

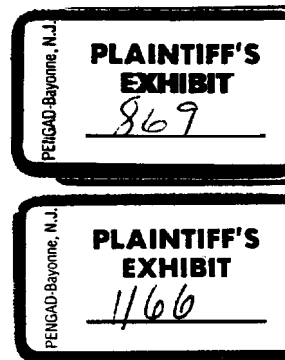
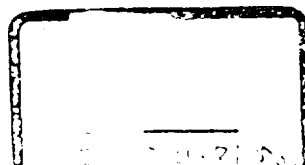
APT BULLETIN ON PRECAUTIONARY LABELS

Guide for the Preparation of Precautionary Labels
for Petroleum Products

For general information only.
This is not an API Standard.



AMERICAN PETROLEUM INSTITUTE
Division of Environmental Affairs
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PRECAUTIONARY LABELS

I. GENERAL

Historically, the American Petroleum Institute has had a continuing interest in the safe use of petroleum products. Safe use is an integral part of realizing the social and economic benefits of petroleum. Experience has shown that an effective aid in safe use is a simple system of precautionary labels applied to the containers of products which may be hazardous.

The policy of the American Petroleum Institute with respect to precautionary labeling of petroleum products is expressed in the following statement:

The petroleum industry recognizes the value of precautionary labels on containers of commercial products when their normal use and handling may constitute a significant health or accident hazard.

Through the American Petroleum Institute, the industry is working on labeling problems along the lines which are being followed by other industries through their respective associations, and the Institute is co-operating with other groups actively concerned with the preparation and use of Precautionary labels.

Voluntary industry activity possesses the great advantage of flexibility to meet changing conditions. Specific, detailed, and rigid regulations enacted as law cannot be revised promptly to keep pace with development of products and usages. If any legislation is deemed necessary to supplement voluntary industry activity, it should be of the enabling type which would authorize an administrative agency after public notice and public hearing to formulate, promulgate, and amend minimum requirements governing the use of precautionary labels.

As a guide for the preparation of petroleum precautionary labels, the API Committee on Precautionary Labeling has prepared this bulletin of principles and suggested wording of labels for certain products. The bulletin is presented with the fullest realization that it cannot take the place of proper education in the safe use of petroleum products. Rather, the primary object is to help safeguard all concerned who store, handle, and apply those petroleum products whose normally anticipated use may constitute a personal risk.

II. PETROLEUM PRECAUTIONARY LABELS

The great bulk of petroleum products present no hazards in normal handling, storage, and use. With many, flammability may be the sole risk, and the extent to which this risk is present is roughly indicated by the predominant use. The labeling principles presented herein are directed to those products, currently being produced both in increasing variety and volume by the petroleum industry, whose nature requires special precautions for handling and use. Through the medium of such labels, it is hoped that precautionary information may reach all those who apply, store, or handle these products. By this means, they may be better safeguarded at all times. Thus, precautionary labeling is a proper part of petroleum refining and marketing.

The preparation of a generally serviceable, informative precautionary label is not a simple task. Petroleum products may have diverse uses. One or more of these uses may involve greater personal hazard than do others. In such cases the label must be an intelligent selection, representing both the major hazard and the normal use and handling.

The handling of petroleum products has already been the subject of federal, state, and municipal legislation. All such statutory requirements must be considered. Usually the precautionary label supplements the statutory requirements. These, however, may be combined

occasionally, as in the wording for fuel containing tetraethyllead (TEL) and/or other lead antiknock compounds, where both flammability and the lead notice are combined. Where needed, the Department of Transportation's red diamond must also be affixed as a further indication of a flammability classification.

The effective precautionary label is a true estimate of personal hazard based on experience; laboratory testing especially biological testing; and the inherent chemical and physical nature of the product. The use of precautionary labels for relatively harmless products or the use of unnecessary warnings defeats the true purpose of this plan. It fosters user disregard of all labels and actually promotes careless and improper handling. Precautionary wording should be selected by those who not only know the nature of the product but also have broad acquaintance with its field of use.

With these general stipulations, the following guiding principles are suggested:

1. All precautionary statements must be brief, accurate and expressed in simple, easily understood terms.
2. Precautionary labeling should call attention not only to hazards arising out of the inherent properties of petroleum product, but also to hazards arising out of reasonably anticipated conditions of storage, handling and use.

3. The possible need for a precautionary label must be determined for each individual product. **This** may also be true of each degree of refinement. Impurities may contribute to the hazard and should not be overlooked. Mixtures of two or more products or mixtures with one or more additives should be considered individually. The hazard of the mixture cannot always be safely defined either from the nature of the components or by analogies based on the chemical structure or on the behavior of other mixtures.

4. Precautionary statements should represent the best knowledge of the product and its behavior. If these data are not adequate, the label should recognize this, and the experimental nature of the product should be indicated.

5. Variety in the statements for similar hazards must be

minimized. Uniformity in language to indicate the same hazards and the same degree of hazard is most desirable. It fosters understanding by all **through** association.

6. Precautionary labels are primarily intended for use on containers. **In** the petroleum industry, they are prepared for use on barrels and smaller units. **Thus**, the quantity is of moment when considering the wording related to predominant use. Also, the label design and layout should be such that it is easily recognizable as a warning and is distinct from other markings.

7. It is equally important that bulk shipment customers be informed of any hazardous properties of a product. ~~Because it may not be practical to affix a label to bulk shipments, many companies advise the customer of the hazardous properties by letter or by duplicating the warning label on the invoice.~~

III. DEFINITIONS OF PRECAUTIONARY TERMS

Statutes and regulations making precautionary labeling mandatory mark its evolution from the 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 all groups engaged in such work. Accurate understanding of the many terms associated with hazard definition is a requirement of label preparation.

The following definitions are provided as guides to those preparing labels and are the basis for the general recommendations which comprise API Bulletin 25 11. In general, they encompass the modes in which petroleum products are hazardous and the types of material which exhibit such behavior. **In** many cases they are exactly the same as definitions included in laws or in other manuals on label preparation.

1. **Combustible liquid:** Any liquid which gives off flammable vapors over a temperature range above 80 F to 120 F, inclusive, as determined by flash point, Tagliabue Open Cup* (ASTM D 1310-67). (See VII. Flammability Classification, p. 11).

2. **Container:** An individual receptacle, such as a bag, box, barrel, bottle, tube, can, carboy, cylinder, or drum, which is used to store or dispense a hazardous substance. It does not include tank trucks, tank cars, pipelines, or equipment or devices used to hold hazardous substances during the process of manufacture.

3. **Corrosive** (physiological): A substance which in contact with living tissue causes destruction of the tissue by chemical action. The term shall not refer to action on inanimate surfaces.

4. **Dust:** Solid particles generated by handling, crushing, grinding, rapid impact, detonation, and decrepitation of organic or inorganic materials such as rock, ore, metal, coal, wood, and grain. Unless very fine, dust does not diffuse in air but settles under the influence of gravity.

5. **Economic poison:** 1, Any substance or mixture of substances intended for preventing, destroying, re-

pellling, 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 dessicant.

6. **Extremely flammable liquid:** Any Liquid which gives off flammable vapors at or below a temperature of 20 F, as determined by flash point, Tag Open Cup (ASTM D 1310-67).

7. **Flammable Liquid:** Any Liquid which gives off flammable vapors over a temperature range above 20 F to 80 F, inclusive, as determined by flash point, Tag Open Cup (ASTM D 1310-67).

8. **Fumes:** Solid particles generated by condensation from the gaseous state, generally after volatilization from molten metals and the like, and often accompanied by a chemical reaction such as oxidation. Fumes tend to flocculate and sometimes coalesce.

9. **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.

10. **Hazardous substance:** Any substance or mixture of substances which: 1, is toxic; 2, is corrosive; 3, is an irritant; 4, is a strong sensitizer; 5, is flammable; or, 6, generates pressure through decomposition, heat, or other means—if such substance or mixture of substances may cause substantial personal injury or illness during, or as a direct result of, any customary or reasonably anticipated handling or use.

11. **Household Products:** Any substance intended or packaged in a form, suitable for use in the household, or by children. A product, which might be brought into any place where people dwell, or in or around a related building such as a garage, carport, barn or storage shed.

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

13. **Label:** A display of written, printed, or graphic matter on or attached to the immediate container of a hazardous substance and/or the outside container or wrapper of the package, if any is used.

* Hereinafter, the Tagliabue Open-Cup Method is referred to as Tag Open Cup.

14. LC_{50} : Airborne concentrations that produce death in 50% of the test animals, from a 1-hour exposure.

15. LD_0 : The maximum dose which none of a group of test animals.

16. LD_{50} : The dose which kills 50% of a group of test animals by ingestion or skin absorption.

17. LD_{100} : The minimum dose which kills all of a group of test animals.

18. *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, and atomizing.

19. *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.

20. *Oxidizing material*: A substance which yields oxygen readily to stimulate the combustion of organic matter.

21. *Poison (Highly Toxic)*: Any substance or mixture of substances which falls within any of the following categories:

a. 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.

b. 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 substance is used in any reasonably foreseeable manner.

c. 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 aforementioned concentrations indicate results different from those obtained on animals, the human data shall take precedence in any classification of a substance as a poison.

22. *Strong sensitizer*: A substance which will cause on normal living tissue, through an allergic or photodynamic process, a hypersensitivity which becomes evident on reapplication of the same substance.

23. *Toxic substance*: A substance which has the inherent capacity to produce personal injury or illness in man through ingestion, inhalation, or absorption through any body surface, and which falls within any of the following categories:

a. A substance that has an oral LD_{50} of more than 50 mg/kg, but not more than 500 mg/kg when administered to rats weighing between 200 and 300 grams each. (For household products the range is 50 mg/kg to 5 g/kg as stated in the Federal Hazardous Substances Regulations)

b. A gas or vapor that has an LC_{50} of more than 200 PPM but not more than 20,000 PPM, or a mist or dust with an LC_{50} of more than 2 mg, but not more than 200 mg per liter when the experimental animal is exposed for a period of 1 hour or less.

c. A substance that has an LD_{50} of more than 200 mg/kg but not more than 2000 mg/kg when administered by continuous contact, 24 hours or less, with the bare skin of albino rabbits which weigh between 2 and 3 kilograms each.

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

IV. PREPARING PRECAUTIONARY LABELS

Modern technology demands functional labels which give information clearly and quickly. The statements must be brief; but, above all, they must be correct. They must inform and, by association, suggest a general type and degree of risk. Label wording can be correctly chosen only with the fullest knowledge of a product and its uses.

Of primary importance is a description of the hazard(s) involved in the use of the particular petroleum product. This description can be prepared from a compilation of the available relevant information on the nature and uses of the product. This is why it was stated earlier that precautionary wording should be selected by those who not only know the nature or the product to be labeled but also have a broad knowledge of its field of use.

Once the hazards have been clearly defined, it is desirable to classify them. Many products will present more than one type of hazard. Also, they may differ in severity. In general, the most serious hazard will be presented first for ready recognition and emphasis. It

is unwise, however, to try to cover too many contingencies, particularly in terms of misuse. The aim must always be to cover the significant hazards under normally expected conditions of use.

A table of suggested precautionary statements is shown on p. 8 (Table 1). With the data on a particular product available, this table is of help in selecting the wording most appropriate for the label. Regular use of Table 1 will aid greatly in the phrase uniformity which is so desirable in precautionary labeling.

Table 1 is essentially the same as the one that appears in the MCA Manual L-1. It is used in essentially this form in a system set up by the Chemical Industry Association (G.B.).

In using Table 1, consider the columns from left to right. First, determine the one or more hazard classes involved. Evaluate these according to the degree of severity. Then, and only then, should the second column be considered.

In the second column, it is not intended that all the

TABLE 1—Selection of Precautionary Statements

Products will be encountered which present hazards varying in kind or degree from those listed. Appropriate statements 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.

Class of Hazard		Statements of Hazard	Precautionary Measures	Instructions in Case of Contact or Exposure
		IMPORTANT: Select applicable statement(s) only. Selection(s) to be based on actual hazards of use and degree of hazard. In some instances, the omission of a precautionary statement may be justified where the measure to be followed is obvious from the statement of hazard.	IMPORTANT: Select applicable statement(s) only. Selection(s) to be based on actual hazards of use and degree of hazard. In some instances, the omission of a precautionary statement may be justified where the measure to be followed is obvious from the statement of hazard.	IMPORTANT: Select applicable statement(s) only. Selection(s) to be based on necessity for prompt action in order to avoid serious effects. (See Note below.)
I.	Liquids flashing at 120 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 120 F, inclusive	Extremely flammable (Combustible)*	Keep away from heat (sparks) and open flame. Keep container closed (and away from heat). Use with adequate ventilation.	In case of contact, immediately flush skin or eyes with plenty of water for (at least) 15 min; for eyes, get medical attention. Remove and wash clothing before reuse. Sweep up spillage at once. Flush or absorb spillage with
II.	Oxidizing materials	Strong oxidant Contact with combustible (other) material may cause fire	Store separately (away from) and avoid contact with combustible (other) materials. Avoid contamination of clothing as it becomes dangerously flammable when dry. Keep container closed (and away from heat). Avoid contact with skin and eyes.	In case of contact, immediately flush skin or eyes with plenty of water for (at least) 15 min; for eyes, get medical attention. Remove and wash clothing before reuse. (See Note below.)
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	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.	If spilled on clothing, remove and wash before reuse. In case of exposure to high concentrations, remove to fresh air.
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 affected by exposure, remove to fresh air. If breathing has stopped, apply artificial respiration.
V.	Gases and vapors physiologically inert	Gas (vapor) reduces oxygen available for breathing Releases heavy gas (vapor) which may cause suffocation	Use only with adequate ventilation. Keep container closed. Do not enter storage areas unless adequately ventilated.	In case of contact, immediately flush skin or eyes with plenty of water for (at least) 15 min; for eyes, get medical attention. (Remove and wash clothing before reuse.)
VI.	Materials in dust form hazardous from inhalation or contact	Hazardous (harmful) dust Harmful if inhaled Causes irritation of skin, eyes, nose, and	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 min; for eyes, get medical attention. (Remove and wash clothing before reuse.)
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, flush with (plenty of) water; for eyes, get medical attention.
VIII.	Irritants, sensitizers	Causes skin irritation May cause skin irritation	Wash thoroughly after handling. Avoid exposure to (concentrated) vapor.	In case of contact, immediately (remove all contaminated clothing and) flush skin or eyes with plenty of water for (at least) 15 min; for eyes, get medical attention. Wash clothing before reuse. (See Note below.)
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	Do not get in eyes, on skin, on clothing. Avoid contact with skin, eyes, and clothing.	
X.	Materials toxic if swallowed	Poisonous if swallowed May be fatal if swallowed Harmful if swallowed	Wash thoroughly before eating or smoking. Wash thorough after handling. Do not breathe dust (vapor). Avoid breathing dust (vapor). Do not take internally.	

* should be included if the product meets any of the criteria for "poison" set forth on p. 7, or as required by law, with appropriate

phrases will be used. Only the one or two which most accurately state the risk should be chosen for label use. This selection must be made to alert and inform the user. He should not have to discriminate between two or more phrases of similar import.

When discreet use of the first two columns has been made, the last two may be consulted. With the guideposts set, the details of the action to be avoided or action to be taken can be selected. Here again, *not all* the phrases should be used. One or two of them will adequately inform the reader of the label. If the selection is made carefully, the reader's comprehension will be more complete and his response more effective.

Table 1 is simply a guide for selection of precautionary statements. There may be many instances in which the illustrative statements will not be applicable or will require rephrasing. In such cases, suitable statements should be evolved to reflect accurately the knowledge of the manufacturer or past experience in the use of the product. The specimen labels prepared by the API Committee on Precautionary Labeling will be helpful.

Precautionary statements as presented in this bulletin should be used in addition to, or in combination with, any wording required by law. 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. Typical of such laws and regulations are Public Law 86-613, Federal Hazardous Substances Labeling Act and similar state and municipal

legislation; Federal Insecticide, Fungicide and Rodenticide Act and similar state requirements; and Department of Transportation Rules and Amendments. The labels illustrated in Section VIII are based on domestic requirements. For use in countries other than the USA, local labeling regulations and directives should be consulted. In each case the requirements of such laws should be studied.

When shipments are made for export, the precautionary label statements are required in the official language of the country. In some cases this may require more than one language. In addition, symbols may be required.

A number of states and cities have enacted laws governing the labeling of hazardous substances within their jurisdiction. Interested persons should write to the appropriate agency for information concerning these laws.

It should be noted, however, that under the amendments to the Federal Hazardous Substances Act by the Child Protection Act of 1966, Congress preempted all laws of the states and political subdivision relating to precautionary labeling for household use. In effect then, all labeling requirements are uniform throughout the 50 states insofar as meeting the minimum requirements of the Federal Hazardous Substances Act. Any state, or political subdivision could impose additional requirements; i.e., a state could, at its discretion, ban the sale of a product which would not be banned under the Federal Hazardous Substances Act, if properly labeled.

V. LABEL CONTENT

The components of an acceptable precautionary label were early set forth in *Manual L-1, Guide to Precautionary Labeling of Hazardous Chemicals*, published by the Manufacturing Chemists' Association, Inc. (MCA). These components have been included in numerous state laws and regulations and are essentially those used in Public Law 86-613, Federal Hazardous Substances Act and Amendments. The same requirements appear in the model state regulation adopted by the International Association of Government Labor Officials (IXGLO). The Chemical Industries Association (G.B.) recognized similar label makeup in its publication *Marking Containers* (latest edition). The Chemical Specialties Manufacturing Association has published a compilation of labeling laws and regulations for hazardous substances.

Precautionary statements are preferably grouped together in a prominent site on the label. They 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 securely to and be in a conspicuous place on the container. Certain laws and regulations specify label location and type sizes. In each case, the requirements of such laws and regulations should be followed. For example, the Federal Hazardous Substances Regulations require that the type be of a size bearing a reasonable relationship to the other type

on the main panel. The signal word, including the word poison, if required, shall be not less than 18 points Caps. and that the statement of hazards not less than 12 points Caps. The other items of label information must be no less than 10 points type. In the case of household containers, too small to accommodate these type sizes, reduction can be made to a size no smaller than is necessary and never smaller than 6 point type.

The API Committee on Precautionary Labeling finds no needed change in these components of precautionary labels for petroleum products. The committee has agreed that the following are necessary in a proper label.

Name of the Product

In addition to any trade name used, the chemical or commonly recognized generic name of the container contents should be given. In mixtures, the chemical or generic name of the hazardous components must also be given. This is a means of identification and should be presented as clearly as possible.

Signal Word

The signal word commands the user's attention and designates the degree of hazard. The words used are DANGER! WARNING! and CAUTION! in descending order of seriousness of risk.

Statement of Hazard

A brief, accurate, affirmative statement of the major hazard(s) should be given. It should be in the correct order of prominence to indicate the nature and severity of the potential risks. Careful selection is necessary to present this information in the most effective, understandable manner.

Precautionary Measures

The precautions should be stated in the same order as the statements of hazard. The statement of hazard(s) need not be repeated under precautionary measures. Actions to be followed and to be avoided should both be included.

Emergency Action and/or First Aid

Where advisable, brief, simple instructions for emergency treatment should be included. Inasmuch as these actions should be suitable for execution in all circumstances, they should be simple and based on both sound practice and the materials commonly and quickly obtainable.

The primary purposes of all precautionary labels are to prevent injury and avoid damage. Instructions may include those instances where the results of contact or exposure are severe and where immediate action is desirable. Instructions for specific medical treatment should be omitted, except where required by law or indicated by special circumstances. Because of the possible serious and lasting effects of eye injury, a recommendation to get prompt medical attention should accompany *most* instructions directed to emergency treatment of the eyes.

Container Handling, Storage & Spill Cleanup

Instructions for safe container handling, storage and cleanup of spills should be a part of the precautionary label when indicated. This may include care in removing contents, if this be needed. This information may comprise a separate label or be combined with the components previously mentioned.

"Poison" Usage

The inclusion of the word "Poison" with the skull and crossbones on a label shall be limited to those products which are poisons as described by definition #21, or where such use is prescribed by law. If used, this legend should be in addition to other label statements. It does not *take* the place of the signal word, "Danger," designated to show the degree of hazard.

When the nature of a hazardous substance requires the word "Poison," the label should include a statement of the preferred emergency action. This emergency action varies with the substance. If a statement of emergency action is considered necessary or required by law, the words "First Aid—Antidote" should appear in the label, together with the preferred or required action.

SPECIMEN LABEL

(1) Name of product; (2) signal word; (3) statement of hazard; (4) precautionary measures; (5) emergency action and/or first aid; (6) name and address of manufacturer, distributor or seller.

(1) ----- AROMATIC PETROLEUM OIL

(2) ----- CAUTION!

(3) ----- MAY BE HARMFUL TO SKIN

(4) ----- PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE IRRITATION OR MORE SERIOUS SKIN DISORDER. IF CONTACT IS UNAVOIDABLE, WEAR APPROPRIATE OIL-IMPERVIOUS CLOTHING. DO NOT BREATHE MIST OR FUMES. CLOTHING SOAKED WITH THIS OIL SHOULD BE REMOVED AND LAUNDERED BEFORE REUSE.

(5) ----- IN CASE OF SKIN CONTACT, PROMPTLY WASH THOROUGHLY WITH SOAP AND WATER.

(6) ----- S. Jones 619 42nd St. New York, N.Y. 10017

Labeling of Experimental Products

A nondescriptive code designation or trade name is not acceptable as the sole designation of a potentially hazardous product unless it is **also** marked "Experimental Product—Toxicological Properties Not Fully Investigated." Even when the latter is included, the label should clearly state any known hazards, e.g., "Flammable Liquid," "Contains Chlorinated Hydrocarbons," or "Corrosive to Skin."

An example of a possible label is shown as follows:

(1) _____
(Name or description of product)

FOR INVESTIGATIONAL USE ONLY

(2) _____
(3) _____
(4) _____
(5) _____

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.

S. Jones 619 42nd St. New York, N.Y. 10017

In the **blank** spaces should be inserted the (1) name of product, (2) appropriate signal word, (3) statement of known hazards, (4) appropriate precautionary measures, and (5) appropriate emergency action and/or first aid instructions in case of contact or exposure.

VI. AEROSOL CONTAINERS

Widespread use of aerosols in metal cans both by industry and in the household makes their appropriate labeling a major concern. These cans contain materials under considerable pressure, and their handling and storage should receive more attention than the ordinary scaled can.

All aerosol containers should bear the following label: **WARNING!** Contents under pressure. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 120°F. Keep out of the reach of children.

If the product has additional hazards, other appropriate precautionary labeling is also required.

VII. FLAMMABILITY CLASSIFICATION

Table 1, p. 8, differs from that of the MCA and the National Fire Protection Association in its classification of flammability in terms of flash point. Experience of the American Petroleum Institute indicates that the third or lowest hazard class of flammability, i.e., above 80 F to 150 F, inclusive, flash point, is too broad. This range includes domestic heating oil, for example, which does not require precautionary labeling, both in view

of its history as an article of commerce and in accordance with the true purpose of all precautionary labeling.

In contrast, the committee believes the range needing attention is above 80 F but not above 120 F. This includes products such as Stoddard solvent, a widely used cleaning solvent. The volatility of materials in this range is such that care is needed in handling these petroleum products.

VIII. API SPECIMEN LABELS

The American Petroleum Institute and its Committee on Precautionary Labeling make no claim that the precautionary labels set forth in this bulletin comply with any particular statute, ordinance, or regulation; nor do they make any representation as to their sufficiency. 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 statutory requirements should be observed. The precautionary labels suggested in this bulletin may be used in addition to, or in combination with, any other such labels.

The labels shown herein are illustrative only and should not be construed as standard or mandatory. No attempt has been made to conform with any statutory requirements governing type size and format. However, the sequence of the various statements is in accordance with good labeling practice.

Some materials are sold both as industrial and household products. If a product is classified as a household product, certain statements are mandatory. For such products, both labels are shown.

INDUSTRIAL

AROMATIC NAPHTHA

Contains over 40% aromatic hydrocarbons •

**DANGER! EXTREMELY FLAMMABLE
VAPOR HARMFUL**

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.
KEEP CONTAINER CLOSED.
USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED BREATHING OF VAPOR.
AVOID PROLONGED OR REPEATED SKIN CONTACT.

For Aromatic Naphtha having flash point 20F or below TOC.

• Minimum volume quantity for aromatic naphtha label. Actual percentage may be stated.

HOUSEHOLD.

AROMATIC NAPHTHA

Contains over 40% aromatic hydrocarbons •

**DANGER! EXTREMELY FLAMMABLE
HARMFUL OR FATAL IF SWALLOWED
VAPOR HARMFUL**

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.
IF SWALLOWED, DO NOT INDUCE VOMITING. CALL
PHYSICIAN IMMEDIATELY.
KEEP CONTAINER CLOSED.
USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED BREATHING OF VAPOR.
AVOID PROLONGED OR REPEATED SKIN CONTACT.
KEEP OUT OF THE REACH OF CHILDREN.

For Aromatic Naphtha having flash point 20F or below TOC.

• Minimum volume quantity for aromatic naphtha label. Actual percentage may be stated.

If product contains 5% (wt) or more of benzene, use household label for benzene.
If product contains 10% (wt) or more of toluene or xylene, use household label for toluene or xylene.

INDUSTRIAL

AROMATIC NAPHTHA •

Contains over 40% aromatic hydrocarbons •

**WARNING! FLAMMABLE
VAPOR HARMFUL**

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.
KEEP CONTAINER CLOSED.
USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED BREATHING OF VAPOR.
AVOID PROLONGED OR REPEATED SKIN CONTACT.

For Aromatic Naphtha having flash point above 20 F but not above 60 F TOC.

• Minimum volume quantity for aromatic naphtha label. Actual percentage may be stated.

HOUSEHOLD

AROMATIC NAPHTHA

Contains over 40% aromatic hydrocarbons •

**DANGER! FLAMMABLE
HARMFUL OR FATAL IF SWALLOWED
VAPOR HARMFUL**

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.
IF SWALLOWED, DO NOT INDUCE VOMITING. CALL
PHYSICIAN IMMEDIATELY.
KEEP CONTAINER CLOSED.
USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED BREATHING OF VAPOR.
AVOID PROLONGED OR REPEATED SKIN CONTACT.
KEEP OUT OF THE REACH OF CHILDREN.

For Aromatic Naphtha having flash point above 20 F but not above 80 F TOC.

• Minimum volume quantity for aromatic naphtha label. Actual percentage may be stated.

If product contains 5% (wt) or more of benzene, use household label for benzene.
If product contains 10% (wt) or more of toluene or xylene, use household label for toluene or xylene.

INDUSTRIAL

AROMATIC NAPHTHA

Contains over 40% aromatic hydrocarbons •

CAUTION: COMBUSTIBLE

KEEP AWAY FROM HEAT AND OPEN FLAME.
AVOID PROLONGED BREATHING OF MIST OR VAPOR.
AVOID PROLONGED OR REPEATED SKIN CONTACT.

For Aromatic Naphtha having flash point above 80 F but not above 120 F TOC or 140 F TOC.

• Minimum volume quantity for aromatic naphtha label. Actual percentage may be stated.

HOUSEHOLD

AROMATIC NAPHTHA

Contains over 40% aromatic hydrocarbons •

**DANGER! HARMFUL OR FATAL IF SWALLOWED
COMBUSTIBLE**

IF SWALLOWED, DO NOT INDUCE VOMITING. CALL
PHYSICIAN IMMEDIATELY.
KEEP AWAY FROM HEAT AND OPEN FLAME.
AVOID PROLONGED BREATHING OF MIST OR VAPOR.
AVOID PROLONGED OR REPEATED SKIN CONTACT.
KEEP OUT OF THE REACH OF CHILDREN.

For Aromatic Naphtha having flash point above 80 F but not above 120 F TOC or 140 F TOC.

• Minimum volume quantity for aromatic naphtha label. Actual percentage may be stated.

If product contains 5% (wt) or more of benzene, use household label for benzene.
If product contains 10% (wt) or more of toluene or xylene, use household label for toluene or xylene.

INDUSTRIAL

AROMATIC PETROLEUM OIL

CAUTION! MAY BE HARMFUL TO SKIN

PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE IRRITATION OR MORE SERIOUS SKIN DISORDERS.
 IF CONTACT IS UNAVOIDABLE, WEAR APPROPRIATE OIL-IMPERVIOUS CLOTHING.
 DO NOT BREATHE MIST OR FUMES.
 IN CASE OF SKIN CONTACT, PROMPTLY WASH THOROUGHLY WITH SOAP AND WATER.
 CLOTHING SOILED WITH THIS OIL SHOULD BE REMOVED AND LAUNDERED BEFORE REUSE.

INDUSTRIAL

BENZENE (BENZOL)

DANGER! EXTREMELY FLAMMABLE
VAPOR HARMFUL

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.
 DO NOT BREATHE VAPOR (OR MIST).
 KEEP CONTAINER CLOSED.
 USE ONLY WITH ADEQUATE VENTILATION.
 AVOID PROLONGED OR REPEATED SKIN CONTACT.



POISON

FIRST AID: IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN.

HOUSEHOLD

BENZENE (BENZOL)

DANGER! EXTREMELY FLAMMABLE
VAPOR HARMFUL
HARMFUL OR FATAL IF SWALLOWED

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FUME.
 DO NOT BREATHE VAPOR (OR MIST).
 KEEP CONTAINER CLOSED.
 USE ONLY WITH ADEQUATE VENTILATION.
 IF SWALLOWED, DO NOT INDUCE VOMITING. CALL PHYSICIAN IMMEDIATELY.
 AVOID PROLONGED OR REPEATED SKIN CONTACT.
 KEEP OUT OF THE REACH OF CHILDREN.



POISON

FIRST AID: IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN.

Now: Household Products containing 5% or more by weight of benzene must be labeled as illustrated.

INDUSTRIAL

CALCIUM SULFONATES

(Active calcium sulfonates 23% or more and 25 total base number (TBN) or less except if animal testing indicates no eye damage.)

CONTAINS CALCIUM SULFONATES.

DANGER! CAUSES EYE BURNS

AVOID CONTACT WITH EYES.
 IN CASE OF CONTACT, FLUSH IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION.

HOUSEHOLD

PRODUCTS CONTAINING CALCIUM SULFONATES

(Eye irritation tests are the final answer in determining whether labeling is required. The following wording is suggested for products containing active calcium sulfonates causing eye irritation.)

CONTAINS CALCIUM SULFONATES.

WARNING! CAUSES EYE IRRITATION

AVOID CONTACT WITH EYES.
 IN CASE OF CONTACT, FLUSH IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION.
 KEEP OUT OF THE REACH OF CHILDREN.

INDUSTRIAL

CALCIUM SULFONATES

(Active calcium sulfonates below 23%.)

CONTAINS CALCIUM SULFONATES.

WARNING! CAUSES EYE IRRITATION

AVOID CONTACT WITH EYES
 IN CASE OF CONTACT, FLUSH IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION

INDUSTRIAL

CUTTING OIL *

**CAUTION! PROLONGED CONTACT MAY
CAUSE SKIN IRRITATION**

WASH SKIN THOROUGHLY WITH SOAP AND WATER AFTER
PROLONGED SKIN CONTACT.

AVOID REPEATED WEARING OF CLOTHING SOAKED WITH
FLUID OR OIL.

AVOID PROLONGED BREATHING OF SPRAYS OR MIST.

• Chemical type coolants may require modification of this label.

HOUSEHOLD

CUTTING OIL

**CAUTION! PROLONGED CONTACT MAY
CAUSE SKIN IRRITATION**

WASH SKIN THOROUGHLY WITH SOAP AND WATER AFTER
PROLONGED SKIN CONTACT.

AVOID REPEATED WEARING OF CLOTHING SOAKED WITH
FLUID OR OIL.

AVOID PROLONGED BREATHING OF SPRAYS OR MIST.

KEEP OUT OF THE REACH OF CHILDREN.

INDUSTRIAL

GASOLINE *

CONTAINS LEAD ANTIKNOCK COMPOUNDS

FOR USE AS MOTOR FUEL ONLY

DANGER! EXTREMELY FLAMMABLE

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FUME.

AVOID PROLONGED OR REPEATED SKIN CONTACT.

AVOID PROLONGED BREATHING OF VAPOR.

KEEP CONTAINER CLOSED.

• for leaded gasoline.

HOUSEHOLD

GASOLINE *

CONTAINS LEAD ANTIKNOCK COMPOUNDS

FOR USE AS MOTOR FUEL ONLY

**DANGER! EXTREMELY FLAMMABLE
HARMFUL OR FATAL IF SWALLOWED**

DO NOT USE OR STORE NEAR HEAT, SPARKS OR OPEN
FUME.

IF SWALLOWED, DO NOT INDUCE VOMITING. CALL
PHYSICIAN IMMEDIATELY.

AVOID PROLONGED OR REPEATED SKIN CONTACT.

AVOID PROLONGED BREATHING OF VAPOR.

KEEP CONTAINER CLOSED.

KEEP OUT OF THE REACH OF CHILDREN.

• For leaded gasoline.

INDUSTRIAL

GASOLINE *

DANGER! EXTREMELY FLAMMABLE

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FUME.

AVOID PROLONGED OR REPEATED SKIN CONTACT.

AVOID PROLONGED BREATHING OF VAPOR.

KEEP CONTAINER CLOSED.

• For unleaded gasoline.

HOUSEHOLD

GASOLINE *

**DANGER! EXTREMELY FLAMMABLE
HARMFUL OR FATAL IF SWALLOWED**

DO NOT USE OR STORE NEAR HEAT, SPARKS OR OPEN
FUME.

IF SWALLOWED, DO NOT INDUCE VOMITING. CALL
PHYSICIAN IMMEDIATELY.

AVOID PROLONGED OR REPEATED SKIN CONTACT.

AVOID PROLONGED BREATHING OF VAPOR.

KEEP CONTAINER CLOSED.

KEEP OUT OF THE REACH OF CHILDREN.

• for unleaded gasoline.

INDUSTRIAL

(GASOLINE PUMP LABEL)

GASOLINE *

FOR USE AS MOTOR FUEL ONLY

CONTAINS LEAD ANTIKNOCK COMPOUNDS

• For leaded gasoline.

INDUSTRIAL

GEAR LUBRICANT *

CONTAINS (CHEMICAL NAME OF SOLVENT);

CAUTION! VAPOR HARMFUL.

USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED OR REPEATED BREATHING OF VAPOR.
KEEP CONTAINER CLOSED.

* For Gear Lubricant that Contains a Hazardous Volatile Solvent.

INDUSTRIAL

KEROSENE**CAUTION! COMBUSTIBLE**

KEEP AWAY FROM HEAT AND OPEN FLAME.
AVOID PROLONGED BREATHING OF MIST OR VAPOR.
AVOID PROLONGED OR REPEATED CONTACT WITH SKIN.

HOUSEHOLD

KEROSENE**DANGER! HARMFUL, OR FATAL, IF SWALLOWED.
COMBUSTIBLE.**

IF SWALLOWED, DO NOT INDUCE VOMITING, CALL
PHYSICIAN IMMEDIATELY.
KEEP AWAY FROM HEAT OR OPEN FLAME.
AVOID PROLONGED BREATHING OF MIST OR VAPOR.
AVOID PROLONGED OR REPEATED CONTACT WITH SKIN.
KEEP OUT OF REACH OF CHILDREN.

Note: Household products containing 10% or more by weight of Kerosene
must be labeled as illustrated.

INDUSTRIAL

LEADED LUBRICANTS**WARNING! CONTAINS LEAD COMPOUNDS**

AVOID EXCESSIVE SKIN CONTACT.
AVOID BREATHING SPRAY MIST.
DO NOT USE ON FOOD PROCESSING MACHINERY.
KEEP AWAY FROM ANIMALS, FEED OR FOOD PRODUCTS.

HOUSEHOLD

LEADED LUBRICANTS**WARNING! CONTAINS LEAD COMPOUNDS**

AVOID EXCESSIVE SKIN CONTACT.
KEEP AWAY FROM ANIMALS, FEED OR FOOD PRODUCTS.
DO NOT USE ON FOOD PROCESSING MACHINERY.
AVOID BREATHING SPRAY MIST.
KEEP OUT OF REACH OF CHILDREN.

INDUSTRIAL

METHANOL ANTIFREEZE**DANGER! POISON** **MAY BE FATAL OR CAUSE BLIND-
NESS IF SWALLOWED
FLAMMABLE—VAPOR HARMFUL**

CONTAINS METHYL ALCOHOL (METHANOL).
CANNOT BE MADE NON-POISONOUS.
AVOID CONTACT WITH EYES.
USE ONLY IN A WELL-VENTILATED AREA.
KEEP AWAY FROM HEAT AND OPEN FLAME.
DO NOT STORE IN OPEN OR UNLABELED CONTAINERS.
KEEP OUT OF THE REACH OF CHILDREN.
FIRST AID: IN CASE OF CONTACT WITH EYES, FLUSH
THOROUGHLY WITH WATER. IF SWALLOWED, INDUCE
VOMITING (GIVE A TABLESPOON OF SALT IN A GLASS
OF WARM WATER). REPEAT UNTIL VOMIT FLUID IS
CLEAR. CALL A PHYSICIAN IMMEDIATELY.

HOUSEHOLD

METHANOL ANTIFREEZE**DANGER! POISON** **MAY BE FATAL OR CAUSE BLIND-
NESS IF SWALLOWED
FLAMMABLE—VAPOR HARMFUL**

CONTAINS METHYL ALCOHOL (METHANOL).
CANNOT BE MADE NON-POISONOUS.
AVOID CONTACT WITH EYES.
USE ONLY IN A WELL-VENTILATED AREA.
KEEP AWAY FROM HEAT AND OPEN FLAME.
DO NOT STORE IN OPEN OR UNLABELED CONTAINERS.
KEEP OUT OF THE REACH OF CHILDREN.
FIRST AID: IN CASE OF CONTACT WITH EYES, FLUSH
THOROUGHLY WITH WATER. IF SWALLOWED, INDUCE
VOMITING (GIVE A TABLESPOON OF SALT IN A GLASS
OF WARM WATER). REPEAT UNTIL VOMIT FLUID IS
CLEAR. CALL A PHYSICIAN IMMEDIATELY.

INDUSTRIAL

MINERAL SEAL OIL

**CAUTION! AVOID PROLONGED OR REPEATED
CONTACT WITH SKIN**

AVOID PROLONGED BREATHING OF MIST.

HOUSEHOLD

MINERAL SEAL OIL

CONTAINS PETROLEUM DISTILLATES.

DANGER! HARMFUL OR FATAL IF SWALLOWED.

IF SWALLOWED DO NOT INDUCE VOMITING. CALL PHYSICIAN
IMMEDIATELY.

KEEP OUT OF THE REACH OF CHILDREN.

Note: Household products containing 10% or more by weight of mineral oil must be labeled as illustrated.

INDUSTRIAL

MINERAL SPIRITS

CONTAINS PETROLEUM DISTILLATES

CAUTION! COMBUSTIBLE

KEEP AWAY FROM HEAT AND OPEN FLAME.
AVOID PROLONGED BREATHING OF MIST OR VAPOR.
USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED OR REPEATED SKIN CONTACT.

For Mineral Spirits with flash point above 80 F but not above 120 F TOC or legal requirement.

HOUSEHOLD

MINERAL SPIRITS

CONTAINS PETROLEUM DISTILLATES.

**DANGER! HARMFUL OR FATAL, IF
SWALLOWED.
COMBUSTIBLE.**

IF SWALLOWED, DO NOT INDUCE VOMITING. CALL PHYSICIAN
IMMEDIATELY.

KEEP AWAY FROM HEAT AND OPEN FLAME.

AVOID PROLONGED BREATHING OF MIST OR VAPOR. USE
WITH ADEQUATE VENTILATION.

AVOID PROLONGED OR REPEATED SKIN CONTACT.

KEEP OUT OF THE REACH OF CHILDREN.

For Mineral Spirits with flash point above 80 F but not above 120 F TOC or legal requirement.

INDUSTRIAL

PERMANENT TYPE ANTIFREEZE

(Ethylene glycol antifreeze containing 0.01%, but no more than
1% by weight sodium arsenite).

**WARNING! HARMFUL OR FATAL IF
SWALLOWED**

DO NOT DRINK ANTIFREEZE OR SOLUTION.
IF SWALLOWED INDUCE VOMITING IMMEDIATELY, CALL
PHYSICIAN.

ETHYLENE GLYCOL BASE CONTAINING SODIUM ARSENITE
(LESS THAN 1%).

DO NOT STORE IN OPENED OR UNLABELED CONTAINERS.

ANTIDOTE FOR SODIUM ARSENITE: DIMERCAPROL (BAL) TO
BE ADMINISTERED ONLY BY A PHYSICIAN.

KEEP OUT OF THE REACH OF CHILDREN.

Note: Local labeling regulations may require this product to be labeled "Combustible."

HOUSEHOLD

PERMANENT TYPE ANTIFREEZE

(Ethylene glycol antifreeze containing 0.01%, but no more than
1% by weight sodium arsenite).

**WARNING! HARMFUL OR FATAL IF
SWALLOWED**

DO NOT DRINK ANTIFREEZE OR SOLUTION.
IF SWALLOWED INDUCE VOMITING IMMEDIATELY, CALL
PHYSICIAN.

ETHYLENE GLYCOL BASE CONTAINING SODIUM ARSENITE
(LESS THAN 1%).

DO NOT STORE IN OPENED OR UNLABELED CONTAINERS.

ANTIDOTE FOR SODIUM ARSENITE: DIMERCAPROL (BAL) TO
BE ADMINISTERED ONLY BY A PHYSICIAN.

KEEP OUT OF THE REACH OF CHILDREN.

Note: Local labeling regulations may require this product to be labeled "Combustible."

INDUSTRIAL

PERMANENT TYPE ANTIFREEZE

(Ethylene glycol antifreeze containing less than 0.01% by weight
of sodium arsenite.)

**WARNING! HARMFUL OR FATAL IF
SWALLOWED**

DO NOT DRINK ANTIFREEZE OR SOLUTION.
IF SWALLOWED, INDUCE VOMITING IMMEDIATELY, CALL
PHYSICIAN.

ETHYLENE GLYCOL BASE.

DO NOT STORE IN OPEN OR UNLABELED CONTAINERS.

KEEP OUT OF THE REACH OF CHILDREN.

Note: Local labeling regulations may require this product to be labeled "Combustible."

HOUSEHOLD

PERMANENT TYPE ANTIFREEZE

(Ethylene glycol antifreeze containing less than 0.01% by weight
of sodium arsenite.)

**WARNING! HARMFUL OR FATAL IF
SWALLOWED**

DO NOT DRINK ANTIFREEZE OR SOLUTION.
IF SWALLOWED, INDUCE VOMITING IMMEDIATELY, CALL
PHYSICIAN.

ETHYLENE GLYCOL BASE.

DO NOT STORE IN OPEN OR UNLABELED CONTAINERS.

KEEP OUT OF THE REACH OF CHILDREN.

Note: Local labeling regulations may require this product to be labeled "Combustible."

INDUSTRIAL PETROLEUM ASPHALT CUTBACK * 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 SKIN CONTACT. • For products having flash point of 20 F or below TOC.	HOUSEHOLD PETROLEUM ASPHALT CUTBACK * 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 SKIN CONTACT. KEEP OUT OF THE REACH OF CHILDREN. • For products having flash point of 20 F or below TOC and with the viscosity of the product or any separated liquid being 150 SUS or more at 100 F.
INDUSTRIAL PETROLEUM ASPHALT CUTBACK * 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 SKIN CONTACT. • For products having flash point above 20 F to 80 F inclusive TOC.	HOUSEHOLD PETROLEUM ASPHALT CUTBACK * 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 SKIN CONTACT. KEEP OUT OF THE REACH OF CHILDREN. • For products having flash point above 20 F to 80 F inclusive TOC, and with the viscosity of the product or any separated liquid being 150 SUS or more at 100 F. PETROLEUM ASPHALT CUTBACK * DANGER! FLAMMABLE HARMFUL OR FATAL IF SWALLOWED KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME. IF SWALLOWED, DO NOT INDUCE VOMITING. CALL PHYSICIAN IMMEDIATELY. KEEP CONTAINER CLOSED. USE WITH ADEQUATE VENTILATION. AVOID PROLONGED BREATHING OF VAPOR. AVOID PROLONGED OR REPEATED SKIN CONTACT. KEEP OUT OF THE REACH OF CHILDREN. • For products having flash point above 20 F to 80 F inclusive TOC, and with the viscosity of the product or any separated liquid being less than 150 SUS at 100 F.

INDUSTRIAL

PETROLEUM ASPHALT CUTBACK ***CAUTION! COMBUSTIBLE**

KEEP AWAY FROM HEAT AND OPEN FLAME.
USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED BREATHING OF VAPOR.
AVOID PROLONGED OR REPEATED SKIN CONTACT.

• For products having flash point above 80 F to 120 F inclusive TOC or legal requirement.

HOUSEHOLD.

PETROLEUM ASPHALT CUTBACK ***CAUTION! COMBUSTIBLE**

KEEP AWAY FROM HEAT AND OPEN FLAME.
USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED OR REPEATED SKIN CONTACT.
KEEP OUT OF THE REACH OF CHILDREN.

• For products having flash point above 80 F to 120 F inclusive TOC or legal requirement and with the viscosity of the product or any separated liquid being 150 SUS or more at 100 F.

PETROLEUM ASPHALT CUTBACK ***DANGER! HARMFUL OR FATAL IF SWALLOWED
COMBUSTIBLE**

IF SWALLOWED, DO NOT INDUCE VOMITING. CALL
PHYSICIAN IMMEDIATELY.
KEEP AWAY FROM HEAT AND OPEN FLAME.
USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED OR REPEATED SKIN CONTACT.
KEEP OUT OF THE REACH OF CHILDREN.

• For products having flash point above 80 F to 120 F inclusive TOC or legal requirement and with the viscosity of the product or any separated liquid being less than 150 SUS at 100 F.

INDUSTRIAL

PETROLEUM NAPHTHA ***DANGER! EXTREMELY FLAMMABLE**

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.
KEEP CONTAINER CLOSED.
USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED BREATHING OF VAPORS.
AVOID PROLONGED OR REPEATED SKIN CONTACT.

• For products with a flash point of 20 F or below TOC.

HOUSEHOLD

PETROLEUM NAPHTHA ***DANGER! EXTREMELY FLAMMABLE
HARMFUL OR FATAL IF SWALLOWED**

KEEP AWAY FROM HEAT, SPARK AND OPEN FLAME.
IF SWALLOWED, DO NOT INDUCE VOMITING; CALL
PHYSICIAN IMMEDIATELY.
KEEP CONTAINER CLOSED.
USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED BREATHING OF VAPOR.
AVOID PROLONGED OR REPEATED SKIN CONTACT.
KEEP OUT OF REACH OF CHILDREN.

• For products with a flash point of 20 F or below TOC.

INDUSTRIAL

PETROLEUM NAPHTHA ***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 SKIN CONTACT.

• For products with a flash point above 20 F to 80 F inclusive TOC.

HOUSEHOLD

PETROLEUM NAPHTHA ***DANGER: FLAMMABLE
HARMFUL OR FATAL IF SWALLOWED**

KEEP AWAY FROM HEAT, SPARK AND OPEN FLAME.
IF SWALLOWED, DO NOT INDUCE VOMITING; CALL
PHYSICIAN IMMEDIATELY.
KEEP CONTAINER CLOSED.
USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED BREATHING OF VAPOR.
AVOID PROLONGED OR REPEATED SKIN CONTACT.
KEEP OUT OF THE REACH OF CHILDREN.

• For products with a flash point above 20 F to 80 F inclusive TOC.

INDUSTRIAL

PETROLEUM NAPHTHA *

CAUTION! COMBUSTIBLE

KEEP AWAY FROM HEAT AND OPEN FLAME.
 USE WITH ADEQUATE VENTILATION.
 AVOID PROLONGED BREATHING OF MIST OR VAPOR.
 AVOID PROLONGED OR REPEATED SKIN CONTACT.

For products with a flash point above ~~100~~ not above 120 F TOC or legal requirement.

HOUSEHOLD

PETROLEUM NAPHTHA *

DANGER! HARMFUL OR FATAL IF SWALLOWED COMBUSTIBLE

IF SWALLOWED, DO NOT INDUCE VOMITING; CALL PHYSICIAN IMMEDIATELY.

KEEP AWAY FROM HEAT AND OPEN FLAME.
 USE WITH ADEQUATE VENTILATION.
 AVOID PROLONGED BREATHING OF MIST OR VAPOR.
 AVOID PROLONGED BREATHING OF VAPOR.
 KEEP OUT OF REACH OF CHILDREN.

For products with a flash point above 100 F, but not above 120 F TOC or legal requirement.

INDUSTRIAL

SODIUM SULFONATES (OIL SOLUBLE)

(Active sodium sulfonates 12% or more.)

(Eye irritation tests are the final answer in determining whether labeling is required. The following wording is suggested for products containing active sodium sulfonates causing eye damage.)

CONTAINS SODIUM SULFONATES

DANGER! CAUSES EYE BURNS

AVOID CONTACT WITH EYES.
 IN CASE OF CONTACT, FLUSH IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION.

HOUSEHOLD

PETROLEUM PRODUCTS CONTAINING SODIUM SULFONATES (OIL SOLUBLE)

(Eye irritation tests are the final answer in determining whether labeling is required. The following wording is suggested for products containing active sodium sulfonates causing eye damage.)

CONTAINS SODIUM SULFONATES

WARNING! CAUSES EYE IRRITATION

AVOID CONTACT WITH EYES.
 IN CASE OF CONTACT, FLUSH IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION.
 KEEP OUT OF THE REACH OF CHILDREN.

INDUSTRIAL

SODIUM SULFONATES (OIL SOLUBLE)

(Active sodium sulfonates 5 to 12%.)

(Eye irritation tests are the final answer in determining whether labeling is required. The following wording is suggested for products containing sulfonates causing eye irritation.)

CONTAINS SODIUM SULFONATES

WARNING! CAUSES EYE IRRITATION

AVOID CONTACT WITH EYES.
 IN CASE OF CONTACT, FLUSH IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION.

HOUSEHOLD

STODDARD SOLVENT**DANGER! HARMFUL OR FATAL IF SWALLOWED COMBUSTIBLE**

IF SWALLOWED, DO NOT INDUCE VOMITING; CALL PHYSICIAN IMMEDIATELY.
 KEEP AWAY FROM HEAT AND OPEN FLAME.
 USE WITH ADEQUATE VENTILATION.
 AVOID PROLONGED BREATHING OF MIST OR VAPOR.
 AVOID PROLONGED OR REPEATED SKIN CONTACT.
 KEEP OUT OF THE REACH OF CHILDREN.

INDUSTRIAL

STODDARD SOLVENT**CAUTION! COMBUSTIBLE**

KEEP AWAY FROM HEAT AND OPEN FLAME.
 USE WITH ADEQUATE VENTILATION.
 AVOID PROLONGED BREATHING OF MIST OR VAPOR.
 AVOID PROLONGED OR REPEATED SKIN CONTACT.

INDUSTRIAL

TOLUENE (TOLUOL)*



**WARNING! FLAMMABLE
VAPOR HARMFUL**

KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME.
KEEP CONTAINER CLOSED.
USE WITH ADEQUATE VENTILATION.
AVOID ~~PROLONGED~~ BREATHING OF VAPOR.
AVOID ~~PROLONGED OR~~ REPEATED SKIN CONTACT.

HOUSEHOLD

TOLUENE (TOLUOL)*

**DANGER! FLAMMABLE
VAPOR HARMFUL
HARMFUL OR FATAL IF SWALLOWED**

KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME.
KEEP CONTAINER CLOSED.
USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED BREATHING OF VAPOR.
AVOID PROLONGED OR REPEATED SKIN CONTACT.
IF SWALLOWED, DO NOT INDUCE VOMITING; CALL
PHYSICIAN IMMEDIATELY.
KEEP OUT OF THE REACH OF CHILDREN.

* Household products containing 10% or more by weight of toluene must be labeled as illustrated.

INDUSTRIAL

XYLENE (XYLOL)*



**WARNING! FLAMMABLE
VAPOR HARMFUL**

KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME.
KEEP CONTAINER CLOSED.
USE WITH ADEQUATE VENTILATION.
AVOID ~~PROLONGED~~ BREATHING OF VAPOR.
AVOID ~~PROLONGED OR~~ REPEATED SKIN CONTACT.

* Flash point EO F, or below.

HOUSEHOLD

XYLENE * (XYLOL)**

**DANGER! FLAMMABLE
VAPOR HARMFUL
HARMFUL OR FATAL IF SWALLOWED**

KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME.
KEEP CONTAINER CLOSED.
USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED BREATHING OF VAPOR.
AVOID PROLONGED OR REPEATED SKIN CONTACT.
IF SWALLOWED, DO NOT INDUCE VOMITING; CALL
PHYSICIAN IMMEDIATELY.
KEEP OUT OF THE REACH OF CHILDREN.

* Household products containing 10% or more by weight of xylene must be labeled as illustrated.

** Flash point EO F or below.

INDUSTRIAL

XYLENE (XYLOL)*

**WARNING! COMBUSTIBLE
VAPOR HARMFUL**

KEEP AWAY FROM HEAT AND OPEN FLAME.
USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED BREATHING OF VAPOR.
AVOID PROLONGED OR REPEATED SKIN CONTACT.

* Flash point above 80 F.

HOUSEHOLD

XYLENE * (XYLOL)**

**DANGER! HARMFUL OR FATAL IF SWALLOWED
VAPOR HARMFUL
COMBUSTIBLE**

IF SWALLOWED, DO NOT INDUCE VOMITING; CALL
PHYSICIAN IMMEDIATELY.
KEEP AWAY FROM HEAT AND OPEN FLAME.
USE WITH ADEQUATE VENTILATION.
AVOID PROLONGED BREATHING OF VAPOR.
AVOID PROLONGED OR REPEATED SKIN CONTACT.
KEEP OUT OF THE REACH OF CHILDREN.

* Household products containing 10% or more by weight of xylene must be labeled as illustrated.

** Flash point above 80 F.

API COMMITTEE ON PRECAUTIONARY LABELING—1969

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