substances in retail packages intended for the ultimate consumer; highly purified chemicals intended for research, testing, or control; and chemicals intended for professional use such as in pharmacy.

As stated in the **General Principles** on Page 12, each hazardous substance presents a distinct problem and must be treated individually in the light of its own characteristics. This same principle will apply to small containers. Small containers may present a problem of less available space for labeling purposes. Careful and selective shortening of precautionary statements for such containers may be in order if necessary to permit legibility, or if the wording on labels for the chemical in industrial packages is not applicable. Consideration should always be given to (1) the intended or reasonably anticipated handling or use of the particular product, (2) the training and experience of the expected user, and (3) the extent to which the hazard is modified by the size or type of container.

The following principles are recommended for condensation of suggested label wording where necessary or advisable:

- (1) Retain the **Signal Word**;
- (2) Retain the **Statement of Hazards**, shortened if necessary to a practical equivalent;
- (3) Consider omission of **Precautionary Measures** if they are clearly indicated or implied from the **Statement of Hazards** or can be clearly indicated or implied by revising the **Statement of Hazards**;
- (4) Consider omission of wording relating to hazards that may be less serious because of the particular characteristics of the package, the nature of the use, and the training and experience of the user. Care must be taken to include Precautionary Measures for any additional hazard which may be present as a result of such characteristics, use, or training and experience.

Care should be taken that labels prepared in accordance with the above principles include all information required by law.

Labels for Samples and for New Products for Investigational Use

Samples:

In general, the label for samples of a product should bear the same precautionary information that is on the commercial label, with the exception of possible differences in container instructions. If the product is not in commercial production, the label for samples should be prepared in accordance with the **General Principles** stated on Page 12 in this Guide.

New Products for Investigational Use:

Chemical, physical, and toxicological data should be obtained on any product before it is distributed, so that hazardous properties can be described on the label. However, it may occasionally be necessary to make delivery of a new product for investigational use before all of these data are obtained. For instance, the quantity available may be too small for necessary tests, or the product may have to be delivered to investigators for the purpose of obtaining the desired information. These deliveries should be made to qualified investigators only, and should be labeled as adequately as possible with the information available. To cover such cases (and such cases only) the following illustration is suggested for preparing labels to be used during the period of investigation.

(NAME OR DESCRIPTION OF PRODUCT)

FOR INVESTIGATIONAL USE ONLY

SIGNAL WORD! STATEMENT(S) OF KNOWN HAZARD(S)

Appropriate precautionary measures.

Appropriate instructions in case of contact or exposure.

IMPORTANT! The chemical, physical, and toxicological properties of this product have not been fully investigated, and its handling or use may (be hazardous) (present additional hazards). Exercise due care.

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 substance 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.

Wood n Barrel Handling and Storage *(for liquids and semi-liquids)*

- Keep barrel out of sun and away from heat.
- Store with hidge hung 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 non-metallic 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.

MANUAL L-1 — SIXTH EDITION

1961

In this new edition of Manual L-1, certain illustrative label texts have been added to illustrate specific new material types. Other texts which appeared in the 5th Edition have been revised in order to recognize new information concerning the products' properties, or in consideration of revised **Container Handling and Storage** precautions as set forth on Page 24. Finally, some texts have been deleted since the labeling principles which they illustrated are adequately illustrated by other texts in this Guide.

The fact that a label text formerly used in Manual L-1 is deleted from this edition 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.

Individual statutes, regulations, or ordinances may require that particular information be included in a label or that a specific label be affixed to a container. In each case, the requirements of such laws should be studied.

PART II

LABELS ADDED

Acrolein
Benzidine Hydrochloride
Benzidine Sulfate
Benzoyl Peroxide
Beryllium Oxide Powder
Butyllithium (normal)
Calcium Cyanide
Decaborane
Diborane
Dichlorobenzene (ortho)
Ethyl Acrylate
Isopropylamine

Lead Oxide (Red Lead)
Methyl Acrylate
Methylamines, Anhydrous
Methylamines, Aqueous Solutions
Pentaborane
Phosphorus Pentasulfide
Potassium Dichromate
Titanium Trichloride, Anhydrous
Tolylene Diisocyanate
Vanadium Tetrachloride
Vinyl Acetate
Zirconium Metal Powder

LABELS REVISED

Acetaldehyde
Acetic Acid, Glacial
Acetic Anhydride
Acetyl Chloride
Acrylonitrile
Allyl Alcohol
Allyl Chloride
Aluminum Chloride, Anhydrous
Ammonium Hydroxide
iso-Amyl Acetate (now Amyl Acetate, Mixed Isomers)
Aniline
Antimony Trichloride
Barium Chloride
Benzyl Chloride

Bromine
Butadiene (now Butadiene, Inhibited)
Butyl Alcohol (normal or secondary)
n-Butylamine (now Butylamine, normal)
Butyraldehyde
Caustic Potash
Caustic Soda
Chlorine
Chlorosulfonic Acid
Chromic Acid [Chromium Trioxide] (now Chromium Trioxide [Chromic Acid])
Cresol (Cresylic Acid)
Cyanides, Inorganic
Cyclohexane
Continued Next Page

PART II—Continued

LABELS REVISED

Dichloroethylene
Dichloroethyl Ether
Diethylamine
Diethylenetriamine
Dimethylamine, Anhydrous
Dimethyl Sulfate
Dioxane (1,4-Diethylene Dioxide)
Ethyl Acetate
Ethylene Chlorohydrin (Anhydrous or 38%)
Ethylene Dichloride
Ethylene Oxide
Formaldehyde Solution
Hydrochloric Acid (Muriatic Acid)
Hydrocyanic Acid
Hydrogen Chloride, Anhydrous
Hydrogen Peroxide 7.4%
Hydrogen Peroxide (stronger than 7.4% but not exceeding 52%)
Hydrogen Sulfide
Lead Monoxide (Litharge)
Mercuric Chloride (Mercury Bichloride)
Methanol
Methyl Bromide
Methyl Chloride
Methyl Ethyl Ketone
Methyl Methacrylate Monomer
Methyl Morpholine
Mixed Acid (Sulfuric and Nitric)
Morpholine
Muriatic Acid
Naphthylamine (alpha)

Paraformaldehyde
Phenol
Phosphoric Acid
Phosphoric Anhydride (now Phosphorus Pentoxide)
Phosphorus
Phosphorus Pentachloride
Phthalic Anhydride
Potassium Hydroxide
iso-Propyl Ether (now Isopropyl Ether)
Pyridine
Silver Nitrate
Sodium Cyanide
Sodium Fluoride
Sodium Hydrosulfite
Sodium Hydroxide
Sodium Orthosilicate
Sodium Sesquisilicate, Anhydrous
Sodium Sulfhydrate
Sodium Sulfide
Sulfur Chloride
Sulfur Dichloride
Sulfuryl Chloride
Tar Acids
Thionyl Chloride
Toluene (Toluol)
Toluidine (ortho or meta)
Toluidine (para)
Vinyl Acetate
Xylene (Xylol)

LABELS DELETED

Ammonia, Anhydrous
Barium Nitrate
Benzidine
1,2-Dichloroethane
Di-iso-Butyl Ketone
Dimethylaniline
Dipropyl Ketone
Ethyl Formate
Ethylene Dibromide
Ethylene Glycol Monomethyl Ether
Mesityl Oxide
Methyl Amyl Acetate
Methyl Amyl Alcohol
Methyl n-Amyl Ketone
Methyl iso-Butyl Ketone

Methyl Cyclohexanol
Methyl Cyclohexanone
Methyl iso-Propyl Ketone
Methylene Chloride
Nitrogen Dioxide
Nitrophenol
Pentachlorophenol
Petroleum Naphthas and Solvents, Industrial
Phenetidine (ortho or para)
iso-Propyl Acetate
Propylene Chlorohydrin
Sodium Fluosilicate
Tetrachlorophenol
Trichlorophenol

PART III

LABELS ADDED

3-(alpha-Acetylthiofurfuryl)-4-hydroxycoumarin and Sodium Salt
Allyl Alcohol
2-Carbomethoxy-1-methylvinyl
Dimethylphosphate and Beta Isomer

2-Chloroallyl Diethyldithiocarbamate
alpha-Chloro-N,N-diallylacetamide
1,1-bis(Chlorophenyl)-2,2,2-trichloroethanol
1,2-Dibromo-3-chloropropane
Continued Next Page

PART III—Continued

LABELS ADDED

Dichloropropene-Dichloropropane Mixture	1-Naphthyl N-Methylcarbamate
Diethyl Diphenyl Dichloroethane	Pentachloronitrobenzene
Dodine	Phorate
Hexaethyl Tetraphosphate	Ronnel
Maleic Hydrazide, Diethanolamine Salt	N-Trichloromethylthiophthalimide

LABELS REVISED

Acrylonitrile	Lead Arsenate
Arsenicals, Liquid (Weed Killers) now	Malathion
Arsenical Weed Killers, Organic	Methyl Bromide
Calcium Arsenate	Nicotine Sulfate
Calcium Cyanide	Parathion
Chloranil	Paris Green
Cyanides, Inorganic	Sodium Fluoride
Dichlone	Sodium Fluosilicate
Dichloroethyl Ether	Tetraethyl Pyrophosphate
Ethylene Dibromide	Thallium Sulfate
Ethylene Dichloride	Toxaphene
Formaldehyde Solutions (5% and over)	Zinc Arsenite
Hydrocyanic Acid	

LABELS DELETED

Antu	Barium Fluosilicate
Aramite	Glyodin

PART II

Illustrative Labels for Hazardous Chemicals

The precautionary labels in this section have been prepared to demonstrate the practical application of the **General Principles** in Part I to a number of chemical products intended for industrial use. The user should familiarize himself with Part I before adapting any of the label statements contained in Part II to his products. The chemicals were selected to illustrate labeling for the major types of hazards commonly encountered. Consequently, the listing covers only relatively few of the hazardous chemicals for which precautionary labels are necessary. In many cases, these labels would be applicable to other products having the same hazards, and examples of this are listed by 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. This subject is discussed under the heading, "**Container Handling and Storage**", beginning on Page 24.

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.

The notation, "MCA Chemical Safety Data Sheet available", appearing with certain labels in this section, refers to Data Sheets published by the Manufacturing Chemists' Association, Inc. These publications contain detailed information on the chemical, physical, and toxicological properties of the product, as well as information on shipping containers, labeling, storage, handling, and protective equipment. Prices and a complete list of available Chemical Safety Data Sheets may be obtained directly from the Manufacturing Chemists' Association, Inc. (See Pages 95 and 96 for complete listing of Chemical Safety Data Sheets now available.)

The labeling of radio-active materials is a complex problem outside the scope of this Guide. In preparing precautionary labels for such

materials, it is suggested that references be made to the series of handbooks published by the U. S. Department of Commerce, National Bureau of Standards, covering the safe handling of radio-active materials.

The illustrative precautionary labels suggested in Manual L-1 should be used in addition to, or in combination with, any label required by law.

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.

MCA Chemical Safety Data Sheet SD-43 available

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.

MCA Chemical Safety Data Sheet SD-41 available

* Addition to "Container Handling and Storage", Page 24.

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.

MCA Chemical Safety Data Sheet SD-41 available

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.

MCA Chemical Safety Data Sheet SD-41 available

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.

MCA Chemical Safety Data Sheet SD-41 available

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.

MCA Chemical Safety Data Sheet SD-15 available

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.

CMA 045526

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

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.

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

(In addition, INCLUDE the same First Aid and Antidote as recommended for CYANIDES, INORGANIC shown on Page 51.)

MCA Chemical Safety Data Sheet SD-31 available

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.



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.

CMA 045527

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.

MCA Chemical Safety Data Sheet SD-62 available

AMMONIA, AQUA—

Same label as AMMONIUM HYDROXIDE

MCA Chemical Safety Data Sheet SD-13 available

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.

MCA Chemical Safety Data Sheet SD-45 available

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.

MCA Chemical Safety Data Sheet SD-13 available for AQUA AMMONIA

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

MCA Chemical Safety Data Sheet SD-17 available

ANISIDINE (orth)

**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.

MCA Chemical Safety Data Sheet SD-66 available

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.



Call A Physician

First Aid

MCA Chemical Safety Data Sheet SD-60 available

BARIUM CHLORIDE

DANGER! MAY BE FATAL IF SWALLOWED

Do not take internally.

Avoid breathing dust.

Wash thoroughly after handling.



Call A Physician

First Aid

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

CMA 045529

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.



Call A Physician

First Aid

MCA Chemical Safety Data Sheet SD-2 available

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.

F r W t Benz yl 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.

MCA Chemical Safety Data Sheet SD-81 available

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.

MCA Chemical Safety Data Sheet SD-69 available

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.

MCA Chemical Safety Data Sheet SD-69 available

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** 
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.

MCA Chemical Safety Data Sheet SD-49 available

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.

MCA Chemical Safety Data Sheet SD-55 available

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.

MCA Chemical Safety Data Sheet SD-78 available

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.

 **POISON** 
Call A Physician
First Aid

MCA Chemical Safety Data Sheet SD-12 available

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.

 **POISON** 
Call A Physician
First Aid

MCA Chemical Safety Data Sheet SD-3 available

CAUSTIC POTASH— Same label as SODIUM HYDROXIDE

MCA Chemical Safety Data Sheet SD-10 available

CAUSTIC SODA — Same label as SODIUM HYDROXIDE

MCA Chemical Safety Data Sheet SD-9 available

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.

MCA Chemical Safety Data Sheet SD-80 available

CMA 045534

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) — Same 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.

MCA Chemical Safety Data Sheet SD-33 available

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.

MCA Chemical Safety Data Sheet SD-44 available

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.

MCA Chemical Safety Data Sheet SD-48 available

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



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.

MCA Chemical Safety Data Sheet SD-30 available for SODIUM CYANIDE

CYCLOHEXANE

DANGER! EXTREMELY FLAMMABLE

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

MCA Chemical Safety Data Sheet SD-68 available

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.

CMA 045536

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 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.

MCA Chemical Safety Data Sheet SD-54 available

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.



POISON

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 — *Sam label as METHYLAMINES,* AQUEOUS SOLUTIONS

MCA Chemical Safety Data Sheet SD-57 available for METHYLAMINES

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.

MCA Chemical Safety Data Sheet SD-76 available

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.

MCA Chemical Safety Data Sheet SD-57 available for METHYLAMINES

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.

MCA Chemical Safety Data Sheet SD-19 available

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.

CMA 045538

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.

MCA Chemical Safety Data Sheet SD-51 available

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.

MCA Chemical Safety Data Sheet SD-79 available

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.

MCA Chemical Safety Data Sheet SD-50 available

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.

MCA Chemical Safety Data Sheet SD-29 available

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
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 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.

* Addition to "Container Handling and Storage", Page 24.

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.

MCA Chemical Safety Data Sheet SD-18 available

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.

MCA Chemical Safety Data Sheet SD-38 available

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.



Call A Physician

First Aid

If **swall wed**: 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.

MCA Chemical Safety Data Sheet SD-1 available

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.

MCA Chemical Safety Data Sheet SD-39 available

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.



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 pers n.

MCA Chemical Safety Data Sheet SD-67 available

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 atten-**
ti n. Remove and wash clothing before re-use.

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

MCA Chemical Safety Data Sheet SD-25 available

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)

MCA Chemical Safety Data Sheet SD-25 available

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.

MCA Chemical Safety Data Sheet SD-39 available

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 decom-
position, 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.

MCA Chemical Safety Data Sheet SD-53 Supplements A & B available

* Addition to "Container Handling and Storage", Page 24.

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 fire.

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.

MCA Chemical Safety Data Sheet SD-53 Supplements A & B available

CMA 045543

* Addition to "Container Handling and Storage", Page 24.

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 fire. 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.

MCA Chemical Safety Data Sheet SD-53 Supplements A & B available

* Addition to "Container Handling and Storage", Page 24.

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** 
Call A Physician
First Aid

Carry patient to fresh air.

If patient has stopped breathing, apply artificial respiration immediately.

Keep patient warm.

MCA Chemical Safety Data Sheet SD-36 available

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.

MCA Chemical Safety Data Sheet SD-72 available

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

MCA Chemical Safety Data Sheet SD-64 available for LEAD OXIDES

LEAD OXIDE (RED LEAD) — Same label as LEAD ACETATE

MCA Chemical Safety Data Sheet SD-64 available

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.

 **POISON** 
Call 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 % OF METHANOL

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

MCA Chemical Safety Data sheet SD-22 available

CMA 045545

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.

MCA Chemical Safety Data Sheet SD-79 available

METHYLAMINES, ANHYDROUS —

Same label as DIMETHYLAMINE, ANHYDROUS

MCA Chemical Safety Data Sheet SD-83 available for ETHYL ACETATE

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.

MCA Chemical Safety Data Sheet SD-57 available

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 MANUFACTURER) _____ for information on equipment and proper use.

MCA Chemical Safety Data Sheet SD-35 available

CMA 045546

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.

MCA Chemical Safety Data Sheet SD-40 available

METHYL ETHYL KETONE—

Same label as ETHYL ACETATE

MCA Chemical Safety Data Sheet SD-83 available

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.

MCA Safety Data Sheet SD-65 available

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

MCA Chemical Safety Data Sheet SD-39 available for HYDROCHLORIC ACID

NAPHTHYLAMINE (alpha) (containing beta- NAPHTHYLAMINE) —

Same label as NAPHTHYLAMINE (beta)

MCA Chemical Safety Data Sheet SD-32 available for BETANAPHTHYLAMINE

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.

MCA Chemical Safety Data Sheet SD-32 available

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.

MCA Chemical Safety Data Sheet SD-5 available

NITROANILINE (orth , meta, or para)

**ANGER! 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

MCA Chemical Safety Data Sheet SD-21 available

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.

MCA Chemical Safety Data Sheet SD-20 available for SULFURIC ACID

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.

MCA Chemical Safety Data Sheet SD-6 available

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.

* Addition to "Container Handling and Storage", Page 24.

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.



**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.

CMA 045549

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.

MCA Chemical Safety Data Sheet SD-11 available

PERCHLOROETHYLENE (TETRACHLOROETHYLENE) — Same label as TRICHLOROETHYLENE

MCA Chemical Safety Data Sheet SD-24 available

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.



**Call A Physician
First Aid**

MCA Chemical Safety Data Sheet SD-4 available

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.

MCA Chemical Safety Data Sheet SD-70 available

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

MCA Chemical Safety Data Sheet SD-16 available

CMA 045550

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.

MCA Chemical Safety Data Sheet SD-26 available

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.

* Addition to "Container Handling and Storage", Page 24.

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.

MCA Chemical Safety Data Sheet SD-71 available

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.

MCA Chemical Safety Data Sheet SD-28 available

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.

MCA Chemical Safety Data Sheet SD-27 available

PHTHALIC ANHYDRIDE (SOLID)

CAUTION! MAY CAUSE SKIN IRRITATION

Avoid prolonged or repeated contact with skin.
Avoid breathing dust.

MCA Chemical Safety Data Sheet SD-61 available

POTASSIUM DICHROMATE—

Same label as SODIUM DICHROMATE

MCA Chemical Safety Data Sheet SD-46 available

* Addition to "Container Handling and Storage", Page 24.

POTASSIUM HYDROXIDE—

Same label as SODIUM HYDROXIDE

MCA Chemical Safety Data Sheet SD-10 available for CAUSTIC POTASH

PROPYLENE—

Same label as ETHYL CHLORIDE

MCA Chemical Safety Data Sheet SD-59 available

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.

MCA Chemical Safety Data Sheet SD-47 available

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.

MCA Chemical Safety Data Sheet SD-42 available

SODIUM CYANIDE—

Same label as CYANIDES, INORGANIC

MCA Chemical Safety Data Sheet SD-30 available

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.

MCA Chemical Safety Data Sheet SD-46 available

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.

CMA 045553

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.

MCA Chemical Safety Data Sheet SD-9 available for CAUSTIC SODA

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—
Same label as SODIUM ORTHOSILICATE**

**SODIUM SULFHYDRATE—
Same 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.

MCA Chemical Safety Data Sheet SD-37 available

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.

MCA Chemical Safety Data Sheet SD-77 available for SULFUR CHLORIDES

SULFUR DICHLORIDE —

Same label as SULFUR CHLORIDE

MCA Chemical Safety Data Sheet SD-77 available for SULFUR CHLORIDES

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.

MCA Chemical Safety Data Sheet SD-20 available

SULFURYL CHLORIDE —

Same label as SULFUR CHLORIDE

TAR ACIDS — Same 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.



Call A Physician

First Aid

MCA Chemical Safety Data Sheet SD-34 available

TETRACHLOROETHYLENE (PERCHLOROETHYLENE) —

Same label as TRICHLOROETHYLENE

MCA Chemical Safety Data Sheet SD-24 available for PERCHLOROETHYLENE

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.

MCA Chemical Safety Data Sheet SD-63 available

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.

MCA Chemical Safety Data Sheet SD-82 available

TOLUIDINE (para)—Same label as NITROANILINE

MCA Chemical Safety Data Sheet SD-82 available

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.

MCA Chemical Safety Data Sheet SD-73 available

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.

MCA Chemical Safety Data Sheet SD-14 available

TRIETHYLENETETRAMINE —

Sam label as DIETHYLENETRIAMINE

TRIMETHYLAMINE, ANHYDROUS —

Same label as DIMETHYLAMINE, ANHYDROUS

MCA Chemical Safety Data Sheet SD-57 available for METHYLAMINES

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
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.

MCA Chemical Safety Data Sheet SD-75 available

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.

MCA Chemical Safety Data Sheet SD-56 available

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.

CHEMICAL SAFETY DATA SHEETS

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Acetic Anhydride	SD-15
Acetylene	SD-7
Acrylonitrile	SD-31
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Ammonia, Anhydrous	SD-8
Ammonia, Aqua	SD-13
Ammonium Dichromate	SD-45
Ammonium Hydroxide	SD-13
Aniline	SD-17
Antimony Trichloride, Anhydrous	SD-66
Arsenic Trioxide	SD-60
Benzene	SD-2
Benzoyl Peroxide	SD-81
Benzyl Chloride	SD-69
Betanaphthylamine	SD-32
Bromine	SD-49
Butadiene	SD-55
Butyraldehyde	SD-78
Calcium Carbide	SD-23
Carbon Disulfide	SD-12
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Caustic Potash (Potassium Hydroxide)	SD-10
Caustic Soda (Sodium Hydroxide)	SD-9
Chlorine	SD-80
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Chromium Trioxide (Chromic Acid)	SD-44
Cresol	SD-48
Cyclohexane	SD-68
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Diethylenetriamine	SD-76
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Ethyl Acetate	SD-51
Ethyl Acrylate	SD-79
Ethyl Chloride	SD-50
Ethyl Ether	SD-29
Ethylene Dichloride	SD-18
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Hydrochloric Acid	SD-39
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Hydrofluoric Acid, Anhydrous, Aqueous	SD-25
Hydrogen Chloride, Anhydrous	SD-39
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CHEMICAL SAFETY DATA SHEETS

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Methylamines	SD-57
Methyl Acrylate	SD-79
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Naphthalene	SD-58
Nitric Acid	SD-5
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Paraformaldehyde	SD-6
Perchloric Acid Solution	SD-11
Perchloroethylene	SD-24
Phenol	SD-4
Phosphoric Acid	SD-70
Phosphorus, Elemental	SD-16
Phosphorus Oxychloride	SD-26
Phosphorus Pentasulfide	SD-71
Phosphorus Pentoxide (Phosphoric Anhydride)	SD-28
Phosphorus Trichloride	SD-27
Phthalic Anhydride	SD-61
Potassium Dichromate	SD-46
Potassium Hydroxide (Caustic Potash)	SD-10
Propylene	SD-59
Sodium Chlorate	SD-42
Sodium Cyanide	SD-30
Sodium Dichromate	SD-46
Sodium, Metallic	SD-47
Sodium Hydroxide (Caustic Soda)	SD-9
Styrene Monomer	SD-37
Sulfur	SD-74
Sulfur Chlorides	SD-77
Sulfur Dioxide	SD-52
Sulfuric Acid	SD-20
Tetrachloroethane	SD-34
Toluene	SD-63
Tolylene Diisocyanate	SD-73
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Vinyl Acetate	SD-75
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PART III

Illustrative Labels for Pesticides

This section contains suggested precautionary texts for a group of hazardous chemicals commonly used as, or in the formulation of, insecticides, fungicides, rodenticides, herbicides, nematocides, plant regulators, defoliants, and desiccants. The term "Pesticide" is used in this Guide to indicate these products but the term "E c n m i c P i s n" is synonymous. Wording is based on the **General Principles** set forth in Part I. Careful study should be given to Part I and the special considerations discussed below before any suggested wording is used for a pesticide. These labels have been selected for illustrative purposes only, and the listings do not purport to cover all pesticides for which precautionary labeling is necessary. **Omission of a label for any particular product should not be interpreted to mean that such product requires no precautionary label.**

The principles in Part I apply primarily to the labeling of hazardous chemicals intended for industrial consumption, some of which are also used as, or for processing into forms of, pesticides intended for home, farm, or other ultimate consumer use. Labels for such packages of pesticides require consideration of additional factors since they will be handled, stored, and used differently from those intended for industrial consumption. Pesticide labels should include warnings not only of hazards to man, but also of hazards to domestic animals, useful invertebrates, and desirable vegetation. The usual legally-required ingredient statement may make unnecessary a separate showing of chemical identification of hazardous components on labels using code or nondescriptive names.

A producer or distributor of a pesticide should be familiar with all pertinent laws, regulations, and interpretations affecting these products, including those of the federal government, states, territories, and other political subdivisions; and with any applicable statutes, ordinances, or regulations affecting labeling in general. **Statements suggested in Part III should be used in addition to, or in combination with, any other wording required by law.**

Each suggested precautionary text in this section applies to a commercial chemical or to an indicated concentration range of a chemical. Many pesticides are marketed in a variety of formulations containing different concentrations or combinations of their ingredients. **Formulations of two or more constituents may have properties that**

vary in kind and degree from those of the constituents. In all cases, the precautionary statements should be based on the properties of the finished formulation.

It has not been practical to propose statements for all special packages, extraordinary uses, or other unusual circumstances surrounding individual products. Each statement is designed for the normal and customary use of a particular product when packaged for sale as a pesticide. **Each labeler of a pesticide should recognize that his product must be treated individually, in the light of its own characteristics, including, among others, concentration and grade, package sizes and types, channels of distribution, normal storage and transportation conditions, intended consumers, and intended uses.**

The label statements in Part III are confined mainly to measures necessary to prevent injury to man and domestic animals arising out of the ordinary handling, storage, or use of a pesticide. Additional statements may be indicated by the particular form or manner in which a product is sold or the circumstances surrounding its use. There also may be other hazards to man or animals which can arise only from specific uses for which directions are given in the labeling. Frequently a pesticide may also be hazardous to useful invertebrates or useful vegetation, or by reason of residues on edible vegetation. The omission of reference to any of these hazards from any text in Part III does not imply that they may be disregarded. As a rule, such statements are properly incorporated in directions for use. By way of illustration, notes directed to the foregoing appear in connection with some of the illustrative labels. **Even though they may be separated from the principal warnings, they should, nevertheless, be prominently displayed.**

Examples:

- Do not apply within.....days of harvest.
- Avoid use during flowering and pollination periods.
- Do not consume or market fruits or vegetables until residue is removed.
- Do not use this powder on drainboards, shelves or other places where contact with food is likely.
- Do not allow spray to come in contact with garden plants.
- For protection of fish and wildlife, avoid contamination of streams, lakes, or ponds.

The Federal Insecticide, Fungicide, and Rodenticide Act and most state acts require the **"POISON-skull and crossbones"** legend and

an antidote on all **"Economic Poisons"** deemed "highly toxic to man". The definition of **"Poison"** in Part I of this Guide is similar to the definition of "highly toxic to man" in the regulations under the federal act. The products in this section have been classified according to the "highly toxic to man" definition. Other states, while not following the federal act on the definition of "highly toxic to man", require the **"POISON-skull and crossbones"** legend and antidote on all substances which are defined as **"Poisons"** in their poison laws.

The term **"Poison"** has been commonly understood by the layman to mean toxic by oral intake only. The controlling criteria should consider oral intake, inhalation, and skin absorption. To clarify the use of the term, labels on packages of pesticides "highly toxic to man" should specify the modes of entry into the body by which the product is poisonous. Examples:

**POISONOUS IF SWALLOWED
POISONOUS BY SKIN CONTACT
MAY BE POISONOUS IF INHALED
POISONOUS IF SWALLOWED OR ABSORBED THROUGH SKIN**

It is not intended that the word **"POISON"** should take the place of a signal word. One of the signal words **"DANGER!"** or **"WARNING!"** will be applicable when a product is a **"Poison"**. The selection of the appropriate word will depend not only on the degree of toxicity of the product, **but more particularly on the risk of injury presented under normal conditions of handling or use.** The word **"POISON"** (or its derivatives) should be reserved exclusively for those products coming within the definitions of the federal act as "highly toxic to man" except where it may be required by other laws or regulations. For products that are less toxic, statements like the following are preferred:

**MAY BE FATAL IF SWALLOWED
HARMFUL IF INHALED OR SWALLOWED**

First aid in case of contact is given for a few products only. The Federal Insecticide, Fungicide, and Rodenticide Act and most state acts require a statement of an antidote on all **"Economic Poisons"** deemed "highly toxic to man". The term "antidote" is defined in the federal act as "a practical immediate treatment in case of poisoning and includes first aid treatment" and the regulations state that "the antidote statement shall include direction to call a physician immediately". Some state laws and regulations require, on labels, the use of special or strictly defined antidotes or prescribe special ways in which these must be shown for certain chemicals. The requirements for any

given pesticide may, therefore, vary greatly and the impossibility of showing, in the illustrative labels, antidotes which might be nationally acceptable has led to the practice of indicating only the need for an appropriate antidote statement where the "POISON-skull and cross-bones" legend is used. 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.

An important principle of good labeling is to avoid the indiscriminate use of precautionary statements since this tends to detract from the importance which should be given to the vital warnings. Common sense indicates certain fundamental precautions in the handling of nearly all household and farm supplies and a label statement cannot substitute for it. Phrases such as "Avoid contamination of feed and **fo d**stuffs." and "Do not take internally." should be necessary only where the inherently high toxicity of the product, special use of the material, size of the package, likelihood of mistaken identity, or actual use experience strongly indicates their need.

3-(alpha-ACETONYLFURFURYL)- 4-HYDROXYCOUMARIN and SODIUM SALT

1. Over 3.0%:

WARNING!

If **swallowed** by humans, domestic animals, or pets, this material may reduce the clotting ability of the blood and cause bleeding. In such case, intravenous and oral administration of Vitamin K combined with blood transfusions are indicated as in the case of hemorrhage caused by overdoses of bishydroxycoumarin.

Keep away from humans, domestic animals, and pets.



Note: Directions for Use should include a statement directing placement of baits so as to protect children, pets, and domestic animals.

(continued on next page)

2. 3-(alpha-ACETONYLFURFURYL)-4-HYDROXYCOUMARIN and SODIUM SALT (0.1% to 3.0% incl.):

CAUTION!

If **swallowed** by humans, domestic animals, or pets, this material may reduce the clotting ability of the blood and cause bleeding. In such case, intravenous and oral administration of Vitamin K combined with blood transfusions are indicated as in the case of hemorrhage caused by overdoses of bishydroxycoumarin.

Keep away from humans, domestic animals, and pets.

Note: Directions for Use should include a statement directing placement of baits so as to protect children, pets, and domestic animals.

3. Finished Baits:

Directions for Use should include a statement directing placement of baits so as to protect children, pets, and domestic animals.

ACRYLONITRILE

DANGER! POISONOUS IF INHALED FLAMMABLE

Do not breathe vapor.

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

Keep away from heat, sparks, and open flame.

Keep container closed.



Note: Directions for Use should include instructions for appropriate respiratory protection.

ALDRIN

1. ALDRIN Technical and Formulations (60% and over):

WARNING! POISONOUS BY SKIN CONTACT, INHALATION, OR SWALLOWING
ABSORBED THROUGH SKIN

Avoid contact with skin, eyes, and clothing.

Avoid breathing spray mist or powder.

Wash thoroughly with soap and water after handling and before eating or smoking.

Do not use indoors without adequate ventilation.

Use clean clothing daily.

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.



2. Formulations (10% to 60%):

WARNING! HAZARDOUS BY SKIN CONTACT, INHALATION, OR SWALLOWING

Avoid contact with skin, eyes, and clothing.

Avoid breathing spray mist or dust.

Wash thoroughly with soap and water after handling and before eating or smoking.

Use clean clothing daily.

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.

Note: Directions for Use should include instructions for appropriate respiratory protection and the use of clean synthetic rubber gloves during commercial or prolonged exposure in spray-mixing and loading operations. Labels should bear a statement relative to protection of persons and animals in treated and adjacent areas.

(continued on next page)

3. ALDRIN Formulations (less than 10%):

CAUTION! HARMFUL BY SKIN CONTACT, INHALATION, OR SWALLOWING

Avoid contact with skin and eyes.

Avoid breathing spray mist or dust.

Wash with soap and water after handling and before eating or smoking.

Avoid contamination of feed and foodstuffs.

Note: Directions for Use should include instructions for appropriate respiratory protection. Labels should bear a statement relative to protection of persons and animals in treated and adjacent areas.

ALLYL ALCOHOL

DANGER! EXTREMELY HAZARDOUS LIQUID AND VAPOR
RAPIDLY ABSORBED THROUGH SKIN

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

Do not breathe vapor.

Do not take internally.

Keep away from heat 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.



Note: Directions for Use should include instructions for adequate ventilation or respiratory protection, as well as the use of neoprene gloves and goggles, when product is being handled. If product exhibits Tag. Open-Cup flash point of 80°F. or less, appropriate flammability statements must be added.

ANTIMONY POTASSIUM TARTRATE (TARTAR EMETIC)

WARNING! MAY BE FATAL IF SWALLOWED

Avoid breathing dust.

Wash thoroughly after handling.

ARSENICAL WEED KILLERS, INORGANIC

1. 2% and over as Metallic Arsenic:

WARNING! POISONOUS IF SWALLOWED

Avoid contact with skin, eyes, and clothing.
Do not breathe spray mist; wear respirator.
In case of contact, wash thoroughly.



POISON



(Antidote)

2. Less than 2% as Metallic Arsenic:

WARNING! MAY BE FATAL IF SWALLOWED

Avoid contact with skin, eyes, and clothing.
Avoid breathing spray mist.
Keep away from food and out of reach of children and domestic animals.
In case of contact, wash thoroughly.

Note: Directions for Use should include reference to the avoidance of spray drift to valuable plants and restriction of persons and animals from treated areas.

BENZENE HEXACHLORIDE (See LINDANE also)

1. BENZENE HEXACHLORIDE Technical and Dry Formulations (25% and over):

WARNING! HARMFUL IF SWALLOWED

MAY CAUSE IRRITATION OF SKIN AND EYES

MAY BE ABSORBED THROUGH SKIN

Avoid breathing dust, vapor, or spray mist.
Avoid contact with skin and eyes.
Avoid contamination of feed and foodstuffs.
In case of contact, wash skin with plenty of soap and water; for eyes, flush with water and get medical attention.

Note: If the product is to be applied to plants that are used as food, a warning should be included in the Directions for Use to the effect that the material should not be applied where there is danger of residual odor or taste remaining in foodstuffs or edible portions of treated crops.

(continued on next page)

2. BENZENE HEXACHLORIDE Dry Formulations (less than 25%):

CAUTION!

Avoid breathing dust, vapor, or spray mist.
Avoid contact with skin and eyes.
Avoid contamination of feed and foodstuffs.
Wash thoroughly after handling.

3. Solutions or Emulsifiable Formulations:

Since various solvents which differ in toxic properties may be used, labels should bear the precautionary information covering the combined hazards of benzene hexachloride and solvent.

Note: If the product is to be applied to plants that are used as food, a warning should be included in the Directions for Use to the effect that the material should not be applied where there is danger of residual odor or taste remaining in foodstuffs or edible portions of treated crops.

CADMIUM SALTS

Toxicity varies with the different products; hence, each product must be considered on its own properties.

CALCIUM ARSENATE

WARNING! POISONOUS IF SWALLOWED

Avoid breathing dust or spray mist.
Avoid contact with skin, eyes, and clothing.
Wash thoroughly after handling.
Clean up spillage.



POISON



(Antidote)

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.



Note: Directions for Indoor Use should include instructions for appropriate respiratory protection.

CAPTAN

CAUTION!

Avoid breathing dust or spray mist.
Avoid prolonged or repeated contact with skin.
Avoid contamination of feed and foodstuffs.

2-CARBOMETHOXY-1-METHYLVINYL DIMETHYLPHOSPHATE and BETA ISOMER

1. Technical Material and Formulations (over 2%):

**DANGER! POISONOUS BY SWALLOWING, INHALATION, OR
SKIN CONTACT
RAPIDLY ABSORBED THROUGH SKIN
REPEATED EXPOSURE MAY, WITHOUT SYMPTOMS,
PROGRESSIVELY INCREASE SUSCEPTIBILITY TO
POISONING BY THIS PRODUCT**

Do not swallow or get in eyes, on skin, on cl thing.

Wear clean heavy rubber gloves and goggles. Wear clean water-proof or freshly-laundered protective clothing (coveralls, caps, etc.). Replace gloves frequently and destroy used gloves.
Wash thoroughly with soap and water after handling and before eating or smoking.
Bathe immediately after work and change all clothing.
In case of contact, immediately remove all contaminated clothing and wash skin with soap and water; for eyes, flush with plenty of water for at least 15 minutes and get medical attention.
Wash clothing before re-use.

Do not breathe dust, vapor, or spray mist.

Wear a mask or respirator of a type passed by U. S. Department of Agriculture for protection against this product.

Do not contaminate food or feed products.

Keep out of the reach of children and domestic animals.
In case of spillage, wash down with large amounts of water.
Decontaminate areas and equipment by washing with a strong lye solution.
Empty containers are to be destroyed by burning or burying; never re-use. Stay out of smoke when burning containers.



Note: For technical material and manufacturing concentrations add after statements of hazard: BEFORE USING, CONSULT MANUFACTURER FOR SAFE HANDLING INSTRUCTIONS.

(continued on next page)

**2. 2-CARBOMETHOXY-1-METHYLVINYL DIMETHYLPHOSPHATE
and BETA ISOMER Formulations (2% or less):**

**WARNING! POISONOUS BY SWALLOWING, INHALATION, OR
SKIN CONTACT
RAPIDLY ABSORBED THROUGH SKIN**

Do n t swallow or get in eyes or on skin.

Wear clean rubber gloves, protective clothing, and goggles.
Replace gloves frequently and destroy used gloves.
Wash thoroughly with soap and water after handling and before
eating or smoking.
In case of contact, immediately remove all contaminated clothing
and wash skin with soap and water; for eyes, flush with plenty
of water for at least 15 minutes and get medical attention.

D n t breathe dust, vapor or spray mist.

Wear a mask or respirator of a type passed by U. S. Department
of Agriculture for protection against this product.

D not contaminate food or feed products.

Keep out of reach of children and domestic animals.
Empty containers are to be destroyed by burning or burying. Stay
out of smoke when burning containers.



Note: Labels should bear a statement relative to the protection of persons and animals in
treated and adjacent areas.

(continued on next page)

**2-CARBOMETHOXY-1-METHYLVINYL DIMETHYLPHOSPHATE
and BETA ISOMER**

FIRST AID

ATROPINE IS THE EMERGENCY ANTIDOTE FOR POISONING BY
THIS PRODUCT

Consult physician about obtaining an adequate supply of 1/100
grain atropine tablets for emergency use.

CALL A PHYSICIAN IN ALL CASES OF SUSPECTED POISONING

Internal: If swallowed, induce vomiting by introducing finger down
throat or by giving 1 tablespoonful of salt in a glass of warm water.

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON

External: If spilled on skin, immediately move patient from vicinity
of the insecticide, remove all contaminated clothing, and wash
skin with soap and running water. If material gets into eyes, wash
immediately with running water for at least 15 minutes.

If warning symptoms appear: Administer two 1/100 grain
atropine tablets immediately.

**NEVER ADMINISTER ATROPINE UNLESS WARNING SYMPTOMS
APPEAR**

Keep patient prone and quiet.

Start artificial respiration immediately if patient is not breathing.

Transport the patient immediately to the nearest physician.

Note to Physician: This product is a cholinesterase inhibitor. Warn-
ing symptoms include weakness, headache, tightness in chest,
blurred vision, un-reactive pinpoint pupils, salivation, sweating,
nausea, vomiting, diarrhea, and abdominal cramps.

Treatment: Atropine is the specific therapeutic antagonist of choice
against the parasympathetic nervous stimulation. If there are
signs of parasympathetic stimulation, atropine sulfate should be
injected at 10 minute intervals, in doses of 1 to 2 milligrams, until
complete atropinization has occurred. Morphine is contraindi-
cated. Clear chest by postural drainage. Oxygen administration
may be necessary. Observe patient continuously for 48 hours.
Repeated exposure to cholinesterase inhibitors may, without warn-
ing, cause prolonged susceptibility to very small doses of any
cholinesterase inhibitor. Allow no further exposure until time
for cholinesterase regeneration has been allowed as determined
by blood test.

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.
Avoid breathing vapor.
Avoid contact with skin and eyes.



POISON



(Antidote)

Note: Directions for Use should include instructions for adequate ventilation or respiratory protection when product is being handled.

CARBON TETRACHLORIDE

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

Do not breathe vapor.
Avoid prolonged or repeated contact with skin.
Do not take internally.



POISON



(Antidote)

Note: Directions for Use should include instructions for adequate ventilation or respiratory protection when product is being handled.

CHLORANIL

CAUTION!

Avoid breathing dust.
Avoid contact with skin.

CMA 045565

CHLORDANE

1. CHLORDANE Technical and Dry Formulations (25% and over):

**CAUTION! HARMFUL IF SWALLOWED
ABSORBED THROUGH SKIN**

Avoid contact with skin, eyes, and clothing.
Avoid breathing dust or spray mist.
Avoid contamination of feed and foodstuffs.
In case of contact, wash with soap and water.

2. Dry Formulations (less than 25%):

CAUTION!

Avoid breathing dust.
Avoid contamination of feed and foodstuffs.

3. Solutions or Emulsifiable Formulations:

Since various solvents which differ in toxic properties may be used, labels should bear precautionary information covering the combined hazards of chlordane and solvent.

Note: Directions for Use should include appropriate additional instructions for aerosol products or those intended to be used on animals. Special labeling for various household preparations is required federally and in some states.

2-CHLOROALLYL DIETHYLDITHIOCARBAMATE

1. Dry Formulations (granular):

WARNING! MAY CAUSE EYE INJURY AND SKIN IRRITATION

Do not get in eyes, on skin, on clothing.
Avoid breathing dust.
Do not take internally.
Avoid contamination of feed and foodstuffs.
In case of contact with dust, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes, get medical attention.

2. Emulsifiable Formulations:

Since various solvents which differ in toxic properties may be used, labels should bear precautionary information covering the combined hazards of this product and solvent.

alpha-CHLORO-N,N-DIALLYLACETAMIDE —
Same labels as 2-CHLOROALLYL
DIETHYLDITHIOCARBAMATE

CHLOROFORM

WARNING! VAPOR HARMFUL
MAY BE FATAL IF SWALLOWED

Avoid breathing vapor.
Avoid prolonged or repeated contact with skin.

Note: Directions for Use should include instructions for adequate ventilation or respiratory protection when product is being handled.

CHLORO-IPC (iso-PROPYL-N-[3-CHLOROPHENYL]
CARBAMATE)

CAUTION! HARMFUL IF SWALLOWED

CHLOROPHENOL (MONOCHLOROPHENOL) —
Sam label as CRESOL

1,1-bis(CHLOROPHENYL)-2,2,2-TRICHLOROETHANOL

1. Dry Formulations (over 10%):

CAUTION!

Avoid repeated skin contact.
Avoid breathing dust or spray mist.
Do not take internally.
Avoid contamination of feed and foodstuffs.
Wash thoroughly after handling.

2. Dry Formulations (10% or less):

CAUTION!

Avoid breathing dust.
Avoid contamination of feed and foodstuffs.

3. Emulsifiable Formulations:

Since various solvents which differ in toxic properties may be used, labels should bear precautionary information covering combined hazards of this product and solvent.

CHLOROPICRIN

DANGER! POISONOUS IF INHALED

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; for eyes, get medical attention. Remove and wash clothing before re-use.



POISON
(Antidote)



Note: Directions for Use should include instructions for appropriate respiratory protection.

COAL TAR CREOSOTE

CAUTION! MAY CAUSE SKIN IRRITATION

Avoid prolonged or repeated contact with skin.
Avoid prolonged breathing of vapor.
Use with adequate ventilation.

COPPER COMPOUNDS (10% and over as Metallic Copper)

CAUTION! HARMFUL IF SWALLOWED

CRESOL (CRESYLIC ACID)

**DANGER! MAY BE FATAL BY SKIN CONTACT OR
SWALLOWING
RAPIDLY ABSORBED THROUGH SKIN
CAUSES SEVERE BURNS**

Do not get in eyes, on skin, on clothing.
Avoid breathing vapor.

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.

CYANIDES, INORGANIC (Excluding HYDROCYANIC ACID and CALCIUM CYANIDE)

(NAME OF PRODUCT)

**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



(Antidote)

Note: Directions for indoor use should include instructions for appropriate respiratory protection.

CYANO(METHYLMERCURI)GUANIDINE (METHYL MERCURY DICYANDIAMIDE) —

Same labels as ETHYL MERCURY CHLORIDE

2,4-D (2,4-DICHLOROPHENOXYACETIC ACID and Derivatives)

1. 2,4-D ACID and Dry Formulations (10% and over):

WARNING! IRRITATING TO EYES, NOSE, AND THROAT

Do not get in eyes.

Avoid contact with skin.

Avoid breathing dust.

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

2. SODIUM SALT (2,4-D Acid Equivalent 20% and over):

CAUTION! IRRITATING DUST

Avoid breathing dust.

Avoid contact with skin and eyes.

3. Liquid Formulations of 2,4-D ESTERS:

CAUTION! MAY CAUSE SKIN IRRITATION

Avoid contact with eyes, skin, and clothing.

4. Liquid Formulations of 2,4-D AMINES:

WARNING! CAUSES IRRITATION OF EYES AND SKIN

Do not get in eyes.

Avoid contact with skin and clothing.

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

Note: All weed killer preparations containing 2,4-D or its derivatives should, when appropriate, carry adequate warning statements regarding dangers of vapor, spray or dust drift to desirable plants, the necessity of using other equipment for handling and applying other agricultural chemicals, and avoiding contamination of domestic or irrigation water supply.

DALAPON, SODIUM SALT

CAUTION! CAUSES SKIN IRRITATION

Avoid contact with skin, eyes, and clothing.

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

DDD (DICHLORODIPHENYL DICHLOROETHANE) — Same labels as DDT

DDT (DICHLORODIPHENYL TRICHLOROETHANE)

1. DDT Technical:

CAUTION! HARMFUL IF SWALLOWED ABSORBED THROUGH SKIN WHEN IN SOLUTION

Avoid breathing dust or spray mist.

Avoid contamination of feed and foodstuffs.

2. Dry Formulations (over 25%):

CAUTION! HARMFUL IF SWALLOWED

Avoid breathing dust or spray mist.

Avoid contamination of feed and foodstuffs.

3. Dry Formulations (25% or less):

CAUTION!

Avoid breathing dust.

Avoid contamination of feed and foodstuffs.

4. Solutions or Emulsifiable Formulations:

Since various solvents which differ in toxic properties may be used, labels should bear precautionary information covering the combined hazards of DDT and solvent.

Note: If the preparation contains other hazardous ingredients, appropriate additional cautions must be added to the foregoing. Directions for Use should include appropriate additional instructions for aerosol products or for products intended to be used on animals.

1,2-DIBROMO-3-CHLOROPROPANE

1. Technical Product:

**WARNING! HARMFUL LIQUID AND VAPOR
MAY BURN SKIN AND EYES
CAUSES IRRITATION OF NOSE AND THROAT
MAY BE ABSORBED THROUGH SKIN**

Do not breathe vapor.

Avoid contact with eyes, skin, and clothing.

Use only with adequate ventilation.

Do not take internally.

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

Store away from domestic animals and dwellings and out of the reach of children.

2. Dry Formulations (20% and over):

**WARNING! HARMFUL DUST AND VAPOR
MAY BURN SKIN AND EYES
CAUSES IRRITATION OF NOSE AND THROAT
MAY BE ABSORBED THROUGH SKIN**

In addition to above Statements, also include balance of precautionary label recommended for Technical Product.

3. Dry Formulations (less than 20%):

**CAUTION! MAY CAUSE IRRITATION OF SKIN, EYES, NOSE,
AND THROAT**

Avoid contact with skin, eyes, and clothing.

Avoid prolonged breathing of vapors or dust.

Do not take internally.

Wash thoroughly with soap and water after handling and before eating or smoking.

Keep out of the reach of children and domestic animals.

4. Solutions and Emulsifiable Formulations:

Since various solvents which differ in toxic properties may be used, labels should bear precautionary information covering the combined hazards of this product and solvent.

DICHLONE

CAUTION! MAY CAUSE SKIN IRRITATION

Avoid contact with skin, eyes, and clothing.

Wash hands and face thoroughly with soap and water after handling.

Store away from feed and foodstuffs.

DICHLOROETHYL ETHER

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

Do not get on skin or clothing.

Do not breathe vapor.

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.



POISON



(Antidote)

Note: Directions for Use should include instructions for adequate ventilation or respiratory protection when product is being handled.

DICHLOROPROPENE — DICHLOROPROPANE MIXTURE

**WARNING! HAZARDOUS LIQUID AND VAPOR
MAY BE FATAL IF SWALLOWED, INHALED, OR
ABSORBED THROUGH SKIN
CAUSES BURNS TO SKIN AND EYES**

Do not get in eyes, on skin, on clothing. Wear goggles and polyethylene gloves when handling.

Do not breathe vapor.

Use only with adequate ventilation.

Keep away from heat and open flame.

Keep container closed.

Keep out of reach of children.

Do not contaminate feed and foodstuffs.

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

Note: Directions for Use should include instructions for respiratory protection when the product is being handled in enclosed areas.

DIELDRIN —

Same labels as ALDRIN

DIETHYL DIPHENYL DICHLOROETHANE (1,1-DICHLORO-2,2-bis[p-ETHYLPHENYL] ETHANE)

1. Technical Product:

CAUTION! ABSORBED THROUGH SKIN WHEN IN SOLUTION

In case of skin contact, wash with soap and water.

Avoid breathing dust.

2. Dusts and Wettable Powders:

CAUTION!

Avoid prolonged breathing of dust or spray mist.

3. Solutions and Emulsifiable Formulations:

Since various solvents which differ in toxic properties may be used, labels should bear precautionary information covering the combined hazards of diethyl diphenyl dichloroethane and solvent.

DINITRO-ortho-CRESOL

**DANGER! POISONOUS BY SWALLOWING OR SKIN CONTACT
ABSORBED THROUGH SKIN**

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

Avoid breathing vapor, dust, or spray mist.

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



POISON



(Antidote)

DODINE (DODECYLGUANIDINE ACETATE)

Technical Product and Dry Formulations (over 50%):

CAUTION! CAUSES EYE IRRITATION

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

ENDRIN

1. ENDRIN Technical and Formulations (2.5% and over):

DANGER! POISONOUS BY SKIN CONTACT, INHALATION, OR SWALLOWING
RAPIDLY ABSORBED THROUGH SKIN

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

Do not breathe spray mist or powder.

Wash thoroughly with soap and water after handling and before eating or smoking.

Clean up spillage.

Do not use indoors without adequate ventilation.

Use clean clothing daily.

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
(Antidote)



2. Formulations (less than 2.5%):

WARNING! HAZARDOUS BY SKIN CONTACT, INHALATION, OR SWALLOWING

Avoid contact with skin, eyes, and clothing.

Avoid breathing spray mist or dust.

Wash thoroughly with soap and water after handling and before eating or smoking.

Use clean clothing daily.

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.

Note: Directions for Use should include instructions for appropriate respiratory protection and the use of clean synthetic rubber gloves during commercial or prolonged exposure in spray-mixing and loading operations. Labels should bear a statement relative to the protection of persons and animals in treated and adjacent areas.

ETHYL BROMIDE

WARNING! VAPOR HARMFUL

Avoid prolonged breathing of vapor.

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

Note: Directions for Use should include instructions for adequate ventilation or respiratory protection when the product is being handled.

ETHYL MERCURY ACETATE—

Same labels as **ETHYL MERCURY CHLORIDE**

ETHYL MERCURY CHLORIDE

1. Dry Formulations (any effective concentration):

DANGER! POISONOUS BY INHALATION OR SWALLOWING
MAY CAUSE SKIN IRRITATION OR DELAYED
CHEMICAL BURNS

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

Do not breathe vapor, dust, or spray mist.

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

Use clean clothing daily.



POISON
(Antidote)



2. Solutions:

The above label may require additional Statements of Hazards for solutions since in this form the chemical may be absorbed through the skin and thus be poisonous by skin contact.

Note: For certain applications, Directions for Use may need to include more detailed instructions for safe handling of this product and materials treated with it.

ETHYL MERCURY PHOSPHATE—

Same labels as ETHYL MERCURY CHLORIDE

ETHYL MERCURY para-TOLUENE SULFONANILIDE—

Same labels as ETHYL MERCURY CHLORIDE

ETHYLENE DIBROMIDE

**WARNING! HARMFUL LIQUID AND VAPOR
CAUSES SKIN IRRITATION, AND BURNS
ON PROLONGED CONTACT
ABSORBED THROUGH SKIN**

Avoid breathing vapor.

Avoid contact with skin, eyes, and clothing.

Do not take internally.

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

Note: Directions for Use should include instructions for adequate ventilation or respiratory protection when the product is being handled. Since mixtures with hydrocarbon- or halogenated hydrocarbon-type solvents may be more hazardous, even "highly toxic", labels should bear precautionary information covering the hazards of the mixture.

ETHYLENE DICHLORIDE

**WARNING! FLAMMABLE
VAPOR HARMFUL**

Keep away from heat, sparks, and open flame.

Keep container closed.

Avoid breathing vapor.

Avoid prolonged or repeated contact with skin.

Do not take internally.

Note: Directions for Use should include instructions for adequate ventilation or respiratory protection when the product is being handled.

FERBAM (any effective concentration)

**CAUTION! MAY CAUSE IRRITATION OF EYES, NOSE,
THROAT, AND SKIN**

Avoid breathing dust or spray mist.

Avoid contact with skin, eyes, and clothing.

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

**Keep away from fire or sparks.*

**For dust mixtures 50% and over, and for lower concentrations if diluent is combustible.*

FORMALDEHYDE SOLUTIONS (5% and over)

**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



(Antidote)

HEPTACHLOR

WARNING! MAY BE FATAL IF SWALLOWED

Avoid breathing vapor, dust, or spray mist.

Avoid contact with skin, eyes, and clothing.

In case of contact, wash promptly with plenty of soap and water.

Avoid contamination of feed and foodstuffs.

HEXAETHYL TETRAPHOSPHATE —

Same label as TETRAETHYL PYROPHOSPHATE

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



(Antidote)

Note: Directions for Use should include instructions for appropriate respiratory protection.

HYDROXYMERCURICHLOROPHENOL

(any effective concentration)

**WARNING! POISONOUS IF INHALED OR SWALLOWED
MAY CAUSE SKIN IRRITATION**

Avoid breathing dust.

Avoid contact with skin, eyes, and clothing.

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



POISON



(Antidote)

Note: For certain applications, Directions for Use may need to include more detailed instructions for safe handling of this product and materials treated with it.

HYDROXYMERCURICRESOL —

Same label as HYDROXYMERCURICHLOROPHENOL

HYDROXYMERCURINITROPHENOL —

Same label as HYDROXYMERCURICHLOROPHENOL

HYPOCHLORITES

Because of the differences in properties of members of this group, each product containing them must be reviewed individually in light of its own characteristics.

IPC (iso-PROPYLPHENYLCARBAMATE) —

Same label as CHLORO-IPC

LEAD ARSENATE

WARNING! POISONOUS IF SWALLOWED

Avoid breathing dust or spray mist.

Avoid contact with skin, eyes, and clothing.

Wash thoroughly after handling.

Clean up spillage.



POISON



(Antidote)

LINDANE (See BENZENE HEXACHLORIDE also)

1. LINDANE and Dry Formulations (25% and over):

**WARNING! MAY BE FATAL IF SWALLOWED
MAY BE ABSORBED THROUGH SKIN**

Avoid breathing dust, vapor, or spray mist.

Avoid contact with skin and eyes.

Avoid contamination of feed and foodstuffs.

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

2. Dry Formulations (less than 25%):

Same label as BENZENE HEXACHLORIDE—Dry Formulations (less than 25%).

3. Solutions or Emulsifiable Formulations:

See BENZENE HEXACHLORIDE

MAGNESIUM ARSENATE —

Same label as **CALCIUM ARSENATE**

MALATHION

1. MALATHION Technical and Dry Formulations (over 50%):

CAUTION! HARMFUL IF SWALLOWED OR INHALED

Avoid breathing vapor or dust.

Avoid repeated or prolonged contact with skin.

Wash thoroughly after handling.

Wash contaminated clothing before re-use.

2. Dry Formulations (over 10% to 50% incl.):

CAUTION! MAY BE HARMFUL IF SWALLOWED

Avoid prolonged breathing of spray mist or dust.

Avoid repeated or prolonged contact with skin.

Wash thoroughly after handling.

Avoid contamination of feed and foodstuffs.

Keep out of reach of children.

3. Emulsifiable Formulations:

Since various solvents which differ in toxic properties may be used, emulsifiable liquid labels should bear precautionary information covering the combined hazards of malathion and solvent.

4. Dusts (10% or less):

CAUTION!

Avoid prolonged breathing of dust.

Avoid repeated or prolonged contact with skin.

Wash thoroughly after handling.

Avoid contamination of feed and foodstuffs.

Keep out of reach of children.

MALEIC HYDRAZIDE, DIETHANOLAMINE SALT

CAUTION! MAY BE HARMFUL IF SWALLOWED

Avoid breathing spray mist.

Avoid contact with skin, eyes, and clothing.

MANEB (any effective concentration) —
Same label as **ZINEB**

**MCP (2-METHYL-4-CHLOROPHENOXYACETIC ACID
and Derivatives)** —

Sam labels as **2,4-D**

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 and get medical attention. Do not re-use shoes or clothing until free from all contamination.



POISON
(Antidote)



IMPORTANT!

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

Contact (NAME OF MANUFACTURER) for information on equipment and proper use.

Note: Directions for Use should include instructions for adequate ventilation or respiratory protection when the product is being handled.

METHYL PARATHION — Sam labels as **PARATHION**

METHYLENE CHLORIDE

CAUTION!

Use with adequate ventilation.

Avoid prolonged or repeated breathing of vapor.

Avoid prolonged or repeated contact with skin.

Do not take internally.

MONOCHLOROPHENOL — Same label as **CRESOL**

NABAM SOLUTIONS (19% and over)

**CAUTION! MAY CAUSE SKIN IRRITATION
MAY BE HARMFUL IF SWALLOWED**

Avoid contact with skin and eyes.

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

1-NAPHTHYL N-METHYLCARBAMATE

CAUTION! HARMFUL IF SWALLOWED OR INHALED

Do not take internally.

Avoid breathing dust.

Avoid prolonged or repeated contact with skin.

Wash thoroughly after handling.

Wash contaminated clothing before re-use.

Avoid contamination of feed and foodstuffs.

NICOTINE SULFATE SOLUTION (40% NICOTINE)

**DANGER! POISONOUS IF SWALLOWED
ABSORPTION THROUGH SKIN HARMFUL**

Do not get in eyes, on skin, on clothing.
Wear protective clothing and goggles when handling.
Do not breathe spray mist; wear respirator.
Store away from food and out of reach of children and domestic animals.
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.



NICOTINE DUSTS (5% or less)

CAUTION! HARMFUL IF INHALED OR SWALLOWED

Avoid exposure to dust.
Avoid contact with skin and eyes.
Wash thoroughly after handling.
Store away from feed and foodstuffs.

Note: The percentage and form of nicotine present may call for poison labeling under the requirements of various state laws.

OVEX (p-CHLOROPHENYL p-CHLOROBENZENE-SULFONATE)

CAUTION! MAY CAUSE SKIN IRRITATION

Avoid contact with skin.
Avoid breathing dust or spray mist.

PARATHION

1. PARATHION Technical:

**DANGER! POISONOUS BY SKIN CONTACT, INHALATION, OR
SWALLOWING
RAPIDLY ABSORBED THROUGH SKIN
REPEATED EXPOSURE MAY, WITHOUT SYMPTOMS,
BE INCREASINGLY HAZARDOUS**

**BEFORE USING, CONSULT MANUFACTURER FOR SAFE HANDLING
INSTRUCTIONS.**

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

Wear clean heavy rubber gloves and goggles. Wear clean waterproof or freshly-laundered protective clothing (coveralls, rubber boots, cap, etc.). Destroy and replace gloves frequently.
Bathe immediately after work and change all clothing. Wash clothing thoroughly with soap and hot water before re-use.
In case of contact, immediately remove contaminated clothing and wash skin thoroughly with soap and water; for eyes, flush with water for 15 minutes.

Do not breathe vapor or dust.

Wear respirator or mask effective for parathion protection.
In case of spillage, cover with an absorbent such as soda ash, lime, clay or sawdust. Sweep up and bury. Wash area thoroughly with strong lye solution.



(continued on next page)

2. PARATHION Wettable Powders and Dusts (25% or less):

DANGER! POISONOUS BY SKIN CONTACT, INHALATION, OR SWALLOWING
RAPIDLY ABSORBED THROUGH SKIN
REPEATED EXPOSURE MAY, WITHOUT SYMPTOMS, BE INCREASINGLY HAZARDOUS

Do not get on skin, on clothing.

Wear clean heavy rubber gloves and clean waterproof or freshly-laundered protective clothing (coveralls, cap, etc.). Destroy and replace gloves frequently.

Wash thoroughly with soap and warm water before eating or smoking.

Bathe immediately after work and change all clothing. Wash clothing thoroughly with soap and hot water before re-use.

In case of contact, immediately remove contaminated clothing and wash skin thoroughly with soap and water.

Do not breathe dust, vapor, or spray mist.

Wear mask or respirator of a type passed by the U. S. Department of Agriculture for parathion protection. Airplane pilots should wear full-face canister-type mask.

If handled indoors, provide mechanical exhaust ventilation.

Do not store near food or feed products.

Keep out of reach of children and domestic animals.

Bury spillage; clean up area with strong lye solution. Burn or bury containers; never re-use. Stay out of smoke when burning containers.



3. Solutions or Emulsifiable Formulations:

Since various solvents which differ in toxic properties may be used, labels should bear precautionary information covering the combined hazards of parathion and solvent.

Note: Labels should bear a statement relative to the protection of persons and animals in treated and adjacent areas.

(continued on next page)

PARATHION FIRST AID

ATROPINE IS AN ANTIDOTE—CONSULT PHYSICIAN FOR EMERGENCY SUPPLY
CALL A PHYSICIAN AT ONCE IN ALL CASES OF SUSPECTED PARATHION POISONING

If symptoms or signs of poisoning include blurred vision, abdominal cramps, and tightness in the chest, do not wait for a doctor but give two atropine tablets (each 1/100 gr.) at once.

Move patient immediately from the area where parathion is present. Remove contaminated clothing and wash the skin clean with plenty of soap and water to remove all traces of parathion. If swallowed, induce vomiting by giving salty or soapy warm water.

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON

Physician's Note: This product is a cholinesterase inhibitor. Warning symptoms include weakness, headache, tightness in the chest, blurred vision, non-reactive pin-point pupils, salivation, sweating, nausea, vomiting, diarrhea, and abdominal cramps.

Treatment: Give atropine, preferably by injection, grains 1/100 three or more tablets at once and parenterally or orally every hour until pupils dilate. Thirty or more tablets may be required in 24 hours. Never give morphine. Clear chest by postural drainage. Artificial respiration or oxygen administration may be necessary. Observe patient continuously 48 hours. Repeated exposure to cholinesterase inhibitors may, without warning, cause prolonged susceptibility to very small doses of any cholinesterase inhibitor. Allow no further exposure until time for cholinesterase regeneration has been allowed as determined by blood tests.

PARIS GREEN —
Same label as CALCIUM ARSENATE

PENTACHLORONITROBENZENE

1. PENTACHLORONITROBENZENE Technical and Dust Formulations:

CAUTION! MAY CAUSE SKIN IRRITATION

Avoid prolonged or repeated contact with skin.
Avoid prolonged breathing of dust.
Wash thoroughly after handling.

2. Wettable Powders:

CAUTION! MAY CAUSE SKIN IRRITATION

Avoid prolonged or repeated contact with skin.
Avoid prolonged breathing of dust or spray mist.
Wash thoroughly after handling.

3. Liquid Formulations:

Since various solvents which differ in toxic properties may be used, labels should bear precautionary information covering the combined hazards of pentachloronitrobenzene and solvent.

PENTACHLOROPHENOL

1. PENTACHLOROPHENOL Technical:

WARNING! HARMFUL DUST

Avoid breathing dust.
Avoid contact with skin, eyes, and clothing.
Do not take internally.
In case of contact with dry material or its solution, immediately wash skin with soap and plenty of water; for eyes, flush with plenty of water for at least 15 minutes and get medical attention.

(continued on next page)

2. PENTACHLOROPHENOL Oil Solutions:

WARNING! CAUSES SKIN IRRITATION ABSORPTION THROUGH SKIN HARMFUL

Avoid breathing vapor.
Avoid contact with skin, eyes, and clothing.
Do not take internally.
In case of contact, immediately wash skin with soap and plenty of warm water; for eyes, flush with plenty of water for at least 15 minutes and get medical attention. Remove and wash clothing before re-use.

PHENOL (CARBOLIC ACID)

DANGER! MAY BE FATAL BY SKIN CONTACT OR SWALLOWING RAPIDLY ABSORBED THROUGH SKIN CAUSES SEVERE BURNS

Do not get in eyes, on skin, on clothing.
Avoid breathing vapor.
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
(Antidote)



PHENOTHIAZINE

CAUTION! MAY CAUSE SKIN IRRITATION

Avoid contact with skin and eyes.
Avoid breathing dust.
In case of contact, wash skin with soap and plenty of water; for eyes, flush with water and get medical attention.

PHENYL MERCURY ACETATE

1. Dry Formulations:

Same label as HYDROXYMERCURICHLOROPHENOL

2. Solutions:

Same labels as PHENYL MERCURY OLEATE

PHENYL MERCURY OLEATE (Oil Solutions or Oil-Water Emulsions)

1. 1.0% and over:

**DANGER! POISONOUS BY SWALLOWING OR SKIN CONTACT
MAY CAUSE SKIN IRRITATION OR DELAYED
CHEMICAL BURNS
ABSORBED THROUGH SKIN**

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

Do not breathe spray mist.

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. If burning or blistering of skin results, get medical attention. Wash clothing before re-use.



POISON



(Antidote)

Note: For certain applications, Directions for Use may need to include more detailed instructions for safe handling of this product and materials treated with it.

(continued on next page)

2. PHENYL MERCURY OLEATE (Less than 1.0% and over 0.1%):

**WARNING! POISONOUS IF SWALLOWED
MAY CAUSE SKIN IRRITATION OR DELAYED
CHEMICAL BURNS**

Avoid contact with skin, eyes and clothing.

Avoid breathing spray mist.

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. If burning or blistering of skin results, get medical attention. Wash clothing before re-use.



POISON



(Antidote)

3. 0.1% or less:

**CAUTION! HARMFUL IF SWALLOWED
MAY CAUSE SKIN IRRITATION OR DELAYED
CHEMICAL BURNS**

Avoid contact with skin, eyes, and clothing.

Avoid breathing spray mist.

In case of contact, flush skin or eyes with plenty of water; for eyes, get medical attention. If burning or blistering of skin results, get medical attention.

Note: For certain applications, Directions for Use may need to include more detailed instructions for safe handling of this product and materials treated with it.

**PHORATE (0,0-DIETHYL-S-ETHYLTHIOMETHYLPHOS-
PHORODITHIOATE) (any effective concentration)**

**DANGER! POISONOUS BY SKIN CONTACT, INHALATION, OR
SWALLOWING
RAPIDLY ABSORBED THROUGH SKIN
REPEATED INHALATION OR SKIN CONTACT MAY,
WITHOUT SYMPTOMS, PROGRESSIVELY INCREASE
SUSCEPTIBILITY TO PHORATE POISONING**

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

Wear clean heavy rubber gloves and goggles. Wear clean water-
proof or freshly-laundered protective clothing (coveralls, cap,
etc.). Destroy and replace gloves frequently.

Wash thoroughly with soap and warm water before eating or
smoking.

Bathe immediately after work and change all clothing. Wash
clothing thoroughly with soap and hot water before re-use.

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

D not breathe dust or vapor.

Wear mask or respirator of a type passed by the U. S. Depart-
ment of Agriculture for phorate protection.

If handled indoors, provide mechanical exhaust ventilation.

Do not store near food or feed products.

Keep out of reach of children and domestic animals.

Bury spillage; wash area thoroughly with a solution containing
1 lb. soda ash per gallon of water, to which a water-soluble
wetting agent has been added.

Empty containers are to be destroyed by burning or burying;
never re-use. Stay out of smoke when burning containers.



**First Aid
(Same First Aid as for Parathion)**

Note: For certain applications, Directions for Use may need to include more detailed
instructions for safe handling of this product and materials treated with it. Labels should
also bear statements relative to the protection of persons and animals in treated and
adjacent areas.

POTASSIUM CYANATE

CAUTION!

Avoid breathing dust or spray mist.

Avoid prolonged or repeated contact with skin.

Wash thoroughly after spraying.

**RONNEL (0,0-DIMETHYL 0-2,4,5-TRICHLOROPHENYL
PHOSPHOROTHIOATE)**

1. Dry Formulations (10% to 30% incl.):

CAUTION! HARMFUL IF SWALLOWED

Avoid prolonged breathing of dust or spray mist.

Avoid prolonged or repeated contact with skin.

Wash thoroughly with soap and water after handling and before
eating or smoking.

Avoid contamination of feed, foodstuffs, and water supplies.

Keep out of the reach of children.

2. Solutions or Emulsifiable Formulations:

Since various solvents which differ in toxic properties may be used, labels should
bear precautionary information covering the combined hazards of ronnel and
solvent.

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 FLUORIDE

WARNING! MAY BE FATAL IF SWALLOWED

Avoid breathing dust.

Wash thoroughly after handling.

Clean up spillage.

SODIUM FLUOSILICATE

CAUTION! HARMFUL IF SWALLOWED

Avoid prolonged breathing of dust or spray mist.

Avoid contamination of feed and foodstuffs.

Keep away from children and domestic animals.

Clean up spillage.

SODIUM TRICHLOROACETATE

**WARNING! IRRITATING TO SKIN AND EYES
MAY CAUSE BURNS**

Do not get in eyes.

Avoid contact with skin and clothing.

Avoid breathing spray mist.

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.

STRYCHNINE and STRYCHNINE SALTS *(any effective concentration)*

DANGER! POISONOUS IF SWALLOWED

Do not breathe dust.

Wash thoroughly after handling and before eating or smoking.

Store away from and do not contaminate feed and foodstuffs.

Keep children, pets, and domestic animals away; especially from baited areas.



POISON



(Antidote)

**2,4,5-T (2,4,5-TRICHLOROPHENOXYACETIC ACID and
Derivatives) —**
Same labels as 2,4-D

TETRACHLOROPHENOL —

Same labels as PENTACHLOROPHENOL

TETRAETHYL PYROPHOSPHATE (any effective concentration)

**DANGER! POISONOUS BY SKIN CONTACT, INHALATION, OR SWALLOWING
RAPIDLY ABSORBED THROUGH SKIN
REPEATED EXPOSURE MAY, WITHOUT SYMPTOMS,
BE INCREASINGLY HAZARDOUS**

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

Wear clean heavy rubber gloves and goggles. Wear clean waterproof or freshly-laundered protective clothing (coveralls, cap, etc.). Replace gloves frequently and destroy used gloves.

Wash thoroughly with soap and warm water before eating or smoking.

Bathe immediately after work and change all clothing. Wash clothing thoroughly with soap and hot water before re-use.

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

Do not breathe dust, vapor, or spray mist.

Wear mask or respirator of a type passed by the U. S. Department of Agriculture for tetraethyl pyrophosphate protection.

Airplane pilots should wear full-face canister-type mask.

If handled indoors provide mechanical exhaust ventilation.

Do not store near food or feed products.

Keep out of reach of children and domestic animals.

Bury spillage; clean up area with strong lye solution. Burn or bury containers; never re-use. Stay out of smoke when burning containers.



POISON



First Aid

(Same First Aid as for Parathion)

Note: Labels should bear a statement relative to the protection of persons and animals in treated and adjacent areas.

THALLIUM SULFATE (any effective concentration)

**DANGER! CUMULATIVE POISON
ABSORBED THROUGH SKIN**

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

Wash thoroughly after handling and before eating or smoking.

Store away from and do not contaminate feed and foodstuffs.

Keep children, pets and domestic animals away, especially from baited areas. Burn all pests killed.



POISON



(Antidote)

THIOCYANATES

Because of the differences in properties of members of this group, each product containing them must be reviewed individually in light of its own characteristics.

THIRAM (any effective concentration)

**CAUTION! MAY CAUSE IRRITATION OF EYES, NOSE, THROAT,
AND SKIN
HARMFUL IF INHALED OR SWALLOWED**

Avoid breathing dust or spray mist.

Avoid contact with skin, eyes, and clothing.

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

Note: For certain applications, Directions for Use may need to include more detailed instructions for the safe handling of this product and materials treated with it.

TOXAPHENE

1. Dry Formulations (25% and over):

WARNING! MAY BE FATAL IF SWALLOWED
MAY BE HARMFUL BY SKIN ABSORPTION

Avoid breathing dust or spray mist.
Avoid contact with skin, eyes, and clothing.
Wash thoroughly after handling.

2. Dry Formulations (less than 25%):

CAUTION! HARMFUL IF SWALLOWED

Avoid prolonged breathing of dust or spray mist.
Avoid contact with skin, eyes, and clothing.
Wash thoroughly after handling.

3. Solutions or Emulsifiable Formulations:

Since various solvents which differ in toxic properties may be used, labels should bear the precautionary information covering the combined hazards of toxaphene and solvent.

N-TRICHLOROMETHYLTHIOPHTHALIMIDE —
Same label as CAPTAN

TRICHLOROPHENOL (all isomers)

CAUTION! MAY CAUSE SKIN IRRITATION

Avoid prolonged or repeated contact with skin.
Do not take internally.

WARFARIN —

Same labels as 3-(alpha-ACETONYLFURFURYL)-4-HYDROXYCOUMARIN and SODIUM SALT

ZINC ARSENITE — Same label as CALCIUM ARSENATE

ZINC PHOSPHIDE FORMULATIONS (10% and over)

WARNING! POISONOUS IF SWALLOWED

Do not breathe dust or vapor.
Wash thoroughly after handling and before eating or smoking.
Store away from and do not contaminate feed and foodstuffs.
Keep children, pets, and domestic animals away; especially from baited areas.



POISON



(Antidote)

ZINEB (any effective concentration)

**CAUTION! MAY CAUSE IRRITATION OF EYES, NOSE, THROAT,
AND SKIN**
MAY BE HARMFUL IF INHALED OR SWALLOWED

Avoid breathing dust or spray mist.
Avoid contact with skin, eyes, and clothing.
In case of contact, flush skin or eyes with plenty of water; for eyes, get medical attention.
*Keep away from fire or sparks.

*For dust mixtures 50% and over, and for lower concentrations if diluent is combustible.

ZIRAM (any effective concentration) —
Same label as ZINEB

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Notes

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