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#### 1. INTRODUCTION

The Chemical Hazards Response Information System (CHRIS) is designed to provide information needed for decision-making by responsible Coast Guard personnel during emergencies that occur during the water transport of hazardous chemicals. CHRIS also provides much information that can be used by the Coast Guard in its efforts to achieve better safety procedures and so prevent accidents.

CHRIS consists of a handbook or manual, a hazard assessment computer system (HACS), and technical support personnel located at Coast Guard headquarters. These components and their relations to one another are described in Section 2 of this manual.

#### 2. COMPONENTS OF CHRIS

#### 2.1 HAZARDOUS CHEMICAL DATA

This manual is the cornerstone of CHRIS. For each substance, it lists the specific chemical, physical, and biological data needed for the preparation and use of the other components of the system. The manual can also be used after the initial response action, when there is sufficient time to use more detailed information.

The Hazardous Chemical Data Manual is intended for use primarily by the On-Scene Coordinator (OSC) and by Regional Response Teams for devising, evaluating, and carrying out response plans.

#### 2.2 HAZARD ASSESSMENT COMPUTER SYSTEM

The Hazard Assessment Computer System (HACS) permits trained specialists to obtain very detailed hazard evaluations quickly, when requested by OSC personnel, and can be accessed through the National Response Center.

#### 3. EXPLANATION OF TERMS

This section explains the special terms used in the data sheets, gives the sources of specific items, and includes other information that will be useful to the reader in interpreting the data. The paragraphs below are keyed to the relevant portions by the subheading and number used in the data sheets.

The expression "**Not pertinent**" means that the data item either has no real meaning (such as the flash point of a nonflammable chemical) or is not required for assessing a hazardous situation. The expression "**Currently not available**" means that the information sought was not found in the general or specialized data sources listed in Section 10 of this manual. In a few cases where important data were not available, values were estimated by usually reliable procedures; all such values are labeled "**(est.)**". If more accurate values for those items are found, they will be included in later revisions.

The **name** used for each of the chemicals included in the CHRIS manuals is either (1) that specified in the Code of Federal Regulations, Title 46, Part 151 or (2) a common name for those chemicals not now regulated by Sub chapters O and D but known to be hazardous during shipment. The data sheets are arranged in alphabetic order by chemical name, not by the 3-letter code.

The **3-letter code** is designed to facilitate correct identification of chemicals in oral or written communication. The code should be used only *in addition* to the compound name; it should not be used alone. For transmitting the code, use the phonetic alphabet given in the "International Code of Signals."

#### 1. RESPONSE TO DISCHARGE

In every case of a discharge or leak, it is obvious that an effort should be made to reduce, stop, or contain the flow of material at its source if this can be done safely. The purpose of the terms used in this section is to describe in a general way the cautionary and corrective responses that are described in greater detail in the Response Methods Handbook.

- "Issue warning" is used when the chemical is a poison, has a high flammability, is a water contaminant, is an air contaminant (so as to be hazardous to life), is an oxidizing material, or is corrosive.
- "Restrict access" is used only for those chemicals that are unusually and immediately hazardous to personnel unless they are protected properly by respirators, protective clothing, etc.
- "Evacuate area" is used primarily for unusually poisonous chemicals or those that ignite easily.
- "Mechanical containment" is used for water-insoluble chemicals that float and do not evaporate readily.

- "Should be removed" is used for chemicals that cannot be allowed to disperse
  because of their harmful effect on humans or on the ecological system in
  general. The term is not used unless there is a reasonable chance of
  preventing dispersal, after a discharge or leak, by chemical and physical
  treatment.
- "Chemical and physical treatment" is recommended for chemicals that can be removed by skimming, pumping, dredging, burning, neutralization, absorption, coagulation, or precipitation. The corrective response may also include the use of dispersing agents, sinking agents, and biological treatment.
- "Disperse and flush" is used for chemicals that can be made non-hazardous to humans by simple dilution with water. In a few cases the response is indicated even when the compound reacts with water because, when proper care is taken, dilution is still the most effective way of removing the primary hazard.

#### 2. CHEMICAL DESIGNATIONS

- **2.1 Coast Guard Compatibility Classification** An entry is made when the chemical has been assigned to one of the 43 cargo groups listed in Code of Federal Regulations, Title 46, Part 150, "Compatibility of Cargoes." Appropriate parts of these regulations are included in this manual. Chemicals included in the regulation were assigned to a group by the Cargo and Hazardous Materials Standards Division, Coast Guard Headquarters. If the chemical is not a liquid carried in bulk in ships' tanks, this data item is "Not listed."
- **2.2 Chemical Formula** This has been limited to a commonly used one-line formula. In the case of some organic compounds it has not been possible to represent chemical structure within such a limitation.
- **2.3 IMO/United Nations Numerical Designation** The designation is that of the "International Maritime Dangerous Goods Code" published by the International Maritime Organization (IMO), London, 1977.
- **2.4 Department of Transportation Identification Number** This is an identification number assigned by the Department of Transportation to aid in categorizing hazards and recommended responses. The ID's can be located in the Hazardous Materials Table, part 172.101 of 49 CFR.
- **2.5 Chemical Abstracts Services Registry Number** The unique identification number assigned each compound registered with the Chemical Abstracts Service (CAS) is listed to aid in quick identification of the compound.
- **2.6 NAERG Guide Number** The number of the guide in the North American Emergency Response Guidebook listing specific emergency response actions for a particular CHRIS chemical. The 1996 edition of the guidebook was used in the preparation of this edition of the CHRIS manual.

**2.7 Standard Industrial Trade Classification** – The five digit code identifying the chemical's commodity category per revision 3 of the subject classification. These codes are compatible with the International Harmonized System codes used in foreign trade.

#### 3. HEALTH HAZARDS

- **3.1 Personal Protective Equipment** The items listed are those recommended by (a) manufacturers, either in technical bulletins or in Material Safety Data Sheets, (b) the Chemical Manufacturers Association, or (c) the National Safety Council, for use by personnel while responding to fire or accidental discharge of the chemical. They are intended to protect the lungs, eyes, and skin. Safety showers and eyewash fountains are considered to be important protective equipment for the handling of almost all chemicals; they are not usually listed.
- **3.2 Symptoms Following Exposure** These are brief descriptions of the effects observed in humans when the vapor (gas) is inhaled, when the liquid or solid is ingested (swallowed), and when the liquid or solid comes in contact with the eyes or skin.
- **3.3 Treatment for Exposure** "First-aid" procedures are recommended. They deal with exposure to the vapor (gas), liquid, or solid and include inhalation, ingestion (swallowing) and contact with eyes or skin. The instruction "Do NOT induce vomiting" is given if an unusual hazard is associated with the chemical being sucked into the lungs (aspiration) while the patient is vomiting. "Seek medical attention" or "Call a doctor" is recommended in those cases where only competent medical personnel can treat the injury properly. In all cases of human exposure, seek medical assistance as soon as possible.
- **3.4 Threshold Limit Value Time Weighted Average** -The Threshold Limit Value Time Weighted Average (TLV-TWA) is usually expressed in units of parts per million (ppm) i.e., the parts of vapor (gas) per million parts of contaminated air by volume at 25°C (77°F) and one atmosphere pressure. For a chemical that forms a fine mist or dust, the concentration is given in milligrams per cubic meter (mg/m³). The TLV is defined as the concentration of the substance in air that can be breathed for five consecutive eight-hour workdays (40-hour work week) by most people without adverse effect (American Conference of Governmental Industrial Hygienists, "Threshold Limit Values for Substance in Workroom Air, Adopted by ACGIH"). As some people become ill after exposure to concentrations lower than the TLV, this value cannot be used to define exactly what is a "safe" or "dangerous" concentration.

No entry appears when the chemical is a mixture; it is possible to calculate the TLV for a mixture only when the TLV for each component of the mixture is known and the composition of the mixture by weight is also known.

**3.5 Threshold Limit Value - Short-Term Exposure Limits** - The parts of vapor (gas per million parts of contaminated air by volume at 25°C (77°F) and one atmosphere pressure is given. The limits are given in milligrams per cubic meter

for chemicals that can form a fine mist or dust. The values given are the maximum permissible average exposures for the time periods specified.

- **3.6 Threshold Limit Value Ceiling Value** The parts of vapor (gas per million parts of contaminated air by volume at 25°C (77°F) and one atmosphere pressure is given. The limits are given in milligrams per cubic meter for chemicals that can form a fine mist or dust. The values given are for a concentration that is not to be exceeded at any time.
- **3.7 Toxicity by Ingestion** The Grade and corresponding LD $_{50}$  value are those defined by the National Academy of Sciences, Committee on Hazardous Materials, "Evaluation of the Hazard of Bulk Water Transportation of Industrial Chemicals, A Tentative Guide," Washington, D.C., 1972. Data were also collected from other sources and converted to the appropriate Grade before entry in this manual. The term LD $_{50}$  signifies that about 50% of the animals given the specified dose by mouth will die. Thus, for a Grade 4 chemical (below 50 mg/kg) the toxic dose for 50% of animals weighing 70 kg (150 lb) is 70 X 50 = 3500 mg = 3.5 g, or less than 1 teaspoonful; it might be as little as a few drops. For a Grade 1 chemical (5 to 15g/k g), the LD $_{50}$  would be between a pint and a quart for a 150-lb man. All LD $_{50}$  values have been obtained using small laboratory animals such as rodents, cats, and dogs. The substantial risks taken in using these values for estimating human toxicity are the same as those taken when new drugs are administered to humans for the first time.
- **3.8 Toxicity by Inhalation** Similar to the Toxicity by Ingestion entry, except that the route of exposure is inhalation instead of ingestion. Units and definition of units are the same.
- **3.9 Chronic Toxicity** Where there is evidence that the chemical can cause cancer, mutagenic effects, teratogenic effects, or a delayed injury to vital organs such as the liver or kidney, a qualitative description of the effect is given.
- **3.10 Vapor (Gas) Irritant Characteristics** The most appropriate of five statements listed below is given. Source: National Academy of Sciences, Committee on Hazardous Materials, "Evaluation of the Hazard of Bulk Water Transportation of Industrial Chemicals, A Tentative Guide," Washington, D.C., 1972.)
  - (1) Vapors are nonirritating to eyes and throat.
  - (2) Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.
  - (3) Vapors cause moderate irritation such that personnel will find high concentrations unpleasant. The effect is temporary.
  - (4) Vapors are moderately irritating such that personnel will not usually tolerate moderate or high concentrations.
  - (5) Vapors cause severe irritation of eyes and throat and can cause eye and lung injury. They cannot be tolerated even at low concentrations.

- **3.11 Liquid or Solid Irritant Characteristics** The most appropriate of the following five statements is given (same source as 5.8 above):
  - (1) No appreciable hazard. Practically harmless to the skin.
  - (2) Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of skin.
  - (3) Causes smarting of the skin and first-degree burns on short exposure; may cause second-degree burns on long exposure.
  - (4) Fairly severe skin irritant. May cause pain and second-degree burns after a few minutes' contact.
  - (5) Severe skin irritant. Causes second- and third-degree burns on short contact and is very injurious to the eyes.
- **3.12 Odor Threshold** This is the lowest concentration in air that most humans can detect by smell. The value cannot be relied on to prevent over-exposure, because human sensitivity to odors varies over wide limits, some chemicals cannot be smelled at toxic concentrations, odors can be masked by other odors, and some compounds rapidly deaden the sense of smell.
- **3.13 IDLH Value** The Immediately Dangerous to Life and Health Value This concentration represents a maximum level from which one could escape within 30 minutes without any escape-impairing symptoms or any irreversible health effects. The concentrations are reported in either parts per million (ppm) or milligrams per cubic meter (mg/m³).
- **3.14 OSHA Permissible Exposure Limit Time Weighted Average** Similar to the definition of the TLV-TWA above, except that this limit has been promulgated by the Occupational Safety and Health Agency.
- **3.15 OSHA Permissible Exposure Limit Short Term Exposure Limit** Similar to the definition of the TVL-STEL above, except that this limit has been promulgated by the Occupational Safety and Health Agency.
- **3.16 OSHA Permissible Exposure Limit Ceiling** Similar to the definition of the TVL-Ceiling above, except that this limit has been promulgated by the Occupational Safety and Health Agency.
- **3.17 EPA AEGL** Acute Exposure Guideline information from the Environmental Protection Agency for the specific compound listed in the manual.

#### 4. FIRE HAZARDS

- **4.1 Flash Point** This is defined as the lowest temperature at which vapors above a volatile combustible substance will ignite in air when exposed to a flame. Depending on the test method used, the values given are either Tag closed cup (C.C.) (ASTM D56) or Cleveland open cup (O.C.) (ASTM D93). The values, along with those in 6.2 and 6.7 below, give an indication of the relative flammability of the chemical. In general, the open cup value is about 10° to 15°F higher than the closed cup value.
- **4.2 Flammable Limits in Air** The percent concentration in air (by volume) is given for the lower (LFL) and upper (UFL) limit. The values, along with those in 6.1 and 6.7, give an indication of the relative flammability of the chemical. The limits are sometimes referred to as "lower explosive limit" (LEL) and "upper explosive limit" (UEL).
- **4.3 Fire Extinguishing Agents** The agents are listed in decreasing order of importance. The general capabilities of all agents are described in section 6, "Fire Protection Handbook," 18th ed., National Fire Protection Association, Boston, Mass., 1997.
- **4.4 Fire Extinguishing Agents Not to be Used** The agents listed must not be used because they react with the chemical and create an additional hazard. In some cases they are listed because they are ineffective in putting out the fire.
- **4.5 Special Hazards of Combustion Products** Some chemicals decompose or burn to give off toxic and irritating gases. Such gases may also be given off by chemicals that vaporize in the heat of a fire without either decomposing or burning. If no entry appears, the combustion products are thought to be similar to those formed by the burning of oil, gasoline, or alcohol; they include carbon monoxide (poisonous), carbon dioxide, and water vapor. The specific combustion products are usually not well known over the wide variety of conditions existing in fires; some may be hazardous.
- **4.6 Behavior in Fire** Any characteristic behavior that might increase significantly the hazard involved in a fire is described. The formation of dense smoke or flammable vapor clouds, and the possibility of polymerization and explosions is stated. Unusual difficulty in extinguishing the fire is also noted.
- **4.7 Ignition Temperature** This is the minimum temperature at which the material will ignite without a spark or flame being present. Along with the values in 6.1 and 6.2 above, it gives an indication of the relative flammability of the chemical. It is sometimes called the "autoignition temperature." The method of measurement is given in ASTM D-2155.
- **4.8 Electrical Hazard** The ease with which the chemical is ignited by electrical equipment is indicated by the Group and Class assignment made in the National Fire Protection Association, "Hazardous Chemicals Data," Boston, Mass., 1994 and in "Classification of Gases, Liquids, and Volatile Solids

Relative to Explosion-Proof Electrical Equipment," National Academy of Sciences, 1982. This information is available for relatively few chemicals, so an absence of data does not necessarily mean that the substance is not hazardous in the presence of electrical equipment.

- **4.9 Burning Rate** The value is the rate (in millimeters per minute) at which the depth of a pool of liquid decreases as the liquid burns. Details of measurement are given by D.S. Burgess, A. Strasser, and J. Grumer, "Diffusive Burning of Liquid Fuels in Open Trays," Fire Research Abstracts and Reviews, 3, 177 (1961).
- **4.10 Adiabatic Flame Temperature** The value is the temperature in degrees Fahrenheit of the flame when the material is burned under adiabatic conditions.
- **4.11 Stoichiometric Air to Fuel Ratio** The value is the ratio of air to the compound in question required for stoichiometric combustion. Since it is a ratio, the value is dimensionless.
- **4.12 Flame Temperature** The value is the temperature in degrees Fahrenheit of the flame produced by burning the compound under stoichiometric conditions without any rate controls.
- **4.13 Molar Ratio (Reactant to Product)** The number of moles of products formed, assuming complete combustion of a single mole of the chemical reactant. These ratios were calculated assuming there was sufficient oxygen available and that combustion did, in fact, go to completion.
- **4.14 Minimum Oxygen Concentration for Combustion (MOCC)** Information from NFPA-69 regarding the minimum percentage of oxygen required to support combustion of the subject compound. The results are reported for oxygen diluted with nitrogen (N<sub>2</sub>) and/or carbon dioxide (CO<sub>2</sub>).

#### 5. CHEMICAL REACTIVITY

- **5.1 Reactivity with Water** The term "No reaction" means that no hazard results when the chemical reacts or mixes with water. Where a hazard does result, it is described.
- **5.2 Reactivity with Common Materials** This is limited to hazardous reactions with fuels and with common materials of construction such as metal, wood, plastics, cement, and glass. The nature of the hazard, such as severe corrosion or formation of a flammable gas, is described.
- **5.3 Stability During Transport** The term "Stable" means that the chemical will not decompose in a hazardous manner under the conditions of temperature, pressure, and mechanical shock that are normally encountered during shipment; the term does not apply to fire situations. Where there is a possibility of hazardous decomposition, an indication of the conditions and the nature of the hazard is given.

- **5.4 Neutralizing Agents for Acids and Caustics** In all cases involving accidental discharge, dilution with water may be followed by use of the agent specified, particularly if the material cannot be flushed away; the agent specified need not necessarily be used.
- **5.5 Polymerization** A few chemicals can undergo rapid polymerization to form sticky, resinous materials, with the liberation of much heat. The containers may explode. For these chemicals the conditions under which the reaction can occur are given. See Section 12.16 for quantitative data.
- **5.6 Inhibitor of Polymerization** The chemical names and concentrations of inhibitors added by the manufacturer to prevent polymerization are given.

#### 6. WATER POLLUTION

**6.1 Aquatic Toxicity** - The form of data presentation used by the Environmental Protection Agency's "Oil and Hazardous Material-Technical Assistance Data System (OHM-TADS)" is used here. Reading from left to right and separated by slashes (/) are the following data:

Concentration in parts per million by weight (or milligrams per liter) at which the chemical was tested:

Time of exposure in hours;

Name of the aquatic species studied;

Effect observed; LC<sub>50</sub> means that approximately 50% of the fish will die under the conditions of concentrations and time given. TL<sub>m</sub> (Median Tolerance Limit) means that approximately 50% of the fish will show abnormal behavior (including death) under the conditions of concentrations and time given; the term EC<sub>50</sub> (Effective Concentration<sub>50</sub>) is used sometimes instead of TL<sub>m</sub>; The kind of water used in the test (fresh or salt)

Some chemicals have been tested with many species of fish. Where the data were available, the data sheet cites one illustrative test in fresh water and one in salt water.

- **6.2 Waterfowl Toxicity** Very little information is available. In a few cases there is entered the  $LD_{50}$  value, which indicates the dose (in milligrams per kilogram of body weight) that is lethal to about half the waterfowl tested.
- **6.3 Biological Oxygen Demand (BOD)** Also called "biochemical oxygen demand," this is a standard way of describing how much oxygen dissolved in water is consumed by biological oxidation of the chemical during the stated period of time. The unit lb/lb indicates the pounds of oxygen consumed by each pound of chemical during the time stated. When given in percent, the values indicate the pounds of oxygen consumed by each 100 pounds of chemical during the time stated. If the percentage is followed by "(theor.)", it indicates the

pounds of oxygen theoretically required to completely oxidize 100 pounds of the chemical.

**6.4 Food Chain Concentration Potential** - If the chemical is consumed by fish, marine plants, waterfowl, etc., that are in turn eaten by other species, the substance may accumulate and ultimately be consumed by humans. Where this occurs, an indication of the potential hazard and its significance is given.

**6.5 GESAMP Hazard Profile** – A composite list of hazard profiles evaluated by the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP). A summary of the legends used in the profile follows.

#### **Bioaccumulation and Tainting**

- + Bioaccumulated to significant extent and known to produce a hazard to aquatic life or human health.
- Z Bioaccumulated with attendant risk to aquatic organisms or human health, however, with short retention of the order of one week or less.
- T Liable to produce tainting of seafood.
- O No evidence to support one of the above ratings (+, Z, T)

	Damage to Living Resources	96 hr LC <sub>50</sub>
5	Extremely toxic	less than 0.01 mg/l
4	Highly toxic	less than 1 mg/l
3	Moderately toxic	1-10 mg/l
2	Slightly toxic	10-100 mg/l
1	Practically nontoxic	100-1000 mg/l
0	Non-hazardous	greater than 1000 mg/l
D	Substance likely to blanket the sea-bed	
BOD	Substance with oxygen demand	

	Hazard to Human Health by Oral Intake	$LD_{50}$
4	Highly hazardous	less than 5 mg/kg
3	Moderately hazardous	5-50 mg/kg
2	Slightly hazardous	50-500 mg/kg
1	Practically non-hazardous	500-5000 mg/kg
0	Non-hazardous	greater than 5000 mg/kg

#### Hazard to Human Health by Skin and Eye Contact or Inhalation

II Hazardous (severe irritation, strong sensitizer, lung injury, percutaneous toxicity, carcinogenic, or other specific long-term

adverse health effect.

- I Slightly hazardous (mild irritation, weak sensitizer)
- 0 Non-hazardous (non-irritant, not a sensitizer)

#### **Reduction of Amenities**

- XXX Highly objectionable because of persistency, smell or poisonous or irritant characteristics; as a result contaminated beaches liable to be closed; also used when there is clear evidence that the substance is a human carcinogen or that the substance has the potential to produce other serious specific long-term adverse health effects in humans.
- XX Moderately objectionable because of the above characteristics, but short-term effects leading only to temporary interference with use of beaches; also used when there is credible scientific evidence that the substance is an animal carcinogen but where there is no clear evidence to indicate that the material has caused cancer in humans, or when there is evidence from laboratory studies that the substance could have the potential to produce other serious specific long-term adverse health effects.
- X Slightly objectionable, non-interference with use of beaches.
- 0 No problem.

Ratings in brackets, (), indicate insufficient data available to the GESAMP experts on specific substances, hence extrapolation was required.

- N Not applicable (e.g. if gases)
- Indicates data were not available to the GESAMP Working Group.

#### 7. SHIPPING INFORMATION

- **7.1 Grades or Purity** The grades USP (United States Pharmacopoeia) and CP (chemically pure) are quite pure. Where "Technical" or "Commercial" grades are given, the percent by weight of the pure chemical present is usually indicated. In a few cases the identity of the major impurities is given. If the properties of the less pure grades differ significantly from those of the pure substance, the differences in properties are described in general terms.
- **7.2 Storage Temperature** The range of temperatures at which the chemical is normally shipped in bulk by water transport is given. "Ambient" means the temperature of the surroundings.
- **7.3 Inert Atmosphere** The terms used are "inerted," "padded," "ventilated (forced)," "ventilated (natural)," and "no requirement." They are given when found in the Code of Federal Regulations, Title 46, beginning in Part 151.05.
- **7.4 Venting** The terms used are "open," "pressure-vacuum," and "safety relief" (same source as 9.3 above).

- **7.5 IMO Pollution Category** pollution classification applied to this compound by the International Maritime Organization.
- **7.6 Ship Type** The data entry refers to construction and containment requirements for ships being used to transport the chemical in question. The information is taken from the Code of Federal Regulations, Title 46, Part 154.
- **7.7 Barge Hull Type** The data entry refers to structural requirements for barge hulls being used to transport the chemical in question. The information is taken from the Code of Federal Regulations, Title 46, part 151.

#### 8. HAZARD CLASSIFICATIONS

- **8.1 49 CFR Category** This is the hazard category specified in the Hazardous Materials Table, Part 172.101, Title 49 of the Code of Federal Regulations. The October 1, 1996 edition was used to prepare this version of the CHRIS.
- **8.2 49 CFR Class** The hazard class as specified in the Hazardous Materials Table, Title 49, Part 172.101 of the Code of Federal Regulations. The October 1, 1996 edition was used to prepare this version of the CHRIS.
- **8.3 49 CFR Package Group** The packaging group assigned to this chemical in the Hazardous Materials Table, Title 49, Part 172.101 of the Code of Federal Regulations. The October 1, 1996 edition was used to prepare this version of the CHRIS. Note that the packaging group is often dependent upon toxicity or flash point of the chemical. In those cases the reported packaging group is based upon the data value reported in CHRIS for that specific compound. The packaging group could be different if the purity of the material varies from that reported in CHRIS.
- **8.4 Marine Pollutant** This is a "Yes" or "No" entry, depending upon whether the chemical is listed in "List of Marine Pollutants", Appendix B to Part 172.101, Title 49 of the Code of Federal Regulations.
- **8.5 NFPA Hazard Classifications** The indicated ratings are given in "Fire Protection Guide on Hazardous Materials," 7th ed., National Fire Protection Association, Boston, Mass., 1978. The classifications are defined in Table 1 below. The symbol used in conjunction with these ratings is illustrated in Section 4.2.
- **8.6 EPA Reportable Quantity** The minimum quantity, in pounds, that must be reported to EPA in the event of a spill. This value is taken from "A List of Hazardous Substances and Reportable Quantities", Appendix A to Part 172.101, Title 49 of the Code of Federal Regulations.
- **8.7 EPA Pollution Category** An alphabetic descriptor identifying the potential pollution impact of the chemical. This descriptor is based upon the reportable quantity from category 8.6 above.

**8.8 RCRA Waste Number** – The 4 character identification number assigned to this chemical, if it is a waste, under the Resources Conservation and Recovery Act. This waste number was reported if the chemical is specifically listed.

**8.9 EPA FWPCA List** – A "Yes" or "No" entry depending upon whether the chemical is listed in the Federal Water Pollution Control Act.

# TABLE 1 EXPLANATION OF NFPA HAZARD CLASSIFICATIONS

Health Hazard (blue)	Definition
4	Materials which on very short exposure could cause death or major residual injury even though prompt medical treatment were given
3	Materials which on short exposure could cause serious temporary or residual injury even though prompt medical treatment were given.
2	Materials which on intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical treatment is given.
1	Materials which on exposure would cause irritation but only minor residual injury even if no treatment is given.
0	Materials which on exposure under fire conditions would offer no hazard beyond that of ordinary combustible material.
Flammability (red)	
4	Materials which will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature, or which are readily dispersed in air and which will burn readily.
3	Liquids and solids that can be ignited under almost all ambient temperature conditions
2	Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.
1	Materials that must be preheated before ignition can occur.
0	Materials that will not burn.
Reactivity (yellow)	
4	Materials which in themselves are readily capable of detonation or explosive decomposition or reaction at normal temperatures and pressures.
3	Materials which in themselves are capable of detonation or explosive reaction but require a strong initiating source or which must be heated under confinement before initiation or which react explosively with water.
2	Materials which in themselves are normally unstable and readily undergo violent chemical change but do not detonate. Also materials which may react violently with water or which may form potentially explosive mixtures with water.
1	Materials which in themselves are normally stable, but which can become unstable at elevated temperatures and pressures or which may react with water with some release of energy but not violently.
0	Materials which in themselves are normally stable, even under fire exposure conditions, and which are not reactive with water.
Other (white)	
Ŵ	Materials which react so violently with water that a possible hazard results when they come in contact with water, as in a fire situation. Similar to Reactivity Classification 2.
Оху	Oxidizing material; any solid or liquid that readily yields oxygen or other oxidizing gas, or that readily reacts to oxidize combustible materials.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

- **9.1 Physical State at 15°C and 1 atm** The statement indicates whether the chemical is a solid, liquid, or gas after it has reached equilibrium with its surroundings at "ordinary" conditions of temperature and pressure.
- **9.2 Molecular Weight** The value given is the weight of a molecule of the chemical relative to a value of 12 for one atom of carbon.

The molecular weight is useful in converting from molecular units to weight units and in calculating the pressure, volume and temperature relationships for gaseous materials. The ratio of the densities of any two gases is approximately equal to the ratio of their molecular weights (see 9.10).

The molecular weights of mixtures can be calculated if both the identity and quantity of each component of the mixture are known. Because the composition of mixtures described in this manual is not known exactly, or because it varies from one shipment to another, no molecular weights are given for such mixtures.

**9.3 Boiling Point at 1 atm** - The value is the temperature of a liquid when its vapor pressure is 1 atm. For example, when water is heated to 100°C (212°F) its vapor pressure rises to 1 atm and the liquid boils.

The boiling point at 1 atm indicates whether a liquid will boil and become a gas at any particular temperature and sea-level atmospheric pressure.

- **9.4 Freezing Point** The freezing point is the temperature at which a liquid changes to a solid. For example, liquid water changes to solid ice at 0°C (32°F). Some liquids solidify very slowly even when cooled below their freezing point. When liquids are not pure (for example, salt water) their freezing points are lowered slightly.
- **9.5 Critical Temperature** The maximum temperature at which a liquid can exist, no matter what the pressure on it, is called the critical temperature. For example, the critical temperature of water is 372°C (705°F). The value can be used to estimate many properties whose values are not immediately available.
- **9.6 Critical Pressure** The vapor pressure of a chemical at the critical temperature (see 9.5) is called the critical pressure. For example, the critical pressure of water is 218 atm. Values are given in pounds per square inch absolute, atmospheres, and meganewtons per square meter. The value can be used for estimating many property values that are not immediately available.
- **9.7 Specific Gravity** The specific gravity of a chemical is the ratio of the weight of the solid or liquid to the weight of an equal volume of water at 4°C (or at some other specified temperature).

If the specific gravity is less than 1.0 (or less than 1.03 in seawater) the chemical will float; if higher, it will sink. Where the change in the value with temperature is important, more data are found in 9.20.

- **9.8 Liquid Surface Tension** This property is a measure of the tensile force at the surface of a liquid that tends to shape liquid fragments into spherical drops. Values are expressed in dynes per centimeter and newtons per meter. Liquids with high surface tensions show less tendency to spread. Water has a surface tension of about 73 dynes/cm; seawater has a slightly higher value.
- **9.9 Liquid-Water Interfacial Tension** The value is a measure of the tensile forces existing at the interface between a liquid and water. Approximately, it is the difference between the individual surface tension of the liquid and that of water. Low values of the interfacial tension indicate that the chemical spreads readily on a water surface. The units are the same as in 9.8.
- **9.10 Vapor (Gas) Specific Gravity** The value is the ratio of the weight of vapor to the weight of an equal volume of dry air at the same conditions of temperature and pressure. Buoyant vapors have a vapor specific gravity less than one. The value may be approximated by the ratio M/29, where M is the molecular weight of the chemical (see 9.2).

In some cases the vapor may be at a temperature different from that of the surrounding air. For example, the vapor from a container of boiling methane at -172°F sinks in warm air, even though the vapor specific gravity of methane at 60°F is about 0.6.

For the effect of temperature on vapor density, see 9.26.

**9.11 Ratio of Specific Heats of Vapor (Gas)** - This property is the ratio of the specific heat at constant pressure  $(C_p)$  to the specific heat at constant volume  $(C_v)$ ; its value is always greater than one. In most cases it was calculated by use of the expression:

$$\frac{C_p}{C_v} = \frac{C_p}{(C_p-R)}$$

where R is the Universal Gas Constant.

The ratio varies slightly with temperature; the value given is at 20°C (68°F). The ratio is often of value in estimating temperature changes when gases are compressed or expanded. Higher values of the ratio lead to larger temperature changes for a given pressure change.

**9.12 Latent Heat of Vaporization** - The value is the heat that must be added to the specified weight of a liquid before it can change to vapor (gas). It varies with temperature; the value given is that at the boiling point at 1 atm (see 9.3). The units used are Btu per pound, calories per gram, and joules per kilogram.

No value is given for chemicals with very high boiling points at 1 atm, because such substances are considered essentially nonvolatile.

- **9.13 Heat of Combustion** The value is the amount of heat liberated when the specified weight is burned in oxygen at 25°C. The products of combustion, including water, are assumed to remain as gases; the value given is usually referred to as the "lower heat value." The negative sign before the value indicates that heat is given off when the chemical burns. Units are the same as in 9.12.
- **9.14 Heat of Decomposition** The value is the amount of heat liberated when the specified weight decomposes to more stable substances. The value is given for very few chemicals, because most are stable and do not decompose under the conditions of temperature and pressure encountered during shipment. The negative sign before the value simply indicates that heat is given off during the decomposition. The value does not include heat given off when the chemical burns. Units are the same as in 9.12.
- **9.15 Heat of Solution** The value represents the heat liberated when the specified weight of chemical is dissolved in a relatively large amount of water at 25°C ("infinite dilution"). A negative sign before the value indicates that heat is given off, causing a rise in temperature. (A few chemicals absorb heat when they dissolve, causing the temperature to fall.) Units are the same as in 9.12.

In those few cases where the chemical reacts with water and the reaction products dissolve, the heat given off during the reaction is included in the heat of solution.

- **9.16 Heat of Polymerization** The value is the heat liberated when the specified weight of the compound (usually called the monomer) polymerizes to form the polymer. In some cases the heat liberated is so great that the temperature rises significantly, and the material may burst its container or catch fire. The negative sign before the value indicates that heat is given off during the polymerization reaction. Units are the same as in 9.12.
- **9.17 Heat of Fusion** The value is the number of Btu needed to change one pound of solid to liquid with no change in temperature.
- **9.18 Limiting Value** A chemical specific concentration in water in mole fraction units below which the contribution to the evolution of toxic or flammable vapor at the water surface can be assumed to be negligible.
- **9.19 Reid Vapor Pressure** The value is the equilibrium pressure exerted by vapor over the liquid at 100°F., expressed as pounds per square inch absolute, as defined in 46 CFR 30.10-59.

Items 9.20 through 12.27 consist of tables. The temperature is given in one column followed by the appropriate data value in the next column.

- **9.20 Saturated Liquid Density** The value is the weight (in pounds) of one cubic foot of liquid that is in equilibrium with its vapor. Liquid densities decrease slightly with an increase in temperature; where literature data or reliable estimation methods were applicable, a table shows this effect.
- **9.21 Liquid Heat Capacity** The value is the heat (in Btu) required to raise the temperature of one pound of the liquid one degree Fahrenheit at constant pressure. For example, it requires almost 1 Btu to raise the temperature of 1 pound of water from 68°F to 69°F. The value is useful in calculating the increase in temperature of a liquid when it is heated, as in a fire. The value increases slightly with an increase in temperature; the table shows this effect.
- **9.22 Liquid Thermal Conductivity** The value is a measure of the ability of a liquid to conduct heat. It represents the number of Btu per hour that pass through an area of liquid one square foot in cross-section when the temperature gradient is 1°F per inch of depth. Higher values indicate that the liquid conducts heat more readily.

Liquid thermal conductivities decrease slightly with an increase in temperature. Where applicable, the table shows this effect.

A basic law of heat conduction states that the energy flow per unit area per unit time is proportional to the gradient in temperature. The constant of proportionality is the liquid thermal conductivity.

**9.23 Liquid Viscosity** - The value (in centipoise) is a measure of the ability of a liquid to flow through a pipe or hole; higher values indicate that the liquid flows less readily under a fixed pressure head. For example, heavy oils have higher viscosities (i.e., are more viscous) than gasoline.

Liquid viscosities decrease rapidly with an increase in temperature. In some cases a table is given to show the effect. In other cases only a single data point was found in the literature.

A basic law of fluid mechanics states that, for most fluids, the force per unit area needed to shear a fluid is proportional to the velocity gradient. The constant of proportionality is the viscosity.

**9.24 Solubility in Water** - The value represents the pounds of a chemical that will dissolve in 100 pounds of pure water. Solubility usually increases when the temperature increases; where the change has been measured, a table is given to show the effect. The following terms are used when numerical data are either unavailable or not applicable:

The term "Miscible" means that the chemical mixes with water in all proportions. The term "Reacts" means that the substance reacts chemically with water; thus, its solubility has no real meaning. "Insoluble" usually means that very little of the chemical dissolves in 100 pounds of water. (Weak solutions of "Insoluble" materials may still be hazardous to humans, fish, and waterfowl, however.)

**9.25 Saturated Vapor Pressure** - The value is the pressure (in pounds per square inch absolute) of the vapor in equilibrium with the liquid form at the specified temperature. Vapor pressure values can be used to estimate the relative volatility of chemicals at a given temperature, and to calculate the pressure over a liquid that is shipped in a closed container.

The vapor pressure increases as temperature increases; a table is given to show this effect. Note that the vapor pressure scale is logarithmic.

**9.26 Saturated Vapor Density** - The value is the weight (in pounds) of one cubic foot of vapor that is in equilibrium with the liquid form.

If it is assumed that the vapor behaves as an ideal gas, the relation pM/RT holds, where p is the vapor pressure, M is the molecular weight, R is the gas constant, and T is the temperature (in absolute units).

Since the vapor pressure varies with temperature (see 9.25), the saturated vapor density also varies with temperature, as shown on the table.

**9.27 Ideal Gas Heat Capacity** - The value is the number of Btu needed to raise the temperature of one pound of gas by 1° Fahrenheit. The property can be used only when the pressure of the gas is less than about 10 atm. The ideal gas heat capacity is not a function of pressure (below about 10 atm), but it does increase with temperature, and a table is given to show the effect.

#### 4. OTHER INFORMATION SYSTEMS

#### 4.1 CHEMICAL TRANSPORTATION EMERGENCY CENTER (CHEMTREC)

The Manufacturing Chemists Association operates CHEMTREC 24 hours a day. By calling the appropriate toll-free number listed below, one can consult experts on chemicals and spill response.

#### 4.2 NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

The NFPA's "Recommended System for the Identification of the Fire Hazards of Materials" (NFPA No. 704M) provides basic warning information to fire fighter in industrial plants and storage facilities. This system uses a diamond-shaped warning symbol. The top, left, and right boxes refer to flammability, health, and reactivity hazards respectively and contain a number from 0 to 4. The exact meaning of each number is explained in Section 3 (para 12.3) of this manual, and the applicable number for each chemical are listed in Section 11 under "NFPA Hazard Classifications." The bottom box is used for special hazards; the most common of these is a warning against the use of water, indicated by the symbol W.

### 4.3 INTERNATIONAL MARITIME ORGANIZATION (IMO)

Foreign vessels using U.S. waterways generally utilize, in addition to U.S. requirements, an international labeling system developed by IMO. This system consists of 15 diamond-shaped labels. Each identifies a particular hazard by a descriptive picture, a word, and a distinctive color.

The number at the bottom of each diamond identifies the class to which IMO has assigned the chemical and is the same as the first digit in the IMO/UN numerical designation, one of the items given under "Chemical Designations" in Section 11 of this manual.

#### 4.4 DEPARTMENT OF TRANSPORTATION (DOT)

The "1996 North American Emergency Response Guidebook" was developed by DOT as a guide for initial actions to be taken when handling incidents involving hazardous materials. The guidebook identifies the most significant potential hazards and gives information and guidance for initial actions to be taken based upon the material involved. Information can be located in the guidebook based upon chemical name or DOT Identification Number.

#### 4.5 OHM-TADS (EPA)

The Oil and Hazardous Materials Technical Assistance Data System (OHM-TADS) has been developed by the Environmental Protection Agency (EPA) to provide information on physical and chemical properties, hazards, pollution characteristics, and shipping information for over 1200 hazardous materials. OHM-TADS consists of a computerized data base which can be accessed from terminals at the 10 EPA Regional Offices, from EPA Headquarters in Washington, D.C., and from Coast Guard Marine Safety Offices. The System can provide either information on specifically requested properties for a material, or it can print all the information in its files for that material.

Some of the same information appears in both this manual and OHM-TADS, but each contains some information not found in the other.

#### **4.6 POISON CONTROL CENTERS**

Throughout the country, local Poison Control Centers are maintained at hospitals. These Centers can provide information on the chemical composition, appearance, and toxicity of common poisonous materials as well as information on the symptoms of exposure and on the emergency procedures recommended in the event of exposure. The information available at these centers deals mainly with common household materials.

Poison Control Centers are coordinated through the Department of Health and Human Services in Washington, D.C., but information should be requested through the local centers.

The telephone number of the local Poison Control Center can be found in a local telephone directory.

#### 4.7 ASSOCIATION OF AMERICAN RAILROADS (AAR)

The AAR has developed emergency action guides for 134 various commodities. The guides are contained in a single binder and provide technical information as well as response guidance.

### **5. CONVERSION FACTORS**

To Convert	То	Multiply by
Length		
inches	millimeters	25.4
inches	feet	0.0833
feet	inches	12*
feet	meters	0.3048
feet	yards	0.3333
feet	miles (U.S. statute)	0.0001894
yards	yards	3*
yards	miles (U.S. statute)	0.0005682
miles (U.S. statute)	feet	5280*
miles (U.S. statute)	yards	1760*
miles (U.S. statute)	meters	1609
miles (U.S. statute)	nautical miles	0.868
meters	feet	3.281
meters	yards	1.094
meters	miles (U.S. statute)	0.0006214
nautical miles	miles (U.S. statute)	1.152
Area		
square inches	square centimeters	6.452
square inches	square feet	0.006944
square feet	square inches	144*
square feet	square meters	0.09290
square meters	square feet	10.76
square miles	square yards	3,097,600*
square yards	square feet	9*
Volume		
cubic inches	cubic centimeters	16.39
cubic inches	cubic feet	0.0005787
cubic feet	cubic inches	1728*
cubic feet	cubic meters	0.02832
cubic feet	U.S. gallons	7.481
cubic meters	cubic feet	35.31
liters	quarts (U.S. liquid)	1.057
quarts (U.S. liquid)	liters	0.9463
U.S. gallons	barrels (petroleum)	0.02381
U.S. gallons	cubic feet	0.1337
U.S. gallons	Imperial gallons	0.8327
barrels (petroleum)	U.S. gallons	42*
Imperial gallons	U.S. gallons	1.201
milliliters	cubic centimeters	1*

<sup>\*</sup> Exact value

Time		
seconds	minutes	0.01667
seconds	hours	0.01007
seconds	days	0.0002778
minutes	seconds	60*
minutes	hours	0.01667
minutes	days	0.0006944
hours	seconds	3600*
hours	minutes	60*
hours	days	0.04167
Tiours	days	0.04107
Mass or Weight		
pounds	kilograms	0.4536
pounds	short tons	0.0005*
pounds	long tons	0.0004464
pounds	metric tons	0.0004536
tons (short)	pounds	2000*
tons (metric)	pounds	2205
tons (long)	pounds	2240*
kilograms	pounds	2.205
tonnes (metric tons)	kilograms	1000*
Enorgy		
Energy calories	Btu	0.003968
calories	joules	4.187
	•	4.167 252.0
Btu (British Thermal Units) Btu	calories joules	1055
	calories	0.2388
joules	Btu	0.2366
joules	ЫU	0.0009479
Velocity		
feet per second	meters per second	0.3048
feet per second	miles per hour	0.6818
feet per second	knots	0.5921
meters per second	feet per second	3.281
meters per second	miles per hour	2.237
miles per hour	meters per second	0.4470
miles per hour	feet per second	1.467
knots	meters per second	0.5148
knots	miles per hour	1.151
knots	feet per second	1.689
Density		
<b>Density</b> pounds per cubic foot	grams per cubic centimeter	0.01602
grams per cubic centimeter	pounds per cubic foot	62.42
grams per cubic certificator	kilograma par aubia matar	1000*

grams per cubic centimeter kilograms per cubic meter

kilograms per cubic meter grams per cubic centimeter

1000\* 0.001\*

<sup>\*</sup> Exact value

Pressure pounds per square inch absolute (psia) psia psia psia pounds per square inch gauge (psig) millimeters of mercury (torr) millimeters of mercury (torr) inches of water kilograms per square centimeter	kilonewtons per square meter (kN/m²) atmospheres inches of water millimeters of mercury (torr) psia psia kN/m² psia millimeters of mercury (torr)	6.895 0.0680 27.67 51.72 add 14.70 0.01934 0.1333 0.03614 735.6
inches of water kilograms per square centimeter atmospheres kilograms per square centimeter atmospheres bars kilonewtons per square meter bars kilonewtons per square meter bars	kN/m² atmospheres kN/m² psia psia kN/m² psia atmospheres atmospheres kilograms per square centimeter	0.2491 0.9678 101.3 14.22 14.70 100* 0.1450 0.9869 0.009869 1.020
Viscosity centipoises pounds per foot per second centipoises centipoises poises grams per centimeter per second newton seconds per square meter	pounds per foot per second centipoises poises newton seconds per square meter grams per centimeter per second poises centipoises	0.0006720 1488 0.01* 0.001* 1* 1* 1000*
Thermal Conductivity Btu per hour per foot per °F Btu per hour per foot per °F watts per meter-kelvin kilocalories per hour per meter per °C kilocalories per hour per meter per °C	watts per meter-kelvin kilocalories per hour per meter per °C Btu per hour per foot per °F watts per meter-kelvin Btu per hour per foot per °F	1.731 1.488 0.5778 1.163 0.6720
Heat Capacity Btu per pound per °F Btu per pound per °F joules per kilogram-kelvin calories per gram per °C	calories per gram per °C joules per kilogram-kelvin Btu per pound per °F Btu per pound per °F	1* 4187 0.0002388 1*
Concentration (in water solution) parts per million (ppm) milligrams per liter milligrams per cubic meter grams per cubic centimeter grams per cubic centimeter pounds per cubic foot	milligrams per liter ppm grams per cubic centimeter milligrams per cubic meter pounds per cubic foot grams per cubic centimeter	1* 1* 1 X 10 <sup>-9</sup> 1 X 10 <sup>9</sup> 62.42 0.01602

<sup>\*</sup> Exact value

#### **Temperature**

degrees Kelvin (°K) degrees Rankine (°R) 1.8\*
degrees Rankine (°R) degrees Kelvin (°K) 0.5556
degrees centigrade (°C) degrees Fahrenheit (°F) first multiply by
1.8, then add 32
degrees Fahrenheit (°F) degrees centigrade (°C) first subtract 32, then multiply by
0.5556

degrees centigrade (°C) degrees Kelvin (°K) add 273.2 degrees Fahrenheit (°F) degrees Rankine (°R) add 459.7

#### **Flow**

cubic feet per secondU.S. gallons per minute448.9U.S. gallons per minutecubic feet per second0.002228

#### **Universal Gas Constant (R)**

8.314 joules per gram mole-Kelvin
1.987 calories per gram mole-Kelvin
1.987 Btu per pound mole per °F
10.73 psia-cubic feet per pound mole per °F
82.057 atm-cubic centimeters per gram mole-Kelvin
62.361 millimeters mercury liter per gram mole-Kelvin

<sup>\*</sup> Exact value

## 6. SELECTED PROPERTIES OF FRESH WATER, SEA WATER, ICE AND AIR

The following properties are useful for engineering calculations described in the Hazard Assessment Handbook. The values for fresh water are those recorded for pure water. The values for the water of lakes and streams differ somewhat from those of pure water, but since no "standard" fresh water has ever been defined, the values for pure water must be used.

A "standard" sea water has been defined as one containing 35 grams of salts per kilogram of solution. The values for the water of tidal estuaries differ somewhat from those of "standard" sea water because the water has a salinity somewhere between those of fresh and sea waters.

The value for the density of air was derived from the ideal gas law; the air is assumed to be dry and at 1 atmosphere pressure.

#### **6.1 FREEZING POINT**

Fresh Water	0°C	32°F
Sea Water	-1.91°C	28.6°F

#### **6.2 LATENT HEAT OF FUSION OF ICE**

79.6 cal/g = 143.3 Btu/lb

**6.3 DENSITY** (See Table 6.1)

**6.4 VISCOSITY** (See Table 6.1)

**6.5 HEAT CAPACITY** (See Table 6.1)

**6.6 THERMAL CONDUCTIVITY** (See Table 6.1)

**6.7 VAPOR PRESSURE** (See Table 6.1)

**TABLE 6.1** 

DENSITY OF FRESH WATER		DENSITY OF	SEA WATER	DENSITY	OF ICE	DENSITY OF D	RY AIR (1 atm.)
Temperature	Pounds per	Temperature	Pounds per	Temperature	Pounds per	Temperature	Pounds per
(degrees F)	cubic foot	(degrees F)	cubic foot	(degrees F)	cubic foot	(degrees F)	cubic foot
32	62.410	30	64.250	-50	57.670	-10	0.088
40	62.418	40	64.200	-40	57.625	0	0.086
50	62.401	50	64.170	-30	57.600	10	0.085
60	62.358	60	64.100	-20	57.582	20	0.083
70	62.293	70	64.020	-10	57.541	30	0.081
80	62.208	80	63.950	0	57.105	40	0.079
90	62.105	90	63.800	10	57.490	50	0.078
100	61.986	100	63.700	20	57.455	60	0.076
110	61.852			30	57.410	70	0.075
120	61.704					80	0.074
						90	0.072
						100	0.071
						110	0.070
						120	0.068

VISCOSITY OF FRESH WATER		VISCOSITY OF SEA WATER		HEAT CAPACITY OF FRESH WATER		HEAT CAPACITY OF SEA WATER	
Temperature		Temperature		Temperature	British thermal	Temperature	British thermal
(degrees F)	Centipoise	(degrees F)	Centipoise	(degrees F)	unit per pound-F	(degrees F)	unit per pound-F
32 40 50 60 70 80 90 100 110 120	1.770 1.540 1.304 1.122 0.974 0.858 0.763 0.682 0.616 0.558	30 40 50 60 70 80 90 100	1.880 1.610 1.400 1.210 1.060 0.920 0.815 0.730	32 40 50 60 70 80 90 100 110 120	1.007 1.004 1.001 1.000 0.999 0.998 0.998 0.998 0.998 0.998	30 40 50 60 70 80 90 100	0.936 0.935 0.934 0.932 0.931 0.930 0.928 0.927

### **TABLE 6.1 (Continued)**

HEAT CAPACITY OF ICE			THERMAL CONDUCTIVITY OF FRESH WATER		THERMAL CONDUCTIVITY OF SEA WATER		THERMAL CONDUCTIVITY OF ICE	
Temperature	British thermal units per pound-F  0.400 0.413 0.426 0.438 0.451 0.464 0.476 0.489 0.502	FRES Temperature (degrees F)  32 40 50 60 70 80 90 100 110 120	H WATER  British thermal unitinch per hour square foot-F  3.932 3.979 4.037 4.096 4.154 4.212 4.271 4.329 4.387 4.446	SEA Temperature (degrees F)  30 40 50 60 70 80 90 100	### AMTER    British thermal unitinch per hour square foot-F	Temperature (degrees F)  -50 -40 -30 -20 -10 0 10 20 30	British thermal unit-inch per hour square foot-F  18.754 18.347 17.939 17.531 17.123 16.715 16.308 15.900 15.492	

	PRESSURE OF FRESH TER		PRESSURE OF SEA VATER	SATURATED VAPOR	R PRESSURE OF ICE
Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per square inch
32 40 50 60 70 80 90 100	0.089 0.122 0.178 0.256 0.363 0.507 0.698 0.950	30 40 50 60 70 80 90 100	0.079 0.115 0.167 0.242 0.351 0.509 0.700 0.950	-50 -40 -30 -20 -10 0 10 20 30	0.001 0.002 0.003 0.006 0.011 0.019 0.031 0.051 0.081

#### 7. GUIDE TO COMPATIBILITY OF CHEMICALS

The Guide is based in part upon information provided to the Coast Guard by the National Academy of Sciences - U.S. Coast Guard Advisory Committee on Hazardous Materials and represents the latest information available to the Coast Guard on chemical compatibility.

The accidental mixing of one chemical cargo with another can in some cases be expected to result in a vigorous and hazardous chemical reaction. The generation of toxic gases, the heating, overflow, and rupture of cargo tanks, and fire and explosion are possible consequences of such reactions.

The purpose of the Compatibility Chart is to show chemical combinations believed to be dangerously reactive in the case of accidental mixing. It should be recognized, however, that the Chart provides a broad grouping of chemicals with an extensive variety of possible binary combinations. Although one group, generally speaking, can be considered dangerously reactive with another group where an "X" appears on the Chart, there may exist between the groups some combinations which would not dangerously react. The Chart should therefore not be used as an infallible guide. It is offered as an aid in the safe loading of bulk chemical cargoes, with the recommendation that proper safeguards be taken to avoid accidental mixing of binary mixtures for which an "X" appears on the Chart. Proper safeguards would include consideration of such factors as avoidance of the use of common cargo and vent lines and carriage in adjacent tanks having a common bulkhead.

The following procedure explains how the Guide should be used in determining compatibility information:

- (1) Determine the reactivity group of a particular product by referring to the alphabetical list in Table 7.1.
- (1) Enter the Chart with the reactivity group. Proceed across the page. An "X" indicates a reactivity group that forms an unsafe combination with the product in question.

For example, crotonaldehyde is listed in Table 7.1 as belonging in Group 19 (Aldehydes) and also has a notation, (2), which is explained in the footnotes to Table 7.1. The Compatibility Chart shows that chemicals in group 19 should be segregated from sulfuric and nitric acids, caustics, ammonia, and all types of amines (aliphatic, alkanol, and aromatic). Footnote (2), refers the user to Table 7.3 where exceptions to the Compatibility Chart are listed. Here, crotonaldehyde is listed as also being incompatible with Group 1, non-oxidizing acids.

It is recognized that there are wide variations in the reaction rates of individual chemicals within the broad groupings shown reactive by the Compatibility Chart. Some individual materials in one group will react violently with some of the materials in another group and cause great hazard; others will react slowly, or not at all. Accordingly, a useful addition to the Guide would be the identification of specific materials which might not follow the characteristic reactivities of the rest of the materials in its Group. A few such combinations are listed in Table 7.3; as other exceptions to the Chart become known, they will be listed in subsequent revisions of this manual.

### FIGURE 1 – COMPATIBILITY CHART

[X indicates incompatible groups]

CARGO COMPATIBILITY	1. NON-OXIDIZING MINERAL ACIDS	SULFURIC ACID	NITRIC ACID	ORGANIC ACIDS	CAUSTICS	AMMONIA	ALIPHATIC AMINES	ALKANOLAMINES	9. AROMATIC AMINES	10. AMIDES	11. ORGANIC ANHYDRIDES	12. ISOCYANATES	13. VINYL ACETATE	14. ACRYLATES	15. SUBSTITUTED ALLYLS	16. ALKYLENE OXIDES	17. EPICHLOROHYDRINS	18. KETONES	9. ALDEHYDES	20. ALCOHOLS, GLYCOLS	21. PHENOLS, CRESOLS	22. CAPROLACTAM SOLUTION		
CARGO GROUPS	:   -≥	2.	ω.	4.	5.	9	7.	œ.	6	7	-≺	7	~	<del>,</del>	7	7	<del>-</del>	7	19.	7	2	20		i
1. NON-OXIDIZING MINERAL ACIDS		Х			Х	Х	Χ	Χ	Х	Х	Х	Х	Х			Χ	Х							1
2. SULFURIC ACID	Х		Х	Х	X	X	Х	X	Х	X	X	Х	X	Χ	Χ	Х	X	Х	Х	Χ	Χ	Χ		2
3. NITRIC ACID		Х			X	X	X	X	X	X	X	X	X	Х	X	X	X	X	X	X	X			3
4. ORGANIC ACIDS		Χ			Χ	Χ	Χ	Χ				Χ				Χ	Χ							4
5. CAUSTICS	Х	Х	Χ	Χ							Χ	Χ				Χ	Χ		Χ	Χ	Х	Χ		5
6. AMMONIA	X	X	X	Х						Х	X	Х	Х			Х	X		X	,,				6
7. ALIPHATIC AMINES	X	X	Х	Х							Х	X	X	Χ	Χ	X	Х	Χ	Х	Χ	Χ	Χ		7
8. ALKANOLAMINES	X	X	X	X							X	X	X	X	X	X	X		X					8
9. AROMATIC AMINES	X	X	X	,							X	Х	,	,	, ,	,	,		X					9
10. AMIDES	X	Х	X			Х						X							,,		Χ			10
11. ORGANIC ANHYDRIDES	X	X	X		Χ	X	Х	Х	Χ															11
12. ISOCYANATES	X	Х	X	Χ	X	Х	Х	X	X	Х										Χ		Χ		12
13. VINYL ACETATE	X	X	X		- / \	X	X	X																13
14. ACRYLATES		X	X				X	Х																14
15. SUBSTITUTED ALLYLS		Х	Χ				Х	Х																15
16. ALKYLENE OXIDES	Х	Х	Х	Χ	Χ	Х	X	Х																16
17. EPICHLOROHYDRIN	X	X	Х	Х	X	X	X	Х																17
18. KETONES		Х	Χ				Χ																	18
19. ALDEHYDES		X	Х		Χ	Х	X	Χ	Х															19
20. ALCOHOLS, GLYCOLS		X	Х		X		X					Χ												20
21. PHENOLS, CRESOLS		X	Х		X		X			Χ														21
22. CAPROLACTAM SOLUTION		X			X		X					Χ												22
30. OLEFINS		Х	Χ																					30
31. PARAFFINS																								31
32. AROMATIC HYDROCARBONS			Х																					32
33. MISCELLANEOUS HYDROCARBON MIXTURES			Х																					33
34. ESTERS		Χ	Χ																					34
35. VINYL HALIDES			Х																			Х		35
36. HALOGENATED HYDROCARBONS																								36
37. NITRILES		Χ																						37
38. CARBON DISULFIDE							Χ	Χ																38
39. SULFOLANE																								39
40. GLYCOL ETHERS		Χ										Χ												40
41. ETHERS		Χ	Χ																					41
42. NITROCOMPOUNDS					Χ	Χ	Χ	Χ	Χ															42
43. MISCELLANEOUS WATER SOLUTIONS		Χ										Χ											]	43
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		

## TABLE 7.1 ALPHABETICAL LISTING OF COMPOUNDS

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Acetaldehyde	19	AAD	
Acetic acid	<sup>2</sup> 4	AAC	
Acetic anhydride	11		
Acetone	<sup>2</sup> 18	ACT	
Acetone cyanohydrin	<sup>1,2</sup> 0	ACY	
Acetonitrile	37	ATN	
Acetophenone	_18	ACP	
Acrolein	<sup>2</sup> 19	ARL	
Acrylamide solution	10	AAM	
Acrylic acid	<sup>2</sup> 4	ACR	
Acrylonitrile	<sup>2</sup> 15	CAN	
Acrylonitrile-Styrene copolymer dispersion in Polyether polyol	20	ALE	
Adiponitrile	37	AND	
Alachlor technical	33	ALH	
*Alcohols (C13+)	20	ALY	TDN/TTN/PDC/TFA
Alcoholic beverages	20		
*Alcohol polyethoxylates	20		APU/APV/APW (APK/APL)
Alcohol polyethoxylates, secondary	20		AEA/AEB
Alkanes (C6-C9)	31	ALK	HXS/HMX/OAX/NAX
n-Alkanes (C10+)	31		DCC/DOC/TRD/ALJ
iso- & cyclo-Alkanes (C10-C11)	31	AKI	
iso & cyclo-Alkanes (C12+)	31		
Alkane (C14-C17) sulfonic acid, sodium salt solution	34	AKA	
Alkanyl polyether (C9-C20)	41	AKP	
Alkenyl (C11+) amide	11	AKM	
Alkenylsuccinic anhydride	11	AAH	
Alkyl acrylate-Vinyl pyridine copolymer in Toluene	32	AAP	
Alkyl (C8+) amine, Alkenyl (C12+) acid ester mixture	34	AAA	DDV/DDE
Alkyl (C3-C4) benzenes	32	AKC	PBY/BBE
Alkyl (C5-C8) benzenes	32	AKD	DD7/UDD/DDD/TDD
*Alkyl (C9+) benzenes	32	AKB	DBZ/UDB/DDB/TRB /TDB
*Alkylbenzene, Alkylindane, Alkylindene mixture (each C12-C17)	32	AIH	
Alkylbenzenesulfonic acid		ABS	
Alkylbenzenesulfonic acid, sodium salt solutions	33	ABT	
Alkyldithiadiazole (C6-C24)	33	ADT	
Alkyl ester copolymer (C6-C18)	<sub>2</sub> 34	AES	
Alkyl (C7-C9) nitrates	<sup>2</sup> 34	AKN	ONE
Alkyl phenol sulfide (C8-C40)		AKS	
Alkyl phthalates	234		
Allyl alcohol	<sup>2</sup> 15	ALA	
Allyl chloride	15	ALC	
Aluminum chloride, Hydrochloric acid solution	2 10	AHS	A 1 A 4
Aluminum sulfate solution	<sup>2</sup> 43	ASX	ALM
2-(2-Aminoethoxy)ethanol	8	AEX	

## TABLE 7.1 ALPHABETICAL LISTING OF COMPOUNDS

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Aminoethyldiethanolamine, Aminoethylethanolamine solution	8		
Aminoethylethanolamine	8	AEE	
N-Aminoethylpiperazine	7		
2-Amino-2-hydroxymethyl-1,3-propanediol solution	43	AHL	
2-Amino-2-methyl-1-propanol	8	APR	
Ammonia, anhydrous	6	AMA	
Ammonia, aqueous, see Ammonium hydroxide	6		AMH
Ammonium bisulfite solution	<sup>2</sup> 43	ABX	ASU
*Ammonium hydrogen phosphate solution	0	AMI	
Ammonium hydroxide (28% or less ammonia)	6	AMH	
Ammonium nitrate solution	<sup>1</sup> 0	ANR	AMN
Ammonium nitrate, Urea solution (containing Ammonia)	6	UAS	LIAT
*Ammonium nitrate, Urea solution (not containing Ammonia)	43	ANU	UAT
*Ammonium polyphosphate solution	43	AMO	APP
Ammonium sulfate solution	43		AMS
Ammonium sulfide solution	5	ASS	ASF
Ammonium thiocyanate, Ammonium thiosulfate solution Ammonium thiosulfate solution	0	ACS ATV	ATF
Ammonium miosuliate solution Amyl acetate	43 34	AEC	IAT/AML/AAS/AYA
Amyl alcohol	20	AAI	IAA/AAN/ASE/APM
*Amylene, see Pentene	30	AMZ	PTX
*Amyl methyl keton, see Methyl amyl ketone	18	AMK	MAK
Aniline	9	ANL	
Animal and Fish oils, n.o.s.	34	AFN	
Animal and Fish acid oils and distillates, n.o.s.	34	AFA	
Anthracene oil (Coal tar fraction), see Coal tar	33	AHO	COR
Apple juice	43		
Aryl polyolefin (C11-C50)	30	AYF	
Asphalt	33	ASP	ACU
Asphalt blending stocks, roofers flux	33	ARF	
Asphalt blending stocks, straight run residue	33	ASR	
Aviation alkylates	33	AVA	GAV
Barium long chain alkaryl sulfonate (C11-C50)	34	BCA	
Barium long chain alkyl (C8-C14) phenate sulfide	34	BCH	
Behenyl alcohol	20	DNZ	
Benzene Benzene hydrocarbon mixtures (having 10% Benzene or	32 32	BNZ BHB	
more)	1,2 <sub>0</sub>		
Benzenesulfonyl chloride	_	BSC	
Benzene, Toluene, Xylene mixtures Benzene tricarboxylic acid, trioctyl ester	32	BTX	
Benzylacetate	34 34	BZE	
Benzyl alcohol	21	BAL	
Benzyl chloride	36	BCL	
Brake fluid base mixtures	20	BFX	
Butadiene	30	BDI	
Butadiene, Butylene mixtures (cont. Acetylenes)	30	BBM	
Butane	31	BMX	IBT/BUT

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Butene, see Butylene Butene oligomer	30 30	BOL	IBL/BTN
Butyl acetate	34	BAX	IBA/BCN/BTA/BYA
Butyl acrylate	14	BAR	BAI/BTC
Butyl alcohol	<sup>2</sup> 20		IAL/BAN/BAS/BAT
Butylamine	7	BTY	IAM/BAM/BTL/BUA
Butylbenzene	32	BBE	
Butyl benzyl phthalate	34	BPH	DLID/DID
Butyl butyrate	34	BBA	BUB/BIB IBL
Butylene Butylene glycol	30 <sup>2</sup> 20	BTN BUG	IDL
Butylene oxide	16	BTO	
Butyl ether	41	BTE	
Butyl formate	34	D.L	BFI/BFN
Butyl heptyl ketone	18	BHK	
Butyl methacrylate	14	BMH	BMI/BMN
Butyl methacrylate, Decyl methacrylate, Cetyl-Eicosyl	14	DER	
methacrylate mixture			
Butyl phenol, Formaldehyde resin in Xylene	32		
n-Butyl propionate	34	BPN	
Butyl stearate	34		
Butyl toluene	32	BUE	D 4 D /DTD /DE 4
Butyraldehyde	19	BAE	BAD/BTR/BFA
Butyric acid gamma-Butyrolactone	4 1,2	BRA BLA	IBR
Calcium alkyl (C9) phenol sulfide, polyolefin	34	CPX	
phosphorosulfide mixture		OF X	
Calcium bromide solution, see Drilling brines	43		DRB
Calcium bromide, Zinc bromide solution, see Drilling brine	43		DZB
(containing zinc salts)	0.4		
Calcium carbonate slurry	34	000	CI C
Calcium chloride solution Calcium hydroxide slurry	43 5	CCS COH	CLC
Calcium hypochlorite solutions	5	COH	CHZ/CHU/CHY
Calcium long chain alkaryl sulfonate (C11-C50)	34	CAY	0112/0110/0111
Calcium long chain alkyl phenate (C8-C40)	34	CAN	
Calcium long chain alkyl phenate sulfide (C8-C40)	34	CPI	
Calcium long chain alkyl salicylate (C13+)	34	CAK	
Calcium long chain alkyl phenolic amine (C8-C40)	7		
Calcium nitrate, Magnesium nitrate, Potassium chloride solution	34		
Calcium sulfonate, Calcium carbonate, Hydrocarbon solvent mixture	33		
Camphor oil	18	CPO	
Caprolactam solution	22	CLS	
Carbolic oil	21	CBO	
Carbon disulfide	38	CBB	
Carbon tetrachloride	36	CBT	
Cashew nut shell oil (untreated)	4	OCN	
Caustic potash solution	<sup>2</sup> 5	CPS	

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Caustic soda solution	<sup>2</sup> 5	CSS	
Cetyl-Eicosyl methacrylate mixture	14	CEM	
Cetyl-Stearyl alcohol	20		
Chlorinated paraffins (C10-C13)	36	CLH	
Chlorinated paraffins (C14 - C17)	36		
Chlorine	<sup>1</sup> 0	CLX	
Chloroacetic acid solution	4	CHM	CHL/MCA
Chlorobenzene	36	CRB	
Chlorodifluoromethane	36	MCF	
Chloroform	36	CRF	
Chlorohydrins	17	CHD	
4-Chloro-2-methylphenoxyacetic acid, Dimethylamine salt	9	CDM	
solution	40	0110	
*Chloronitrobenzene	42	CNO	01.4/01.5
Chloropropionic acid	4	CPM	CLA/CLP
Chlorosulfonic acid	<sup>1</sup> 0	CSA	OTM/OTO/ODM
Chlorotoluene	36	CHI	CTM/CTO/CRN
Choline chloride solutions	20	CCO	OLT
Citric acid	4	CIS	CIT
Clay slurry, see also Kaolin clay slurry	43	COD	OCT
Coal tar	33 33	COR CTP	001
Coal tar pitch Cobalt naphthenate in solvent naphtha	34	CNS	
Coconut oil, fatty acid	34	CFA	
Corn syrup	43	CSY	
Cottonseed oil, fatty acid	34	CFY	
Creosote	<sup>2</sup> 21	CCT	CCW/CWD
Cresols	21	CRS	CRL/CSL/CSO
Cresylate spent caustic solution	05	CSC	01(2/002/000
Cresylic acid	21	CRY	
Cresylic acid, dephenolized	21	CAD	
Cresylic acid, sodium salt solution, see Cresylate spent	05	0/12	CSC
caustic			
Cresylic acid tar	<sub>2</sub> 21	CRX	
Crotonaldehyde	<sup>2</sup> 19	CTA	
Cumene (isopropyl benzene), see Propylbenzene	32	CUM	PBY
1,5,9-Cyclododecatriene	30		
Cycloheptane	31	CYE	
Cyclohexane	31	CHX	
Cyclohexanol	20	CHN	
Cyclohexanone	18 <sup>2</sup> 18	CCH	
Cyclohexanone, cyclohexanol mixture		CYX	
Cyclohexyl acetate Cyclohexylamine	34 07	CYC CHA	
*1,3-Cyclopentadiene dimer	30	CPD	DPT
Cyclopentane	31	CYP	DFI
Cyclopentene	30	CPE	
Cymene	32	CMP	
Decahydronaphthalene	33	DHN	
Decaldehyde	19	D: 114	IDA/DAL
_ 555.3611,46	10		,

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
*Decane, see n-Alkanes (C10+)	31	DCC	ALJ
Decanoic acid	04	DCO	
Decene	30	DCE	
Decyl acetate	34	DYA	
Decyl acrylate	ູ14	DAT	IAI/DAR
Decyl alcohol	<sup>2</sup> 20	DAX	ISA/DAN
Decylbenzene	32	DBZ	AKB
Decyloxytetrahydro-thiophene dioxide	<sup>2</sup> 0	DHT	
Dextrose solution	43	DTS	
Diacetone alcohol	<sup>2</sup> 20	DAA	
Dialkyl(C10 - C14) benzenes	32	DAB	DUD/DIE/DOD/DIE
Dialkyl(C7 - C13) phthalates	34	DAH	DHP/DIE/DOP/DIF /DTP/DUP/DID/DIN /DIO/EHE
Dibutyl amine	7	DBA	
Dibutyl hydrogen phosphonate	34	DHD	
Dibutyl phthalate	34	DPA	
Dichlorobenzene	36	DBX	DBM/DBO/DBP
Dichlorodifluoromethane	36	DCF	
1,1-Dichloroethane	36	DCH	
2,2'-Dichloroethyl ether	41	DEE	
1,6-Dichlorohexane	36	DHX	
2,2'-Dichloroisopropyl ether	36	DCI	
Dichloromethane	36	DCM	
2,4-Dichlorophenol	21	DCP	
2,4-Dichlorophenoxyacetic acid, Diethanolamine salt solution	43	DDE	
2,4-Dichlorophenoxyacetic acid, Dimethylamine salt solution	<sup>1,2</sup> 0	DAD	DDA/DSX
2,4-Dichlorophenoxyacetic acid, Triisopropanolamine salt solution	<sup>2</sup> 43	DTI	
Dichloropropane	36	DPX	DPB/DPP/DPC/DPL
1,3-Dichloropropene	15	DPS	DPU/DPF
Dichloropropene, dichloropropane mixture	15	DMX	
2,2-Dichloroproprionic acid	4	DCN	
*Dicyclopentadiene, see 1,3-Cyclopentadiene dimer	30	DPT	CPD
Diethanolamine		DEA	
Diethanolamine salt of 2,4-Dichlorophenoxyacetic acid solution		DDE	
Diethylamine	07	DEN	5.45
Diethylaminoethanol, see Diethylethanolamine	08		DAE
2,6-Diethylaniline	09	DMN	
Diethylbenzene	32	DEB	
Diethylene glycol	<sup>2</sup> 40	DEG	D.4.C
Diethylene glycol butyl ether, see Poly(2-8) alkalene glycol monoalkyl (C1-C6) ether	40	DME	PAG
Diethylene glycol butyl ether acetate, see Poly(2-8) alkylene glycol monoalkyl(C1-C6)	34	DEM	PAF
Diethylene glycol dibutyl ether	40	DIG	
Diethylene glycol diethyl ether	40		

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Diethylene glycol ethyl ether, see Poly(2-8) alkylene glycol monoalkyl (C1-C6) ether	40	DGE	PAG
*Diethylene glycol ethyl ether acetate, see Poly (2-8) alkylene glycol monoalky (C1-C6) ether acetates	34	DGA	PAF
Diethylene glycol n-hexyl ether, see Poly (2-8) alkylene glycol monoalkyl (C1-C6) ether	40	DHE	PAG
*Diethylene glycol methyl ether, see Poly (2-8) alkylene glycol monoalkyl (C1-C6) ether	40	DGM	PAG
Diethylene glycol methyl ether acetate, see Poly (2-8) alkylene glycol monoalkyl (C1-C6) ether acetate	34	DGR	PAF
Diethylene glycol phenyl ether	40	DGP	
Diethylene glycol phthalate	34	DGL	
Diethylene glycol propyl ether, see Poly (2-8) alkylene glycol monoalkyl (c1-C6) ether	40	DGO	PAG
Diethylenetriamine	<sup>2</sup> 7	DET	
Diethylenetriamine pentaacetic acid, pentasodium salt solution	43		
Diethylethanolamine	8	DAE	
Diethyl ether, see Ethyl ether	41		EET
Di-(2-ethylhexyl)adipate	34	DEH	
Di-(2-ethylhexyl)phosphoric acid	1	DEP	
*Di-(2-ethylhexyl)phthalate, see Dialkyl (c7-C13) phthalates	34	DIE	DIO/DOP/DAH
Diethyl phthalate	34	DPH	
Diethyl sulfate	34	DSU	
Diglycidyl ether of Bisphenol A	41	BDE	BPA
Diglycidyl ether of Bisphenol F	41	DGF	
Diheptyl phthalate	34	DHP	
Di-n-hexyl adipate	34	DHA	
Dihexyl phthalate	34		
1,4Dihydro-9,10-dihydroxy anthracene, disodium salt solution	5	DDH	
Diisobutylamine	7	DBU	
*Diisobutylcarbinol, see Nonyl alcohol	20	DBC	NNS
Diisobutylene	30	DBL	
Diisobutyl ketone	18	DIK	
Diisobutyl phthalate	34		
*Diisodecyl phthalate, see Dialkyl (C7-C13) phthalates	34	DID	DAH
Diisononyl adipate	34	DNY	<i>57</i> (11)
*Diisononyl phthalate, see Dialkyl (C7-C13) phthalates	34	DIN	DAH
Diisooctyl phthalate	34	DIO	אאוו
Diisopropanolamine	8	DIP	
Diisopropylamine	7	DIA	
	32	DIX	
Diisopropylbenzene Diisopropyl naphthalene	32 32	DIX	
N,N-Dimethyl acetamide	32 10	DAC	
N,N-Dimethylacetamide solution	10	DLS	
Dimethyl adipate	34	DLA	
Dimethylamine	7	DMA	
Dimethylamine solution	7		DMG/DMY/DMC

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Dimethylamine salt of 4-Chloro-2-methylphenoxyacetic acid solution	9	CDM	
Dimethylamine salt of 2,4-dichlorophenoxyacetic acid solution	1,20	DAD	DDA/DSX
2,6-Dimethylaniline	9	DMM	
Dimethylcyclicsiloxane hydrolyzate	34		
N,N-Dimethylcyclohexylamine	7	DXM	
Dimethylethanolamine	8	DMB	
Dimethylformamide	10	DMF	
Dimethyl furan	41		
Dimethyl glutarate	34	DGT	
Dimethyl hydrogen phosphite	<sup>2</sup> 34	DPI	
Dimethyl naphthalene sulfonic acid, sodium salt solution	<sup>2</sup> 34	DNS	
Dimethyloctanoic acid	4	DMO	
Dimethyl phthalate	34	DTL	
Dimethylpolysiloxane	34	DMP	
2,2-Dimethylpropane-1,3-diol	20	DDI	
Dimethyl succinate	34	DSE	
Dinitrotoluene	42	DNM	DTT/DNL/DNU
*Dinonyl phthalate, see Dialkyl (C7-C13) phthalates	34	DIF	DAH
*Dioctyl phthalate, see Dialkyl (C7-C13) phthalates	34	DOP	DAH
1,4-Dioxane	41	DOX	
Dipentene	30	DPN	
Diphenyl	32	DIL	
Diphenylamines, alkylated	7	DAJ	
Diphenylaine, reaction product with 2,2,4-trimethylpentene	7	DAK	D.T.I.
Diphenyl, Diphenyl ether mixture	33	DDO	DTH
Diphenyl ether	41	DPE	
Diphenyl ether, Diphenyl phenyl ether mixture	41	DOB	
Diphenylmethane diisocyanate	12 <sup>1</sup> 0	DPM	
Diphenylol propane-Epichlorohydrin resins	7	DPR DNA	
Di-n-propylamine Dipropylene glycol	40	DPG	
Dipropylene glycol butyl ether, see Poly (2-8) alkylene	40	DBG	PAG
glycol monoalkyl (C1-C6) ether			1 AO
Dipropylene glycol dibenzoate	34	DGY	
Dipropylene glycol methyl ether, see Poly (2-8) alkylene glycol monoalkyl (C1-C6) ether	40	DPY	PAG
Distillates: flashed feed stocks	33	DFF	
Distillates: straight run	33	DSR	
*Ditridecyl phthalate, see Dialkyl (C7-C13) phthalates	34	DTP	DAH
*Diundecyl phthalate, see Dialkyl (C7-C13) phthalates	34	DUP	DAH
Dodecane	31	DOC	PFN
Dodecanol	20	DDN	LAL
Dodecene	30	DOZ	DDC/DOD
2-Dodecenylsuccinic acid, dipotassium salt solution	34		DSP
*Dodecyl alcohol, see Dodecanol	2	<b>5</b>	DDN
Dodecylamine, tetradecylamine mixture	<sup>2</sup> 07	DTA	ALCD
Dodecylbenzene	32	DDB	AKB
Dodecylbenzenesulfonic acid	<sup>2</sup> 0	DSA	

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Dodecyl diphenyl oxide disulfonate solution	43		
Dodecyl hydroxypropyl sulfide	<sup>2</sup> 0		
Dodecylmethacrylate	14	DDM	
	14	DDIVI	
Dodecyl, pentadecyl methacrylate mixtures  Dodecyl phenol	21	DOL	
Dodecyl xylene	32	DXY	
Drilling brine (containing Calcium, Potassium or Sodium salts)	43	DAT	DRB
Drilling brine (containing Zinc salts)	43	DZB	
Drilling mud (low toxicity) (if flammable or combustible)	33	טבט	DRM
Drilling mud (low toxicity) (if non-flammable or non-	43		DRM
combustible)	40		DINIVI
Epichlorohydrin	17	EPC	
Epoxy resin	18		
Ethane	31	ETH	
Ethanolamine	8	MEA	
*2-Ethoxyethanol, see Ethylene glycol monoalkyl ethers	40	EEO	EGC/EGE
2-Ethoxyethyl acetate	34	EEA	EGC/EGE
*Ethoxylated alcohols, C11-C15, see the alcohol	20	LLA	APU/APV/APW
	20		
polyethoxylates			(EOD/ENP/EOP/EOT
Ethovu trighyool	40	ETG	/ETD)
Ethoxy triglycol	40		
Ethyl acetate	34		
Ethyl acetoacetate	34		
Ethyl acrylate	14 <sup>2</sup> 20		
Ethyl alcohol	20 <sup>2</sup> 7		
Ethylamine Ethylamine		EAM	
Ethylamine solution	7	EAN	FLIZ
Ethyl amyl ketone	18	EAK	ELK
Ethyl benzene	32		
Ethyl butanol	20		
N-Ethyl-n-butylamine	7	EBA	
Ethyl butyrate	34	EBR	
Ethyl chloride	36	ECL	
Ethyl cyclohexane	31	ECY	
N-Ethylcyclohexylamine	7	ECC	
Ethylene Ethylene gerhanete	30 34	ETL	
Ethylene carbonate	20	ECH	
Ethylene chlorohydrin Ethylene cyanohydrin	20	ETC	
Ethylenediamine	<sup>2</sup> 0	EDA	EMX
Ethylenediaminetetracetic acid, tetrasodium salt solution	43	EDS	LIVIA
Ethylene dibromide	36	EDB	
Ethylene dichloride	<sup>2</sup> 36		
Ethylene glycol	<sup>2</sup> 20	EGL	
Ethylene glycol acetate	34	EGC	
Ethylene glycol butyl ether, see Ethylene glycol monoalkyl	40	EGM	EGC
ethers		LGIVI	
Ethylene glycol tert-butyl ether, see Ethylene glycol monoalkyl ethers	40		EGC

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Ethylene glycol butyl ether acetate	34	EMA	
Ethylene glycol diacetate	34	EGY	
Ethylene glycol dibutyl ether	40	EGB	
Ethylene glycol ethyl ether, see Ethylene glycol monoalkyl ethers	40	EGE	EGC/EEO
Ethylene glycol ethyl ether acetate, see 2-Ethoxyethyl acetate	34	EGA	EEA
Ethylene glycol hexyl ether	40	EGH	
Ethylene glycol isopropyl ether, see Ethylene glycol monoalkyl ethers	40	EGI	EGC
Ethylene glycol methyl butyl ether	40	EMB	
Ethylene glycol methyl ether, see Ethylene glycol monoalkyl ethers	40	EME	EGC
Ethylene glycol methyl ether acetate	34	EGT	
Ethylene glycol monoalkyl ethers	40	EGC	
Ethylene glycol phenyl ether	40	EPE	
Ethylene glycol phenyl ether, Diethylene glycol phenyl ether mixture	40	EDX	
Ethylene glycol propyl ether, see Ethylene glycol	40	EGP	EGC
monoalkyl ethers	<sup>1</sup> 0	FOV	
Ethylene oxide	16	EOX EPM	
Ethylene oxide, Propylene oxide mixture	30	EPIVI	
Ethylene-Propylene copolymer Ethylene, Vinyl acetate copolymer emulsion	43		
Ethyl ether	43	EET	
Ethyl-3-ethoxypropionate	34	EEP	
*Ethylhexaldehyde, see Octyl aldehydes	19	EHA	OAL
2-Ethylhexanoic acid, see Octanoic acids	4	EHO	OAY
*2-Ethylhexanol, see Octanol	20	EHX	OCX
2-Ethylhexyl acrylate	14	EAI	
2-Ethylhexylamine	7	EHM	
Ethyl hexyl phthalate	34	EHE	
*Ethyl hexyl tallate	34	EHT	
2-Ethyl-1-(hydroxymethyl)propane-1,3-diol, C8-C10 ester	34	EHD	
Ethylidene norbornene	<sup>2</sup> 30	ENB	
Ethyl methacrylate	14	ETM	
2-Ethyl-6-methyl-N(1'-methyl-2-methoxyethyl)aniline	9	EEM	
o-Ethyl phenol	21	EPL	
Ethyl propionate	34	EPR	
2-Ethyl-3-propylacrolein	<sup>2</sup> 19	EPA	
Ethyl toluene	32	ETE	
*Fatty acids (saturated, C13+)	34	FAD	SRA
Ferric chloride solution	2.5	FCS	FCL
Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution	<sup>2</sup> 43	FHX	STA
Ferric nitrate, Nitric acid solution	3	FNN	
Fish solubles (water based fish meal extracts)	43	FSO	
Fluorosilicic acid	1	FSJ	
Formaldehyde, Methanol mixtures	<sup>2</sup> 19	MTM	
Formaldehyde solution	<sup>2</sup> 19	FMS	

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Formamide	10	FAM	
Formic acid	<sup>2</sup> 4	FMA	
Fructose solution	43		
Fumaric adduct of Rosin, water dispersion	43	FAR	
Furfural	19 2	FFA	
Furfuryl alcohol	<sup>2</sup> 20	FAL	
Gas oil: cracked	33	GOC	
Gasoline blending stocks: alkylates	33	GAK	
Gasoline blending stocks: reformates	33	GRF	
Gasolines:		O 4 T	
Automotive (not over 4.23 grams lead per gal.)	33	GAT	
Aviation (not over 4.86 grams lead per gal.)	33	GAV	AVA
Casinghead (natural)	33	GCS	
Polymer	33	GPL	
Straight run	33	GSR	
Glucose solution	43	OT 4	
Glutaraldehyde solution	19	GTA	
Glycerine	<sup>2</sup> 20	GCR	
Glycerine, Dioxanedimethanol mixture	20	GDM	
Glycerol monooleate	20	GMO	
Glycerol polyalkoxylate	34		
Glyceryl triacetate	34		CLT
Glycidyl ester of C10 tridecylacetic acid, see Glycidyl ester	34		GLT
of tridecyl acetic acid	24	CLT	
Glycidyl ester of tridecylacetic acid	34	GLT	
Glycidyl ester of Versatic acid, see Glycidyl ester of	34		
tridecylacetic acid	7		
Glycine, sodium salt solution	7 34		
Glycol diacetate		GOS	
Glyoxal solutions Glyoxylic acid	19 4	GAC	
Heptane	31	HMX	HPI/HPT
n-Heptanoic acid	4	HEP	HEWHE I
Heptanol	20	HTX	HTN
Heptene	30	HPX	HTE
Heptyl acetate	34	HPE	1112
*Herbicide (C15-H22-NO2-CI), see Metolachlor	34		MCO
Hexaethylene glycol, see Polyethylene glycol	40		Wice
Hexamethylene glycol	20		
Hexamethylenediamine adipate solution	43	HAM	
Hexamethylenediamine solution	7	HMC	HMD
Hexamethylenetetramine	7	HMT	1 11/12
Hexamethylenetetramine solutions	7	HTS	
Hexamethylenimine	7	HMI	
Hexane	<sup>2</sup> 31	HXS	IHA/HXA
Hexanoic acid	4	HXO	, (1.7.0.1
Hexanol	20	HXN	
*Hexene	30	HEX	HXE/HXT/MPN/MTN
Hexyl acetate	34	HAE	HSA
Hexylene glycol	20	HXG	
, 3,	_,	-	

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Hydrochloric acid	1	HCL	
*Hydrofluorosilicic acid, see Fluorosilicic acid	1 <sup>1</sup> 0	HFS	FSJ
Hydrogen peroxide solutions	1,2 <sub>0</sub>	1141	HPN/HPS/HPO
2-Hydroxyethyl acrylate N-(Hydroxyethyl)ethylenediaminetriacetic acid, trisodium	43	HAI HET	
salt solution			
2-Hydroxy-4-(methylthio)butanoic acid	4	HBA	
Hydroxy terminated polybutadiene, see polybutadiene, hydroxyl terminated	20		
Isophorone	<sup>2</sup> 18	IPH	
Isophorone diamine	7	IPI	
Isophorone diisocyanate	12	IPD	
Isoprene	30	IPR	
Isopropylbenzene(cumene), see Propylbenzene	32	CUM	PBY/CUM
Jet Fuels:			
JP-4	33	JPF	
JP-5	33	JPV	
JP-8	33	JPE	
Kaolin clay slurry	43		
Kerosene	33	KRS	
Ketone residue	18		KDI
Kraft black liquor	05	KDI	KPL
Kraft pulping liquors (Black, Green, or White)	05 <sup>2</sup> 0	KPL LTA	
Lactic acid Lactonitrile solution	37	LNI	
Lard	34	LINI	
Latex (ammonia inhibited)	30	LTX	
Latex, liquid synthetic	43	LLS	LTX
Lauric acid	34	LRA	
Lauryl polyglucose (50% or less)	20	LAP	
Lecithin (soyabean)	34	LEC	
Lignin liquor	43		
Liquid Streptomyces solubles	43		
Long chain alkaryl polyether (C11-C20)	41	LCP	
Long chain alkaryl sulfonic acid (C16-C60)	<sup>2</sup> 0	LCS	
Long chain alkylphenate/Phenol sulfide mixture	21	LCE	
Long chain polyetheramine in alkyl (C2-C4) benzenes Magnesium chloride solution	7 1,2	LCE	
Magnesium hydroxide slurry	5		
Magnesium long chain alkaryl sulfonate (C11-C50)	34	MAS	
Magnesium long chain alkyl phenate sulfide (C8-C20)	34	MPS	
Magnesium long chain alkyl salicylate (C11+)	34	MLS	
*Magnesium nonyl phenol sulfide, see Magnesium long	-		MPS
chain alkyl phenate sulfide (C8-C20)  Magnesium sulfonate, see Magnesium long chain	34	MSE	MAS
sulfonate (C11-C50)			
Maleic anhydride	11	MLA	OMP
Mercaptobenzothiazol, sodium salt solution	05 240	MCO	SMB
Mesityl oxide	<sup>2</sup> 18	MSO	CMD
Metam sodium solution	07	MSS	SMD

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Methacrylic acid	04	MAD	
Methacrylic resin in Ethylene dichloride	14	MRD	
Methacrylonitrile	15	MET	
Methane	31	MTH	
3-Methoxy-1-butanol	20		
3-Methoxybutyl acetate	34	MOA	
N-(2-Methoxy-1-methyl ethyl)-2-ethyl-6-methyl			
chloroacetanilide, see Metolachlor			
1-Methoxy-2-propyl acetate	34	MPO	
Methoxy triglycol	40	MTG	
Methyl acetate	34	MTT	
Methyl acetoacetate	34	MAE	
Methyl acetylene, propadiene mixture	30	MAP	
Methyl acrylate	14	MAM	
Methyl alcohol	<sup>2</sup> 20	MAL	
Methylamine solution	7	MSZ	
Methyl amyl acetate	34	MAC	
*Methyl amyl alcohol	20	MAA	MIC
Methyl amyl ketone	18	MAK	
Methyl bromide	36	MTB	
Methyl butenol	20	MBL	
Methyl butyl ketone	18	MBK	
Methyl tert-butyl ether	<sup>2</sup> 41	MBE	
Methylbutynol	20	MBY	
3-Methyl butyraldehyde	19		
Methyl butyrate	34	MBU	
Methyl chloride	36	MTC	
Methylcyclohexane	31	MCY	
Methylcyclopentadiene dimer	30	MCK	MAR
Methyl diethanolamine	8	MDE	MAB
2-Methyl-6-ethyl aniline	210	MEN	
Methyl ethyl ketone	<sup>2</sup> 18	MEK	
2-Methyl-5-ethylpyridine	9	MEP	
Methyl formate	34	MFM	
N-Methylglucamine solution	43	MGC	
N-Methylglucamine solution (70% or less)	43	MGC	
Methyl heptyl ketone	18	MHK	
2-Methyl-2-hydroxy-3-butyne	20	MHB	NAALC
Methyl isoamyl ketone	18	MIC	MAK
Methyl isobutyl carbinol, see Methyl amyl alcohol	20 240	MIC	MAA
Methyl isobutyl ketone	<sup>2</sup> 18	MIK	
Methyl methacrylate	14	MMM	
3-Methyl-3-methoxybutanol	20		
3-Methyl-3-methoxybutyl acetate	34	NANIA	
Methyl naphthalene	32	MNA	
Methylolureas	19	MUS	ILIΛ
2-Methyl 1 pentage and Havens	31	MDM	IHA
2-Methyl-1-pentene, see Hexene	30	MPN	HEX
*4-Methyl-1-pentene, see Hexene	30	MTN	HEX
Methyl propyl ketone	18	MKE	

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Methylpyridine	9		MPR/MPE/MPF
N-Methyl-2-pyrrolidone	<sup>2</sup> 9	MPY	
Methyl Salicylate	34	MES	
alpha-Methylstyrene	30	MSR	
Metolachlor	34	MCO	
Milk	43		
Mineral spirits	33	MNS	
Molasses	20		
Molasses residue	0		
Monochlorodifluoromethane	36	MCF	
Morpholine	<sup>2</sup> 7	MPL	
Motor fuel anti-knock compounds containing lead alkyls	<sup>1</sup> 0	MFA	
Myrcene	30	MRE	
Naphtha:			
Aromatic	33		
Coal tar solvent	33	NCT	
Cracking fraction	<sup>2</sup> 33		
Heavy	33		
Paraffinic	33		
Petroleum	33	PTN	
Solvent	33	NSV	
Stoddard Solvent	33	NSS	
Varnish Makers' and Painters'	33	NVM	
Naphthalene	32	NTM	
Naphthalene sulfonic acid-formaldehyde copolymer, sodium salt solution	0	NFS	
Naphthalene sulfonic acid, sodium salt solution	34	NSA	
Naphthenic acids	4	NTI	
Naphthenic acid, sodium salt solution	43	NTS	
Neodecanoic acid	.4	NEA	
Nitrating acid	<sup>1</sup> 0	NIA	
Nitric acid (70% or less)	<sub>.</sub> 3	NCD	
Nitric acid (Greater than 70%)	<sup>1</sup> 0		NAC
Nitrobenzene	42	NTB	
o-Nitrochlorobenzene, see Chloronitrobenzene	42		CNO/CNP
Nitroethane	42	NTE	
o-Nitrophenol	1,20	NTP	NIP/NPH
Nitropropane	42	NPM	NPN/NPP
Nitropropane, Nitroethane mixture	42		NNM/NNL
Nitrotoluene	42	NIT	NIE/NTT/NTR
Nonane	31	NAX	NAN
Nonanoic acid	4	NNA	NAI/NIN
Nonanoic, Tridecanoic acid mixture	4	NAT	NIONI/NINIE
*Nonene	30	NOO	NON/NNE
Nonyl acetate	34	NAE	NINII/NININI/DDC
*Nonyl alcohol	<sup>2</sup> 20	NNS	NNI/NNN/DBC
Nonyl methacrylate	14	NMA	
Nonylphenol	21	NNP	NDE
Nonyl phenol (ethoxylated)	40	NDE	NPE
Nonyl phenol poly(4-12)ethoxylates	40	NPE	

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
*Nonyl phenol sulfide solution, see Alkyl phenol sulfide (C8-C40)		-	AKS/NPS
Noxious Liquid Substance, n.o.s. (NLS's) 1-Octadecene Octadecenoamide Octane *Octanoic acid Octanol Octene n-Octyl acetate *Octyl alcohol, see (Octanol) *Octyl aldehyde Octyl decyl adipate Octyl nitrate, see Alkyl (C7-C9) nitrates Octyl phenol Octyl phthalate, see Dialkyl (C7-C13) phthalates	0 30 10 31 4 <sup>2</sup> 20 30 34 <sup>2</sup> 20 19 34 <sup>2</sup> 34 21 34	ODD OAX OAY OCX OTX OAF OCX OAL ODA ONE	IOO/OAN OAA/EHO IOA/OTA/EHX OTE OAE IOA/OTA IOC/OLX/EHA AKN DAH
Oil, edible: Beechnut *Castor Cocoa butter Coconut Cod liver *Corn *Cottonseed *Fish Groundnut Hazelnut *Lard Maize Nutmeg butter *Olive *Palm *Palm kernel *Peanut Poppy Poppy seed Raisin seed *Rice bran *Safflower Salad Sesame *Soya bean *Sunflower seed *Tucum *Vegetable Walnut Oil, fuel:	34 34 34 34 34 34 34 34 34 34 34 34 34 3	OBN OCA OCB OCC OCC OCC OCS OFS OGN OHN OLD ONB OPN OPN OPY ORA ORP ORB OSF OSL OSS OSN OTC OVG OWN	VEO VEO VEO VEO AFN VEO VEO AFN VEO VEO AFN VEO/OCO VEO VEO VEO VEO VEO VEO VEO VEO VEO VE
No. 1 No. 1-D	33 33	OON OOD	

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
No. 2	33	OTW	
No. 2-D	33	OTD	
No. 4	33	OFR	
No. 5	33	OFV	
No. 6	33	OSX	
Oil, misc:			
Aliphatic	33	0144	A = 1.
Animal	34	OMA	AFN
Aromatic	33	005	
Clarified	33 33	OCF	
Coopyrt oil fatty coid mathyl actor		ОСМ	
Coconut oil, fatty acid methyl ester Cotton seed oil, fatty acid	34 34	CFY	
Crude	33	OIL	
Diesel	33	ODS	
Gas, high pour	33	ODS	
Gas, low pour	33		
Gas, low sulfur	33		
Heartcut distillate	33		
Lanolin	34	OLL	AFN
Linseed	33	OLS	,
Lubricating	33	OLB	
Mineral	33	OMN	
Mineral seal	33	OMS	
Motor	33	OMT	
*Neatsfoot	33	ONF	AFN
Oiticica	34	OOI	
Palm oil, fatty acid methyl ester	34	OPE	
Penetrating	33	OPT	
Perilla	34	OPR	
Pilchard	34	OPL	AFN
Pine	33	OPI	
Residual	33		
Road	33	ORD	
Rosin	33	ORN	
Seal	34	OIC	
Soapstock	34	OIS	EV/O
*Soybean (epoxidized)	34	OCD	EVO AFN
*Sperm	33 33	OSP OSD	AFN
Spindle Tall	34	OSD	
Tall, fatty acid	<sup>2</sup> 34	TOF	
Transformer	33	OTF	
Tung	34	OTG	
Turbine	33	OTB	
Wood	34	OID	
Olefin/Alkyl ester copolymer (molecular weight 2000+)	34	OCP	
Olefin mixtures	30	<b>.</b> .	OFX/OFY
alpha-Olefins (C6 - C18) mixtures	30	OAM	
Olefins (C13+)	30		

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Oleic acid	04	OLA	
Oleum	<sup>1,2</sup> 0	OLM	
Oleylamine	10	OLY	
Oxyalkylated alkyl phenol formaldehyde	33		
Palm kernel acid oil	34	PNO	
Palm kernel dacid oil, methyl ester	34	PNF	
*Palm kernel oil, fatty acid, see Palm kernel acid oil			
*Palm kernel oil, fatty acid methyl ester, see Palm kernel			
acid oil, methyl ester	2.4	DMC	
Palm stearin	34 31	PMS PFN	
n-Paraffins (C10 - C20), see n-Alkanes (C10+) Paraldehyde	19	PDH	
Pentachloroethane	36	PCE	
Pentadecanol, see alcohols (C13+)	20	PDC	ALY
1,3-Pentadiene	30	PDE	PDN
Pentaethylenehexamine	7	PEN	1 514
Pentaethylenehexamine, Tetraethylenepentamine mixture	7	PEP	
Pentane	31	PTY	IPT/PTA
Pentanoic acid	4	POC	,
Pentene	30	PTX	PTE
Pentene, Miscellaneous hydrocarbon mixture	<sup>2</sup> 30		
Pentyl aldehyde	19		
n-Pentyl propionate	34	PPE	
Perchloroethylene	36	PER	
Petrolatum	33	PTL	
Phenol	21	PHN	
1-Phenyl-1-xylyl ethane	32	PXE	
Phosphoric acid	1	PAC	
Phosphorus  Physical Land Construction  Physical Land Cons	<sup>1</sup> 0	DANI	PPW/PPR/PPB
Phthalic anhydride (molten)	11 <sup>2</sup> 0	PAN	
Phthalate based polyester polyol	_	PBE PIO	
alpha-Pinene beta-Pinene	30 30	PID	
*Pinene	30	PIN	PIO/PIP
*Pine oil	33	PNL	OPI
Polyalkyl (C18 - C22) acrylate in Xylene	14	PIX	<b>.</b> .
Polyalkylene glycol butyl ether, see Poly(2-8) alkylene	40		PAG
glycol monoalkyl (C1-C6) ether			
Poly(2-8) alkylene glycol monoalkyl (C1-C6) ether	40	PAG	
Poly(2-8) alkylene glycol monoalkyl (C1-C6) ether acetate	34	PAF	
Polyalkylene glycols, polyalkylene glycol monoalkyl ethers mixtures	40	PPX	
Polyalkylene oxide polyol	20	PAO	
Polyalkyl methacrylate (C1-C20)	14	PMT	
Polyaluminum chloride solution	1		
Polybutadiene, hydroxyl terminated	20		
Polybutene	30	PLB	
Polybutenyl succinimide	10	PBS	
Poly(2+)cyclic aromatics	32	PCA	
Polydimethylsiloxane	34		

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Polyether (molecular weight 2000+) Polyethylene glycol	41 40	PYR	
Polyethylene glycol dimethyl ether	40		
Polyethylene glycol monoalkyl ether, see Poly(2-8) alkylene glycol monoalkyl (C1-C6) ether	40	PEE	PAG
Polyethylene polyamines	<sup>2</sup> 7	PEB	
Polyferric sulfate solution	34	PSS	
Polyglycerine, Sodium salts solution (containing less than 3% Sodium hydroxide)	<sup>2</sup> 20	PGT	
Polyglycerol	20		GCR
Poly(4+)isobutylene	30		
Polymethylene polyphenyl isocyanate	12	PPI	
Polymethylsiloxane	34		
Polyolefin (molecular weight 300+)	30		
Polyolefin amide alkeneamine (C28+)	7	POD	
Polyolefin amide alkeneamine borate (C28-C250)	34	PAB	
Polyolefin amide alkeneamine/Molybdenum oxysulfide mixture	7		
Polyolefin amide alkeneamine polyol	7	PAP	
Polyolefinamine in alkyl(C2-C4)benzenes	7	POF	
Polyolefin anhydride	11	PAR	
Polyolefin ester (C28-C250)	34	POS	
Polyolefin phenolic amine (C28-C250)	7	PPH	
Polyolefin phosphorosulfide, barium derivative (C28-C250)	34	PPS	
Poly(20)oxyethylene sorbitan monooleate	34	PSM	
Polypropylene	30	PLP	
Poly(5+)propylene	30	PLQ	
Polypropylene glycol	40	PGC	
Polypropylene glycol methyl ether	40	PGM	
*Polysiloxane	34		DMP
Potassium chloride solution	43	PCS	(DRB)
Potassium hydroxide solution	<sup>2</sup> 5		CPS
Potassium oleate	34	POE	
Potassium polysulfide, Potassium thiosulfide solution (41% or less)	0	PTG	
Potassium thiosulfate solution	43	PTF	
Propane	31	PRP	
Propanil, Mesityl oxide, Isophorone mixture	7	PMI	
Propanolamine	8	PAX	MPA/PLA
Propionaldehyde	19	PAD	
Propionic acid	4	PNA	
Propionic anhydride	11	PAH	
Propionitrile	37	PCN	
n-Propoxypropanol, see Propylene glycol monoalkyl ether	40	PXP	PGE
Propyl acetate	34		IAC/PAT
Propyl alcohol	<sup>2</sup> 20		IPA/PAL
Propyl amine	7		IPO/IPP/PRA
Propylbenzene	32	PBY	PBZ/CUM
n-Propyl chloride	36	PRC	
iso-Propylcyclohexane	31	IPX	

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Propylene	30	PPL	
Propylene butylene polymer	30	PBP	
Propylene carbonate	34		
Propylene dimer	30	PDR	
Propylene glycol	<sup>2</sup> 20	PPG	
Propylene glycol n-butyl ether, see Propylene glycol monoalkyl ether	40	PGD	PGE
Propylene glycol ethyl ether, see Propylene glycol monoalkyl ether	40	PGY	PGE
Propylene glycol methyl ether, see Propylene glycol monoalkyl ether	40	PME	PGE
Propylene glycol methyl ether acetate	34	PGN	
Propylene glycol monoalkyl ether	40	PGE	PME/PGY
Propylene glycol propyl phenyl ether	40	PGP	
Propylene glycol propyl ether, see Propylene glycol monoalkyl ether	40		PGE
Propylene oxide	16	POX	
Propylene tetramer	30	PTT	
Propylene trimer	30	PTR	
Propyl ether	41		IPE/PRE
*Pseudocumene, see Trimethylbenzene	32	DDD	TME/TRE
Pyridine  Dividing house	9	PRD	
Pyridine bases	9	PRB ORN	
Rosin oil Rosin soon (dispreparticipated) solution	33 43	RSP	
Rosin soap (disproportionated) solution *Rum, see Alcoholic beverages	20	NOF	
Sewage sludge	43		
Silica slurry	43		
Sludge, treated	43		
Sodium acetate, Glycol, Water mixture (not containing	<sup>2</sup> 34	SAO	SAP
Sodium hydroxide)		0, 10	
Sodium acetate, Glycol, Water mixture (containing Sodium hydroxide)	5	SAP	SAO
Sodium acetate solution	34	SAN	
Sodium alkyl sulfonate solution	43	SSU	
Sodium aluminate solution	5	SAU	
Sodium aluminosillicate slurry	34		
Sodium benzoate solution	34	SBN	07.1/07.
Sodium borohydride, sodium hydroxide solution	5	SBX	SBH/SBI
Sodium carbonate solutions	120	SCE	000
Sodium chlorate solution	<sup>1,2</sup> 0	SDD	SDC
Sodium cyanide solution	5 1,2	SCS	SCN
Sodium dimethyl popultion	<sup>2</sup> 34	SDL	SCR DNS
Sodium dimethyl naphthalene sulfonate solution	<sup>2</sup> 0	SSS	DNS
Sodium hydrogen sulfide, Sodium carbonate solution Sodium hydrogen sulfite solution	43	SHX	
Sodium hydrosulfide solution	<sup>2</sup> 5	SHR	
Sodium hydrosulfide, Ammonium sulfide solution	<sup>2</sup> 5	SSA	
Sodium hydroxide solution	<sup>2</sup> 5	00/1	CSS
Sodium hypochlorite solution	5	SHP	SHC

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Sodium long chain alkyl salicylate (C13+)	34		
Sodium 2-mercaptobenzothiazol solution	5	SMB	
Sodium naphthalene sulfonate solution	34	SNS	
Sodium naphthenate solution, see Naphthenic acid, sodium salt solution	5		
Sodium nitrite solution	5	SNI	SNT
Sodium petroleum sulfonate	_33	SPS	
Sodium polyacrylate solution	<sup>2</sup> 43		
Sodium salt of Ferric hydroxyethylethylenediamine	43	STA	FHX
triacetic acid solution	2		
Sodium silicate solution	<sup>2</sup> 43	SSN	SSC
Sodium sulfide, hydrosulfide solution	<sup>1,2</sup> 0	000	SSH/SSI/SSJ
Sodium sulfide solution	43	SDR	CLIC
Sodium sulfite solution	43	SUP	SUS
Sodium tartrates, Sodium succinates solution	43 1,2	STM STS	SCY
Sodium thiocyanate solution Sorbitol solutions	20	313	SBT
Soyabean oil (epoxidized)	34		OSC/EVO
Stearic acid, see Fatty acids (saturated, C13+)	34	SRA	FAD
Stearyl alcohol	20	Ortiv	1710
Styrene	30	STY	STX
Sulfolane	39	SFL	
Sulfohydrocarbon (C3-C88)	33	SFO	
Sulfohydrocarbon, long chain (C18+) alkylamine mixture	7	SFX	
Sulfonated polyacrylate solutions	<sup>2</sup> 43		
Sulfur	10	SXX	
Sulfuric acid	<sup>2</sup> 2	SFA	
Sulfuric acid, spent	2	SAC	
Tall oil	34	OTL	
Tall oil fatty acid, barium salt	<sup>2</sup> 0	TOB	
Tall oil soap (disproportionated) solution	43 <sup>2</sup> 34	TOS TLO	
Tallow Tallow fatty acid	<sup>2</sup> 34	TFD	
Tallow fatty alcohol, see Alcohols (C13+)	20	TFA	ALY
Tallow nitrile	37	TAN	7121
1,1,2,2-Tetrachloroethane	36	TEC	
*Tetradecanol, see Alcohols (C13+)	20		ALY
*Tetradecene, see the olefins entries	30	TTD	
Tetradecylbenzene	32	TDB	AKB
Tetraethylene glycol	40	TTG	
Tetraethylenepentamine	7	TTP	
Tetrahydrofuran	41	THF	
Tetrahydronaphthalene	32	THN	
*1,2,3,5-Tetramethylbenzene, see Tetramethylbenzene	32	TTB	TTC
Tetramethylbenzene	32	TTC	TTB
Tetrapropylbenzene, see Alkyl(C9+)benzenes Tetrasodium salt of EDTA solution	32 43		AKB EDS
Titanium tetrachloride	43	ттт	EDO
Toluene	32	TTT TOL	
Toluenediamine	9	TDA	
1 organical artiflic	9	IDA	

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
Toluene diisocyanate	12	TDI	
o-Toluidine	9	TLI	
*Triarylphosphate, see Triisopropylated phenyl phosphates	34		TPL
Tributyl phosphate	34	TBP	
1,2,4-Trichlorobenzene	<sub>2</sub> 36	TCB	
1,1,1-Trichloroethane	<sup>2</sup> 36	TCE	
1,1,2-Trichloroethane	<sub>2</sub> 36	TCM	
Trichloroethylene	<sup>2</sup> 36	TCL	
1,2,3-Trichloropropane	36	TCN	
1,1,2-trichloro-1,2,2-trifluoroethane	36	TTF	T00/T0D
Tricresyl phosphate	34	TDD	TCO/TCP
*Tridecane, see n-Alkanes (C10+)	31	TRD	
Tridecanoic acid	34	TDN	
*Tridecanol, see Alcohols (C13+)	20	TDN	ALY
*Tridecene, see Olefins (C13+)	30 34	TDC	
Tridecyl acetate	32	TAE TRB	AKB
Tridecylbenzene Triethanolamine	<sup>2</sup> 8	TEA	AND
Triethylamine Triethylamine	7	TEN	
Triethylbenzene	32	TEB	
Triethylene glycol	40	TEG	
Triethylene glycol butyl ether, see Poly(2-8) alkylene	40	120	PAG
glycol monoalkyl (C1-C6) ether			1710
Triethylene glycol butyl ether mixture	40	TOD	
Triethylene glycol di-(2-ethylbutyrate)	34	TGD	
Triethylene glycol ether mixture	40	тог	DAC
Triethylene glycol ethyl ether, see Poly(2-8) alkylene glycol monoalkyl (C1-C6) ether	40	TGE	PAG
Triethylene glycol methyl ether, see Poly(2-8) alkylene glycol monoalkyl (C1-C6) ether	40	TGY	PAG
Triethylenetetramine	<sup>2</sup> 7	TET	
Triethyl phosphate	234	TPS	
Triethyl phosphite	<sup>2</sup> 34	TPI	
Trifluralin in Xylene	18	TFX	
Triisobutylene	30	TIB	
Triisooctyl trimellitate	34	TID	
Triisopropanolamine	8	TIP	
Triisopropanolamine salt of 2,4-Dichlorophenoxyacetic acid solution	43		
Triisopropylated phenyl phosphates	34	TPL	
Trimethylacetic acid	4	TAA	
Trimethylamine solution	7	TMT	T145 (T145 (T145
Trimethylbenzene	32	TRE	TME/TMB/TMD
Trimethylhexamethylenediamine (2,2,4- and 2,4,4-)	7	THA	
Trimethylhexamethylene diisocyanate (2,2,4- and 2,4,4-)	12	THI	
Trimethylol propane polyethoxylate	20	TPR	
2,2,4-Trimethyl pentanediol-1,3-diisobutyrate, see 2,2,4- Trimethyl-1,3-pentanediol diisobutyrate			
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	34	TMQ	
=,=, . Timodiyi 1,0 pointahodiol alloobatylato	5-4	1 1VI 🔾	

Chemical Name	Group No.	CHRIS Code	Related CHRIS codes
2,2,4-Trimethyl-1,3-pentanediol-1-isobutyrate	34	TMP	
2,2,4-Trimethyl-3-pentanol-1-isobutyrate	34		
Trimethyl phosphite	<sup>2</sup> 34	TPP	
1,3,5-Trioxane	<sup>2</sup> 41	TRO	
Triphenylborane, Caustic soda solution	5	TPB	
*Tripropylene, see Propylene trimer	30		PTR
Tripropylene glycol	40	TGC	
*Tripropylene glycol methyl ether, see Poly (2-8) alkylene	40	TGM	PAG
glycol monoalkyl (C1-C6) ether			
Trisodium nitrilotriacetate	34		
Trisodium phosphate solution	5	TSP	
Trisylyl Phosphate, see Trixylenyl phosphate	34		TRP
Trixylenyl phosphate	34	TRP	
Turpentine	30	TPT	
Undecanoic acid	4	UDA	
Undecanol, see Undecyl alcohol	20		UND
Undecene	30	UDC	
Undecyl alcohol	20	UND	ALCE
Undecylbenzene	32	UDB	AKB
Urea, Ammonium mono- and di-hydrogen phosphate,	0	UPX	
Potassium chloride solution	6	LIAC	
Urea, Ammonium nitrate solution (containing Ammonia)	6	UAS	ANILI
Urea, Ammonium nitrate solution (not containing	43	UAT	ANU
Ammonia) Urea, Ammonium phosphate solution	43	UAP	
Urea solution	43	UAI	URE
Valeraldehyde	19	VAK	IVA/VAL
Vanillin black liquor	5	VBL	IVAVAL
Vegetable acid oils and distillates, n.o.s.	34	VAO	
Vegetable oils, n.o.s.	34	VEO	
Vegetable protein solution	43	•	
Vinyl acetate	13	VAM	
Vinyl chloride	35	VCM	
Vinyl ethyl ether	13	VEE	
Vinylidene chloride	35	VCI	
Vinyl neodecanoate	13	VND	
Vinyltoluene	13	VNT	
Water	43		
Waxes:		WAX	
Candelilla	34	WDC	
Carnauba	34	WCA	
Paraffin	31	WPF	
Petroleum	33		
White Spirit (low(15-20%) aromatic)	33	WSL	WSP
Xylene	32	XLX	XLM/XLO/XLP
Xylenols	21	XYL	
Zinc alkaryl dithiophosphate (C7-C16)	34	ZAD	
Zinc alkenyl carboxamide	10	ZAA	
Zinc alkyl dithiophosphate (C3-C14)	34	ZAP	D7D
Zinc bromide, Calcium bromide solution see Drilling brine	43		DZB

**Chemical Name** 

Group CHRIS Related CHRIS codes No. Code

(containing Zinc salts

### FOOTNOTES TO TABLE

Items with an asterisk (\*) are changes per CGD 92-100.

<sup>&</sup>lt;sup>1</sup> Because of very high reactivity or unusual conditions of carriage or potential compatibility problems, this product is not assigned to a specific group in the Compatibility Chart. For additional compatibility information, contact Commandant (G-MSO), U.S. Coast Guard, 2100 Second Street, SW., Washington, DC 20593-0001. Telephone (202) 267-1577.

<sup>&</sup>lt;sup>2</sup> See Table 7.3 - Exceptions to the Chart.

#### **TABLE 7.2**

#### REACTIVITY GROUPS

### **0. UNASSIGNED CARGOES**

Acetone cyanohydrin<sup>1,2</sup> Alkylbenzenesulfonic acid<sup>1,2</sup>

Aluminum chloride, Hydrochloric acid solution Ammonium hydrogen phosphate solution<sup>1</sup>

Ammonium nitrate solution

Ammonium thiocyanate, Ammonium thiosulfate solution<sup>1</sup>

Benzenesulfonyl chloride<sup>1,2</sup> gamma-Butyrolactone<sup>1,2</sup>

Chlorine<sup>1</sup>

Chlorosulfonic acid1

Decyloxytetrahydro-thiophene dioxide<sup>2</sup>

2,4-Dichlorophenoxyacetic acid, Dimethylamine salt solution<sup>1,2</sup>

Dimethylamine salt of 2,4-dichlorophenoxyacetic acid solution<sup>1,2</sup>

Diphenylol propane-Epichlorohydrin resins<sup>1</sup>

Dodecylbenzenesulfonic acid<sup>1,2</sup> Dodecylhydroxypropyl sulfide<sup>2</sup>

Ethylene oxide<sup>1</sup> Fluorosilicic acid

2-Hydroxyethyl acrylate<sup>1,2</sup>

Lactic acid<sup>2</sup>

Long chain alkaryl sulfonic acid (C16-C60)<sup>2</sup>

Magnesium chloride solution<sup>1,2</sup>

Molasses residue<sup>1</sup>

Motor fuel anti-knock compounds containing lead alkvls<sup>1</sup>

Naphthalene sulfonic acid-formaldehyde copolymer, sodium salt solution<sup>1</sup>

Nitrating acid1

Nitric acid (Greater than 70%)1

o-Nitrophenol<sup>1,2</sup>

Noxious Liquid Substance, n.o.s. (NLS's)<sup>1</sup>

Oleum<sup>1,2</sup> Phosphorus<sup>1</sup>

Phthalate based polyester polyol<sup>2</sup>

Potassium polysulfide, potassium thiosulfide

solution (41% or less) Sodium chlorate solution<sup>1,2</sup> Sodium dichromate solution<sup>1,2</sup>

Sodium hydrogen sulfide, Sodium carbonate solution<sup>1,2</sup>

Sodium sulfide, hydrosulfide solution<sup>1,2</sup>

Sodium thiocyanate solution<sup>1,2</sup>

Sulfur<sup>1</sup>

Tall oil fatty acid, barium salt<sup>2</sup>

Urea, Ammonium mono- and di-hydrogen phosphate, Potassium chloride solution

#### 1. NON-OXIDIZING MINERAL ACIDS

Di-(2-ethylhexyl)phosphoric acid

Ferric chloride solution

Fluorosilicic acid

Hydrochloric acid

Phosphoric acid

Polyaluminum chloride solution

#### 2. SULFURIC ACIDS

Sulfuric acid<sup>2</sup>
Sulfuric acid, spent

Titanium tetrachloride

#### 3. NITRIC ACID

Ferric nitrate, Nitric acid solution Nitric acid (70% or less)

#### 4. ORGANIC ACIDS

Acetic acid<sup>2</sup>

Acrylic acid<sup>2</sup>

Butyric acid

Cashew nut shell oil (untreated)

Chloroacetic acid solution

Chloropropionic acid

Citric acid

Decanoic acid

2,2-Dichloroproprionic acid

2.2-Dimethyloctanoic acid

2-Ethylhexanoic acid

Formic acid<sup>2</sup>

Glvoxvlic acid

n-Heptanoic acid

Hexanoic acid

2-Hydroxy-4-(methylthio)butanoic acid

Methacrylic acid

Naphthenic acids

Neodecanoic acid

Nonanoic acid

Nonanoic, tridecanoic acid mixture

Octanoic acid

Pentanoic acid

Propionic acid

Trimethylacetic acid Undecanoic acid

### 5. CAUSTICS

Ammonium sulfide solution

Calcium hypochlorite solutions

Caustic potash solution<sup>2</sup>

Caustic soda solution<sup>2</sup>

Cresylate spent caustic

Cresylic acid, sodium salt solution

Kraft black liquor

Kraft pulping liquors

Mercaptobenzothiazol, sodium salt solution

Potassium hydroxide solution<sup>2</sup>

Sodium acetate, glycol, water mixture

(containing sodium hydroxide)
Sodium aluminate solution

Sodium borohydride, sodium hydroxide solution

Sodium carbonate solutions

Sodium cyanide solution

Sodium hydrosulfide solution<sup>2</sup>

Sodium hydrosulfide, Ammonium sulfide solution<sup>2</sup>

Sodium hydroxide solution<sup>2</sup>

Sodium hypochlorite solution

Sodium 2-mercaptobenzothiazol solution

Sodium naphthenate solution

Sodium nitrite solution

Triphenylborane, caustic soda solution

Trisodium phosphate solution

Vanillin black liquor

### 6. AMMONIA

Ammonia, anhydrous

Ammonia, aqueous

Ammonium hydroxide (28% or less ammonia)

Ammonium nitrate-urea solution (containing ammonia)

Urea, Ammonium nitrate solution (containing Ammonia)

### 7. ALIPHATIC AMINES

N-Aminoethyl piperazine

Butylamine

Calcium long chain alkyl phenolic amine (C8-C40)

Cyclohexylamine

Dibutyl amine

Diethylamine<sup>2</sup>

Diethylenetriamine

Diisobutylamine

Diisopropylamine

Dimethylamine

Dimethylamine solution

N,N-Dimethylcyclohexylamine

Di-n-propylamine

Diphenylamine, reaction product with 2,2,4-

trimethylpentene

Diphenylamines, alkylated

Dodecylamine, tetradecylamine mixture<sup>2</sup>

 $Dodecylmethylamine, \, tetra decyldimethylamine \,$ 

mixture

Ethylamine<sup>2</sup>

Ethylamine solution

N-Ethyl-n-butylamine

N-Ethylcyclohexylamine

Ethylenediamine<sup>2</sup>

2-Ethylhexylamine

Hexamethylenediamine solution

Hexamethylenetetramine

Hexamethylenetetramine solutions

Hexamethylenimine

Isophorone diamine

Long chain polyetheramine in alkyl (C2-C4)

benzenes

Metam sodium solution

Methylamine solution

Morpholine<sup>2</sup>

Pentaethylenehexamine

Pentaethylenehexamine,

Tetraethylenepentamine mixture

Polyalkyl methacrylate (C1-C20)

Polyolefin amide alkeneamine (C28+)

Polyolefin amide alkeneamine/Molybdenum

oxysulfide mixture

Polyethylene polyamines<sup>2</sup>

Polyolefin amide alkeneamine polyol

Polyolefinamine in alkyl (C2-C4) benzenes

Polyolefin phenolic amine (C28-C250)

Propanil, mesityl oxide, isophorone mixture

Propyl amine

Sulfohydrocarbon, long chain (C18+) alkylamine

mixture

Tetraethylenepentamine

Triethylamine

Triethylenetetramine<sup>2</sup>

Trimethylamine solution

Trimethylhexamethylenediamine (2,2,4- and

2,4,4-)

### 8. ALKANOLAMINES

2-(2-Aminoethoxy)ethanol

Aminoethyldiethanolamine,

Aminoethylethanolamine solution

Aminoethylethanolamine

2-Amino-2-methyl-1-propanol

Diethanolamine

Diethylaminoethanol

Diethylethanolamine
Diisopropanolamine
Dimethylethanolamine
Ethanolamine
Propanolamine
Triethanolamine<sup>2</sup>
Triisopropanolamine

#### 9. AROMATIC AMINES

Aniline

4-Chloro-2-methylphenoxyacetic acid, Dimethylamine salt solution

2,6-Diethylaniline

Dimethylamine salt of 4-Chloro-2methylphenoxyacetic acid solution

2,6-Dimethylaniline

2-Ethyl-6-methyl-N-(1'-methyl-2-methoxyethyl)aniline

2-Methyl-6-ethyl aniline

2-Methyl-5-ethyl pyridine

Methylpyridine 3-Methylpyridine N-Methyl pyrrolidone Pyridine

Pyridine bases Toluenediamine

p-Toluidine

### 10. AMIDES

Acrylamide solution Alkenyl (C11+) amide N,N-Dimethylacetamide N,N-Dimethylacetamide solution Dimethylformamide Formamide Octadecenoamide

#### 11. ORGANIC ANHYDRIDES

Acetic anhydride
Alkenylsuccinic anhydride
Maleic anhydride
Phthalic anhydride
Polyolefin anhydride
Propionic anhydride

#### 12. ISOCYANATES

Diphenylmethane diisocyanate Isophorone diisocyanate Polymethylene polyphenyl isocyanate Toluene diisocyanate Trimethylhexamethylene diisocyanate (2,2,4-and 2,4,4-)

### 13. VINYL ACETATE

Vinyl acetate
Vinyl ethyl ether
Vinyl neodecanoate
Vinyl toluene

#### 14. ACRYLATES

Butyl acrylate Butyl methacrylate Butyl methacrylate, decyl methacrylate, cetyl eicosyl methacrylate mixture Cetyl eicosyl methacrylate mixture Decyl acrylate Dodecylmethacrylate Dodecyl, pentadecyl methacrylate mixture Ethyl acrylate 2-Ethylhexyl acrylate Ethyl methacrylate Methacrylic resin in ethylene dichloride Methyl acrylate Methyl methacrylate NonvI methacrvlate Polyalkyl (C18 - C22) acrylate in Xylene Polyalkyl methacrylate (C1-C20)

### 15. SUBSTITUTED ALLYLS

Acrylonitrile<sup>2</sup>
Allyl alcohol<sup>2</sup>
Allyl chloride
1,3-Dichloropropene
Dichloropropene, dichloropropane mixture
Methacrylonitrile

#### 16. ALKYLENE OXIDES

Butylene oxide Ethylene oxide, Propylene oxide mixture Propylene oxide

### 17. EPICHLOROHYDRIN

Chlorohydrins Epichlorohydrin

#### 18. KETONES

Acetone<sup>2</sup>
Acetophenone
Amyl methyl ketone
Butyl heptyl ketone
Camphor oil
Cyclohexanone

Cyclohexanone, cyclohexanol mixture<sup>2</sup>

Diisobutyl ketone
Epoxy resin
Ethyl amyl ketone
Isophorone<sup>2</sup>
Ketone residue
Mesityl oxide<sup>2</sup>
Methyl amyl ketone
Methyl butyl ketone
Methyl diethenaolamine
Methyl ethyl ketone<sup>2</sup>
Methyl heptyl ketone
Methyl isoamyl ketone
Methyl isobutyl ketone
Methyl isobutyl ketone<sup>2</sup>
Methyl propyl ketone

#### 19. ALDEHYDES

Trifluralin in xylene

Acetaldehyde
Acrolein<sup>2</sup>
Butyraldehyde
Crotonaldehyde<sup>2</sup>
Decaldehyde
Ethylhexaldehyde
2-Ethyl-3-propylacrolein<sup>2</sup>
Formaldehyde solution<sup>2</sup>

Formaldehyde, Methanol mixtures<sup>2</sup>

**Furfural** 

Glutaraldehyde solution Glyoxal solutions 3-Methyl butyraldehyde

Methylolureas Octyl aldehyde Paraldehyde Pentyl aldehyde Propionaldehyde Valeraldehyde

#### 20. ALCOHOLS, GLYCOLS

Acrylonitrile-Styrene copolymer dispersion in

Polyether polyol Alcoholic beverages Alcohol polyethoxylates

Alcohol polyethoxylates, secondary

Alcohols (C13 and above)

Amyl alcohol Behenyl alcohol

Brake fluid base mixtures

Butyl alcohol<sup>2</sup>
Butylene glycol<sup>2</sup>
Cetyl-stearyl alcohol
Choline chloride solutions

Cyclohexanol Decyl alcohol<sup>2</sup> Diacetone alcohol<sup>2</sup> Diisobutylcarbinol

2,2-Dimethylpropane-1,3-diol

Dodecanol Dodecyl alcohol

Ethoxylated alcohols, C11-C15

2-Ethoxyethanol Ethyl alcohol<sup>2</sup> Ethyl butanol

Ethylene chlorohydrin Ethylene cyanohydrin Ethylene glycol<sup>2</sup> 2-Ethylhexanol Furfuryl alcohol<sup>2</sup> Glycerine<sup>2</sup>

Glycerine, dioxanedimethanol mixture

Glycerol monooleate

Heptanol

Hexamethylene glycol

Hexanol Hexylene glycol

Hydroxy terminated polybutadiene Lauryl polyglucose (50% or less)

3-Methoxy-1-butanol Methyl alcohol<sup>2</sup> Methyl amyl alcohol Methyl butenol Methylbutynol

2-Methyl-2-hydroxy-3-butyne Methyl isobutyl carbinol 3-Methyl-3-methoxybutanol

Molasses Nonyl alcohol<sup>2</sup> Octanol<sup>2</sup> Octyl alcohol<sup>2</sup> Pentadecanol

Polyalkylene oxide polyol

Polybutadiene, hydroxyl terminated

Polyglycerol

Polyglycerine, sodium salts solution (containing

less than 3% sodium hydroxide)2

Propyl alcohol<sup>2</sup> Propylene glycol<sup>2</sup> Rum

Sorbitol solutions Stearyl alcohol Tallow fatty alcohol Tetradecanol Tridecanol

Trimethylol propane polyethoxylate

Undecanol Undecyl alcohol

### 21. PHENOLS, CRESOLS

Benzyl alcohol

Carbolic oil Creosote<sup>2</sup> Cresols

Cresylic acid

Cresylic acid dephenolized

Cresylic acid, tar 2,4-Dichlorophenol Dodecyl phenol o-Ethyl phenol

Long chain alkylphenate/phenol sulfide mixture

Nonylphenol Octyl phenol Phenol **Xylenols** 

#### 22. CAPROLACTAM SOLUTIONS

Caprolactam solution

#### 23-29. UNASSIGNED

#### 30. OLEFINS

Amylene

Arvl polyolefin (C11-C50)

Butadiene

Butadiene, Butylene mixtures (cont. Acetylenes)

Butene

Butene oligomer

Butylene

1,5,9-Cyclododecatriene 1,3-Cyclopentadiene dimer

Cyclopentene Decene

Dicyclopentadiene Diisobutvlene Dipentene Dodecene Ethylene

Ethylene-propylene copolymer

Ethylidene norbornene<sup>2</sup>

1-Heptene Hexene Isoprene

Latex (ammonia (1% or less) inhibited) Methyl acetylene, propadiene mixture

Methylcyclopentadiene dimer

2-Methyl-1-pentene 4-Methyl-1-pentene alpha-Methyl styrene

Myrcene Nonene 1-Octadecene Octene

Olefin mixtures

alpha-Olefins (C6 - C18) mixtures

alpha-Olefins (C13 and above)

1.3-Pentadiene

Pentene

Pentene, Miscellaneous hydrocarbon mixture<sup>2</sup>

alpha-Pinene beta-Pinene Polybutene

Poly(4+)isobutylene

Polyolefin (molecular weight 300+)

Polypropylene Poly(5+)propylene

Propylene

Propylene butylene polymer

Propylene dimer Propylene tetramer Propylene trimer Styrene

Tetradecene Tridecene Triisobutylene Tripropylene Turpentine Undecene

#### 31. PARAFFINS

Alkanes (C6-C9) n-Alkanes (C10+)

iso- & cyclo- Alkanes (C10-C11) iso- & cyclo- Alkanes (C12+)

Butane Cycloheptane Cyclohexane Cyclopentane Decane Dodecane Ethane

Ethyl cyclohexane

Heptane Hexane<sup>2</sup> Methane

Methylcyclohexane 2-Methyl pentane

Nonane Octane Pentane Propane

iso-Propylcyclohexane

Tridecane Waxes: Paraffin

#### 32. AROMATIC HYDROCARBONS

Alkyl (C3-C4) benzenes Alkyl (C5-C8) benzenes Alkyl (C9+) benzenes

Alkyl acrylate-Vinyl pyridine copolymer in Distillates: straight run Drilling mud (low toxicity) (if flammable or Toluene Alkylbenzene, alkylindane, alkylindene mixture combustible) (each C12-C17) Gas oil: cracked Benzene Gasoline blending stocks: alkylates Benzene, Hydrocarbon mixture (10% benzene Gasoline blending stocks: reformates or more) Gasolines: Benzene, Toluene, Xylene mixture Automotive (not over 4.23 grams lead per Butylbenzene Butyl phenol, Formaldehyde resin in Xylene Aviation (not over 4.86 grams lead per gal.) Butyl toluene Casinghead (natural) Cumene Polymer Straight run Cymene Decylbenzene Jet Fuels: Dialkyl(C10 - C14) benzenes JP-4 JP-5 Diethylbenzene Diisopropylbenzene JP-8 Diisopropyl naphthalene Kerosene Diphenyl Mineral spirits Dodecylbenzene Naphtha: Dodecylxylene Coal tar solvent Ethyl benzene Petroleum Ethyl toluene Solvent Isopropylbenzene Stoddard solvent Methyl naphthalene Varnish Makers' and Painters' Naphthalene Oil. fuel: 1-Phenyl-1-xylyl ethane No. 1 Poly(2+)cyclic aromatics No. 1-D Propylbenzene No. 2 Pseudocumene No. 2-D Tetradecylbenzene No. 4 Tetrahydronaphthalene No. 5 1,2,3,5-Tetramethylbenzene No. 6 Toluene Oil. misc: Tridecylbenzene Aliphatic Triethylbenzene Aromatic Trimethylbenzene Clarified Undecylbenzene Coal Xvlene Crude Diesel 33. MISCELLANEOUS HYDROCARBON Gas, high pour **MIXTURES** Heartcut distillate Linseed Lubricating Alachlor technical Alkylbenzenesulfonic acid, sodium salt solutions Mineral Alkyl dithiothiadiazole (C6-C24) Mineral seal Asphalt blending stocks: roofers flux Motor Asphalt blending stocks: straight run residue Neatsfoot Aviation alkylates Penetrating Calcium sulfonate, Calcium carbonate, Pine Hydrocarbon solvent mixture Rosin Coal tar Sperm Coal tar pitch Spindle Decahydronaphthalene Turbine Diphenyl, Diphenyl ether Residual

Road

Distillates: flashed feed stocks

Transformer

Oxyalkylated alkyl phenol formaldehyde

Petrolatum Pine oil

Sodium petroleum sulfonate Sulfohydrocarbon (C3-C88)

Waxes: Petroleum

White Spirit (low(15-20%) aromatic)

#### 34. ESTERS

Alkane (C14-C17) sulfonic acid, sodium salt solution

Alkyl(C8+)amine, Alkenyl (C12+) acid ester mixture

Alkyl ester copolymer (C6-C18)

Alkyl (C7-C9) nitrates<sup>2</sup>

Alkyl phenol sulfide (C8-C40)

Amyl acetate

Animal and fish oils, n.o.s.

Animal and fish acid oils and distillates, n.o.s. Barium long chain alkaryl sulfonate (C11-C50)

Barium long chain alkyl (C8-C14) phenate sulfide

Benzene tricarboxylic acid, trioctyl ester

Benzylacetate Butyl acetate

Butyl benzyl phthalate

n-Butyl butyrate Butyl formate

iso-Butyl isobutyrate n-Butyl propionate

Calcium alkyl(C9)phenol sulfide, polyolefin phosphorosulfide mixture

Calcium long chain alkaryl sulfonate (C11-C50) Calcium long chain alkyl phenate (C8-C40) Calcium long chain alkyl phenate sulfide (C8-

C40)

Calcium long chain alkyl salicylate (C13+) Calcium nitrate, Magnesium nitrate, Potassium

chloride solution

Cobalt naphthenate in solvent naphtha

Coconut oil, fatty acid Cottonseed oil, fatty acid Cyclohexyl acetate Decyl acetate

Dialkyl(C7 - C13) phthalates Dibutyl hydrogen phosphonate

Dibutyl phthalate

Diethylene glycol butyl ether acetate Diethylene glycol ethyl ether acetate Diethylene glycol methyl ether acetate

Diethylene glycol phthalate Di-(2-ethylhexyl)adipate Di-(2-ethylhexyl)phthalate

Diethyl phthalate

Diethyl sulfate

Diheptyl phthalate

Dihexvl phthalate

Di-n-hexyl adipate

Diisobutyl phthalate

Diisodecyl phthalate

Diisononyl adipate

Diisononyl phthalate

Diisooctyl phthalate

Dimethyl adipate

Dimethylcyclicsiloxane hydrolyzate

Dimethyl glutarate

Dimethyl hydrogen phosphite<sup>2</sup>

Dimethyl naphthalene sulfonic acid, sodium salt solution<sup>2</sup>

Dimethyl phthalate

Dimethylpolysiloxane

Dimethyl succinate

Dinonyl phthalate

Dioctyl phthalate

Dipropylene glycol dibenzoate

Ditridecyl phthalate

2-Dodecenylsuccinic acid, dipotassium salt

solution

Diundecyl phthalate

2-Ethoxyethyl acetate

Ethyl acetate

Ethyl acetoacetate

Ethyl butyrate

Ethylene carbonate

Ethylene glycol acetate

Ethylene glycol butyl ether acetate

Ethylene glycol diacetate

Ethylene glycol ethyl ether acetate

Ethylene glycol methyl ether acetate

Ethyl-3-ethoxypropionate

Ethyl hexyl phthalate

Ethyl propionate

Fatty acids (saturated, C13+)

Glycerol polyalkoxylate

Glyceryl triacetate

Glycidyl ester of C10 trialkyl acetic acid Glycidyl ester of tridecylacetic acid

Heptyl acetate Hexyl acetate

Lauric acid

Lecithin (soyabean)

Magnesium long chain alkaryl sulfonate (C11-

C50)

Magnesium long chain alkyl phenate sulfide (C8-C20)

Magnesium long chain alkyl salicylate (C11+)

3-Methoxybutyl acetate

1-Methoxy-2-propyl acetate

Methyl acetate Methyl acetoacetate Methyl amyl acetate Tung Methyl butyrate Olefin/alkyl ester copolymer (molecular weight 2000+) Methyl formate 3-Methyl-3-methoxybutyl acetate Oleic acid Palm kernel acid oil Methyl salicylate Metolachlor Palm kernel acid oil, methyl ester Naphthalene sulfonic acid, sodium salt solution Palm stearin (40% or less) n-Pentyl propionate Nonyl acetate Poly(2-8)alkylene blycol monoalkyl(C1-C6) ether n-Octyl acetate acetate Octyl decyl adipate Polydimethylsiloxane Polyferric sulfate solution Oil. edible: Polymethylsiloxane Beechnut Castor Poly(20)oxyethylene sorbitan monooleate Cocoa butter Polysiloxane Coconut<sup>2</sup> Polyolefin amide alkeneamine borate (C28-Cod liver C250) Corn Polyolefin ester (C28-C250) Polyolefin phosphorosulfide, barium derivative Cottonseed Fish<sup>2</sup> (C28-C250) Groundnut Potassium oleate Hazelnut Propyl acetate Propylene carbonate Lard Lanolin Propylene glycol methyl ether acetate Nutmea butter Sodium acetate, glycol, water mixture (not containing sodium hydroxide)<sup>2</sup> Olive Palm<sup>2</sup> Sodium acetate solution Palm kernel Sodium benzoate solution Sodium dimethyl naphthalene sulfonate solution<sup>2</sup> Peanut Sodium long chain alkyl salicylate (C13+) Poppy Poppy seed Sodium naphthalene sulfonate solution Raisin seed Soyabean oil (epoxidized) Rapeseed Stearic acid Rice bran Tall oil Safflower Tallow<sup>2</sup> Tallow fatty acid<sup>2</sup> Salad Tributyl phosphate Sesame Tricresyl phosphate Soya bean Sunflower Tridecanoic acid Sunflower seed Tridecyl acetate Triethylene glycol di-(2-ethylbutyrate) Tucum Triethyl phosphate Vegetable Walnut Triethyl phosphite<sup>2</sup> Triisooctyl trimellitate<sup>2</sup> Oil, misc.: Triisopropylated phenyl phosphates Animal 2,2,4-Trimethyl-1,3-pentanediol diisobutyrate Coconut oil, fatty acid methyl ester 2,2,4-Trimethyl-1,3-pentanediol-1-isobutyrate Cotton seed oil, fatty acid 2.2.4-Trimethyl-3-pentanol-1-isobutyrate Lanolin Palm kernel oil, fatty acid methyl ester Trimethyl phosphite<sup>2</sup> Palm oil, methyl ester Trisodium nitrilotriacetate Pilchard Trixylyl phosphate Perilla Trixylenyl phosphate Vegetable acid oils and distillates, n.o.s. Soapstock Soyabean (epoxidized) Vegetable oils, n.o.s. Tall Waxes: Carnauba Tall, fatty acid<sup>2</sup> Zinc alkaryl dithiophosphate (C7-C16)

### Zinc alkyl dithiophosphate (C3-C14)

#### 35. VINYL HALIDES

Vinyl chloride Vinylidene chloride

#### 36. HALOGENATED HYDROCARBONS

Benzyl chloride Carbon tetrachloride

Chlorinated paraffins (C10 - C13) Chlorinated paraffins (C14 - C17)

Chlorobenzene

Chlorodifluoromethane

Chloroform Chlorotoluene Dichlorobenzene

Dichlorodifluoromethane

1,1-Dichloroethane 1,6-Dichlorohexane

2,2'-Dichloroisopropyl ether

Dichloromethane
Dichloropropane
Ethyl chloride
Ethylene dibromide
Ethylene dichloride<sup>2</sup>
Methyl bromide
Methyl chloride

Monochlorodifluoromethane

n-Propyl chloride Pentachloroethane Perchloroethylene

1,1,2,2-Tetrachloroethane 1,2,4-Trichlorobenzene 1,1,1-Trichloroethane<sup>2</sup> 1,1,2-Trichloroethane

Trichloroethylene<sup>2</sup>

1,2,3-Trichloropropane

1,1,2-trichloro-1,2,2-trifluoroethane

### 37. NITRILES

Acetonitrile Adiponitrile

Lactonitrile solution

Propionitrile Tallow nitrile

### 38. CARBON DISULFIDE

Carbon disulfide

### 39. SULFOLANE

Sulfolane

### **40. GLYCOL ETHERS**

Diethylene glycol<sup>2</sup>

Diethylene glycol butyl ether Diethylene glycol dibutyl ether Diethylene glycol diethyl ether Diethylene glycol ethyl ether Diethylene glycol methyl ether Diethylene glycol n-hexyl ether Diethylene glycol phenyl ether Diethylene glycol propyl ether

Dipropylene glycol

Dipropylene glycol butyl ether Dipropylene glycol methyl ether

Ethoxy triglycol

Ethylene glycol hexyl ether

Ethylene glycol methyl butyl ether Ethylene glycol monoalkyl ethers Ethylene glycol tert-butyl ether Ethylene glycol butyl ether Ethylene glycol dibutyl ether Ethylene glycol ethyl ether Ethylene glycol isopropyl ether Ethylene glycol methyl ether Ethylene glycol phenyl ether

Ethylene glycol phenyl ether, Diethylene glycol

phenyl ether mixture
Ethylene glycol propyl ether
Hexaethylene glycol

Hexaethylene glycol Methoxy triglycol

Nonyl phenol (ethoxylated)

Nonyl phenol poly(4-12)ethoxylates Polyalkylene glycol butyl ether

Polyalkylene glycols, Polyalkylene glycol

monoalkyl ethers mixtures

Polyethylene glycols

Polyethylene glycol dimethyl ether

Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether

Polyethylene glycol monoalkyl ether

Polypropylene glycols

Polypropylene glycol methyl ether

n-Propoxypropanol

Propylene glycol monoalkyl ether Propylene glycol ethyl ether Propylene glycol methyl ether Propylene glycol n-butyl ether Propylene glycol phenyl ether Propylene glycol propyl ether

Tetraethylene glycol
Triethylene glycol

Triethylene glycol butyl ether

Triethylene glycol butyl ether mixture
Triethylene glycol ether mixture
Triethylene glycol ethyl ether
Triethylene glycol ethyl ether

Triethylene glycol methyl ether

Tripropylene glycol

Tripropylene glycol methyl ether

#### 41. ETHERS

Alkaryl polyether (C9-C20)

Butyl ether

2,2-Dichloroethyl ether

Diethyl ether

Diglycidyl ether of Bisphenol F

Dialycidyl ether of bisphenol A

Dimethyl furan

1,4-Dioxane

Diphenyl ether

Diphenyl ether, Diphenyl phenyl ether mixture

Ethyl ether

Long chain alkaryl polyether (C11-C20)

Methyl tert-butyl ether<sup>2</sup>

Propyl ether

Tetrahydrofuran

1,3,5-Trioxane

Polyether (molecular weight 2000+)

#### **42. NITROCOMPOUNDS**

o-Chloronitrobenzene

Dinitrotoluene

Nitrobenzene

Nitroethane

Nitropropane

Nitropropane, Nitroethane mixture

Nitrotoluene

### 43. MISCELLANEOUS WATER SOLUTIONS

Aluminum sulfate solution<sup>2</sup>

2-Amino-2-hydroxymethyl-1,3-propanediol

solution

Ammonium bisulfite solution<sup>2</sup>

Ammonium nitrate-urea solution (not containing

ammonia)

Ammonium polyphosphate solution

Ammonium sulfate solution

Ammonium thiosulfate solution

Sulfonated polyacrylate solutions<sup>2</sup>

Calcium bromide solution

Calcium chloride solution

Clay slurry

Corn syrup

Dextrose solution

2,4-Dichlorophenoxyacetic acid, Diethanolamine

salt solution

2,4-Dichlorophenoxyacetic acid,

Triisopropanolamine salt solution<sup>2</sup>

Diethanolamine salt of 2,4-

Dichlorophenoxyacetic acid solution

Diethylenetriamine pentaacetic acid,

pentasodium salt solution

Dodecyl diphenyl ether disulfonate solution

Drilling brine (containing Calcium, Potassium or

Sodium salts)

Drilling brine (containing Zinc salts)

Drilling mud (low toxicity) (if non-flammable or

non-combustible)

Ethylenediaminetetracetic acid, tetrasodium salt

solution

Ethylene, Vinyl acetate copolymer emulsion

Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution<sup>2</sup>

Fish solubles (water based fish meal extracts)

Fructose solution

Fumaric adduct of Rosin, water dispersion

Hexamethylenediamine adipate solution

N-(Hydroxyethyl)ethylenediaminetriacetic acid,

trisodium salt solution

Kaolin clay slurry

Latex, liquid synthetic

Lignin liquor

Liquid streptomyces solubles

N-Methylglucamine solution

N-Methylalucamine solution (70% or less)

Naphthenic acid, sodium salt solution

Potassium chloride solution

Potassium thiosulfate solution

Rosin soap (disproportionated) solution

Sewage sludge, treated

Sodium alkyl sulfonate solution

Sodium hydrogen sulfite solution

Sodium polyacrylate solution<sup>2</sup>

Sodium salt of Ferric

hydroxyethylethylenediamine triacetic acid

solution

Sodium silicate solution<sup>2</sup>

Sodium sulfide solution

Sodium sulfite solution

Sodium tartrates, Sodium succinates solution

Sulfonated polyacrylate solutions<sup>2</sup>

Tall oil soap (disproportionated) solution

Tetrasodium salt of EDTA solution

Triisopropanolamine salt of 2,4-

Dichlorophenoxyacetic acid solution

Urea, Ammonium nitrate solution (not containing Ammonia)

Urea, Ammonium phosphate solution

Urea solution

Vegetable protein solution (hydrolysed)

Water

### FOOTNOTES TO TABLE

<sup>&</sup>lt;sup>1</sup> Because of very high reactivity or unusual conditions of carriage or potential compatibility problems, this product is not assigned to a specific group in the Compatibility Chart. For additional compatibility information, contact Commandant (G-MTH), U.S. Coast Guard, 2100 Second Street, SW., Washington, DC 20593-0001. Telephone (202) 267-1577.

<sup>&</sup>lt;sup>2</sup> See Table 7.3 - Exceptions to the Chart.

### TABLE 7.3 EXCEPTIONS TO THE CHART

1. The binary combinations listed below have been tested as prescribed in Appendix III and found not to be dangerously reactive. These combinations are exceptions to the Compatibility Chart (Figure 1) and may be stowed in adjacent tanks.

Member of Reactive	Compatible with	Tetradecylamine	
Group	D: (1   1   (7)	mixture (7)	Destrict also be all (OO)
Acetone (18)	Diethylenetriamine (7)	Ethylenediamine (7)	Butyl alcohol (20)
Acetone cyanohydrin (0)	Acetic acid (4)		tert-Butyl alcohol (20)
Acrylonitrile (15)	Triethanolamine (8)		Butylene glycol (20)
1,3-Butylene glycol (20)	Morpholine (7)		Creosote (21)
1,4-Butylene glycol (20)	Ethylamine (7)		Diethylene glycol (40)
	Triethanolamine (8)		Ethyl alcohol (20)
Gamma-Butyrolactone(0)	N-Methyl-2-pyrrolidone (9)		Ethylene glycol (20)
Caustic potash, 50% or	Isobutyl alcohol (20)		Ethyl hexanol (20)
less (5)	Ethyl alcohol (20)		Glycerine (20)
	Ethylene glycol (20)		Isononyl alcohol (20)
	Isopropyl alcohol (20)		Isophorone (18)
	Methyl alcohol (20)		Methyl butyl ketone (18)
	iso-Octyl alcohol (20)		Methyl isobutyl ketone (18)
Caustic soda, 50% or less	Butyl alcohol (20)		Methyl ethyl ketone (18)
(5)	tert-Butyl alcohol, Methanol		Propyl alcohol (20)
` '	mixtures		Propylene glycol (20)
	Decyl alcohol (20)		
	Iso-Decyl alcohol	Oleum (0)	Hexane (31)
	Diacetone alcohol (20)	. ,	Dichloromethane (36)
	Diethylene glycol (40)		Perchloroethylene (36)
	Ethyl alcohol (40%,		
	whiskey) (20)	1,2-Propylene glycol (20)	Diethylenetriamine (7)
	Ethylene glycol (20)	, 1, 0, ,	Polyethylene polyamines
	Ethylene glycol, Diethylene		(7)
	glycol mixture (20)		Triethylenetetramine (7)
	Ethyl hexanol (Octyl	Sodium dichromate, 70%	Methyl alcohol (20)
	alcohol) (20)	(0)	, , , , , , , , , , , , , , , , , , , ,
	Methyl alcohol (20)	Sodium hydrosulfide	Iso-Propyl alcohol (20)
	Nonyl alcohol (20)	solution (5)	, , , , , , , , , , , , , , , , , , , ,
	iso-Nonyl alcohol (20)	Sulfuric acid (2)	Coconut oil (34)
	Propyl alcohol (20)	(2)	Coconut oil acid (34)
	Propylene glycol (20)		Palm oil (34)
	Sodium chlorate (0)		Tallow (34)
	iso-Tridecanol (20)	Sulfuric acid, 98% or less	Choice white grease tallow
	(20)	(2)	(34)
Dodecyl and	Tall oil, fatty acid (34)	<u>'-</u> '	1 \3./

2. The binary combinations listed below have been determined to be dangerously reactive, based on either data obtained in the literature or on laboratory testing which has been carried out in accordance with procedures prescribed in Appendix III. These combinations are exceptions to the Compatibility Chart (Figure 1) and may not be stowed in adjacent tanks.

Acetone cyanohydrin (0) is not compatible with Groups 1-12, 16, 17 and 22.

Acrolein (19) is not compatible with Group 1, Non-Oxidizing Mineral Acids.

Acrylic acid (4) is not compatible with Group 9, Aromatic Amines.

Acrylonitrile (15) is not compatible with Group 5 (Caustics)

Alkylbenzenesulfonic acid (0) is not compatible with Groups 1-3, 5-9, 15, 16, 18, 19, 30, 34, 37, and strong oxidizers.

Allyl alcohol (15) is not compatible with Group 12, Isocyanates.

Alkyl (C7-C9) nitrates (34) is not compatible with Group 1, Non-oxidizing Mineral Acids.

Aluminum sulfate solution (43) is not compatible with Groups 5-11.

Ammonium bisulfite solution (43) is not compatible with Groups 1, 3, 4, and 5.

Benzenesulfonyl chloride (0) is not compatible with Groups 5-7, and 43.

1,4-Butylene glycol (20) is not compatible with Groups 1-9.

gamma-Butyrolactone (0) is not compatible with Groups 1-9.

Caustic soda solution, 50% or less (5) is not compatible with 1,4-Butylene glycol (20).

Crotonaldehyde (19) is not compatible with Group 1, Non-Oxidizing Mineral Acids.

Cyclohexanone, Cyclohexanol mixture (18) is not compatible with Group 12, Isocyanates.

- 2,4-Dichlorophenoxyacetic acid, Triisopropanolamine salt solution (43) is not compatible with Group 3, Nitric acid.
- 2,4-Dichlorophenoxyacetic acid, Dimethylamine salt solution (0) is not compatible with Groups 1-5, 11, 12, and 16.

Dimethyl hydrogen phosphite (34) is not compatible with Groups 1 and 4.

Dimethyl naphthalene sulfonic acid, sodium salt solution (34) is not compatible with Group 12, Formaldehyde, and strong oxidizing agents.

Dodecylbenzenesulfonic acid (0) is not compatible with oxidizing agents and Groups 1, 2, 3, 5, 6, 7, 8, 9, 15, 16, 18, 19, 30, 34, and 37.

Ethylenediamine (7) is not compatible with Ethylene dichloride (36).

Ethylene dichloride (36) is not compatible with Ethylenediamine (7).

Ethylidene norbonene (30) is not compatible with Groups 1-3 and 5-8.

2-Ethyl-3-propylacrolein (19) is not compatible with Group 1, Non-Oxidizing Mineral Acids.

Ferric hydroxyethyylethylenediamine triacetic acid, Sodium salt solution (43) is not compatible with Group 3, Nitric acid.

Fish oil (34) is not compatible with Sulfuric acid (2).

Formaldehyde (over 50%) in Methyl alcohol (over 30%) (19) is not compatible with Group 12, Isocyanates.

Formic acid (4) is not compatible with Furfural alcohol (20).

Furfuryl alcohol (20) is not compatible with Group 1, Non-Oxidizing Mineral Acids and Formic acid (4).

2-Hydroxyethyl acrylate is not compatible with Groups 2, 3, 5-8 and 12.

Isophorone (18) is not compatible with Group 8, Alkanolamines.

Magnesium chloride solution (0) is not compatible with Groups 2, 3, 5, 6 and 12.

Mesityl oxide (18) is not compatible with Group 8, Alkanolamines.

Methacrylonitrile (15) is not compatible with Group 5 (Caustics).

Methyl tert-butyl ether (41) is not compatible with Group 1, Non-oxidizing Mineral Acids.

Naphtha, cracking fraction (33) is not compatible with strong acids, caustics or oxidizing agents.

o-Nitrophenol (0) is not compatible with Groups 2, 3, and 5-10.

Octyl nitrates (all isomers) see Alkyl (C7-C9) nitrates.

Oleum (0) is not compatible with Sulfuric acid (2) and 1,1,1-Trichloroethane (36).

Phthalate based polyester polyol (0) is not compatible with group 2, 3, 5, 7 and 12.

Pentene, Miscellaneous hydrocarbon mixtures (30) are not compatible with strong acids or oxidizing agents.

Polyglycerine, Sodium salts solution (20) is not compatible with Groups 1, 4, 11, 16, 17, 19, 21, and 22.

Sodium acetate, Glycol, Water mixture (1% or less Sodium hydroxide) (34) is not compatible with Group 12 (Isocyanates).

Sodium chlorate solution (50% or less) (0) is not compatible with Groups 1-3, 5, 7, 8, 10, 12, 13, 17, and 20

Sodium dichromate solution (70% or less) (0) is not compatible with Groups 1-3, 5, 7, 8, 10, 12, 13, 17, and 20.

Sodium dimethyl naphthalene sulfonate solution (34) is not compatible with Group 12, Formaldehyde and strong oxidizing agents.

Sodium hydrogen sulfide, Sodium carbonate solution (0) is not compatible with Groups 6 (Ammonia) and 7 (Aliphatic amines).

Sodium hydrosulfide (5) is not compatible with Groups 6 (Ammonia) and 7 (Aliphatic amines).

Sodium hydrosulfide, Ammonium sulfide solution (5) is not compatible with Groups 6 (Ammonia) and 7 (Aliphatic amines).

Sodium polyacrylate solution (43) is not compatible with Group 3, Nitric Acid.

Sodium salt of Ferric hydroxyethylethylenediamine triacetic acid solution (43) is not compatible with Group 3, Nitric acid.

Sodium silicate solution (43) is not compatible with Group 3, Nitric acid.

Sodium sulfide, hydrosulfide solution (0) is not compatible with Groups 6 (Ammonia) and 7 (Aliphatic amines).

Sodium thiocyanate (56% or less) (0) is not compatible with Groups 1-4.

Sulfonated polyacrylate solution (43) is not compatible with Group 5 (Caustics).

Sulfuric acid (2) is not compatible with Fish oil (34), or Oleum (0).

Tallow fatty acid (34) is not compatible with Group 5, Caustics.

1,1,1-Trichloroethane (36) is not compatible with Oleum (0).

Trichlorethylene (36) is not compatible with Group 5, Caustics.

Triethyl phosphite (34) is not compatible with Groups 1 and 4.

Trimethyl phosphite (34) is not compatible with Groups 1 and 4.

1,3,5-Trioxane (41) is not compatible with Group 1 (Non-oxidizing mineral acids) and Group 4 (Organic acids).

### 8. INDEX OF SYNONYMS

#### **SYNONYM**

#### **COMPOUND NAMES**

300° oil Oils, miscellaneous: mineral seal

Aatrex herbicide Atrazine

Oils, miscellaneous: absorption Absorbent oil

Accelerator HX N-Ethylcyclohexylamine

Acetal Acetal Acetaldehyde diethylacetal Acetal

Acetaldehyde, chloro-Chloroacetaldehyde Acetaldehyde, trichloro Trichloroacetaldehyde =

Acetaldehyde Acetaldehyde p-Acetaldehyde Paraldehyde = Acetate C-7 Heptyl acetate NonvI acetate Acetate C-9 Bis (Acetate) dioxouranium Uranyl acetate

(Acetato-o) phenyl mercury Phenylmercuric acetate = Acetatophenylmercury Phenylmercuric acetate =

Acetic acid anhydride = Acetic anhydride

Acetic acid n-amyl ester Amyl acetate (all isomers) Acetic acid, 3-methoxybutyl ester 3-Methoxybutyl acetate Acetic acid, ammonium salt = Ammonium acetate Acetic acid, benzyl ester Benzyl acetate

Acetic acid, chromium salt = Chromic acetate Acetic acid, cupric salt Copper acetate Acetic acid, cyclohexyl ester Cyclohexyl acetate Acetic acid, dimethylamide Dimethylacetamide

Acetic acid, dimethylamide N,N-Dimethyl acetamide solution (40% or =

less)

Acetic acid, ethyl ester Ethyl acetate

Acetic acid, fluoro-, sodium salt Sodium fluoroacetate

Acetic acid, heptyl ester Heptyl acetate Acetic acid, hexyl ester Hexyl acetate Acetic acid, isobutyl ester Isobutyl acetate Acetic acid, isopropyl ester Isopropyl acetate Acetic acid, methyl ester Methyl acetate = Acetic acid, n-butyl ester n-Butyl acetate Acetic acid, n-nonyl ester Nonyl acetate

Acetic acid, n-propyl ether n-Propyl acetate Acetic acid. nickel (II) salt = Nickel acetate Acetic acid, phenylmethyl ester = Benzyl acetate Acetic acid, sec-butyl ester sec-Butyl acetate Acetic acid, tert-butyl ester tert-Butyl acetate Acetic acid, thallium (I) salt Thallium acetate

Acetic acid, thallous salt Thallium acetate = Acetic acid, zinc salt = Zinc acetate Acetic acid = Acetic acid

Acetic aldehyde Acetaldehyde Acetic anhydride Acetic anhydride Acetic ester Ethyl acetate = Ethyl acetate Acetic ether

Acetoacetic acid, ethyl ester = Ethyl acetoacetate Acetoacetic acid, methyl ester Methyl acetoacetate

Ethyl acetoacetate Acetoacetic ester

## **COMPOUND NAMES**

Acetocyanohydrin = Lactonitrile solution (80% or less)

Acetone cyanohydrin = Acetone cyanohydrin

Acetone Acetone Acetonitrile Acetonitrile Acetonyl bromide Bromoacetone Acetophenone Acetophenone alpha-Acetoxytoluene Benzyl acetate = Acetyl bromide Acetyl bromide Acetyl chloride Acetyl chloride = Acetyl hydroperoxide Peracetic acid = Acetyl oxide Acetic anhydride

Acetyl peroxide solution = Acetyl peroxide solution

Acetylacetone = Acetylacetone
Acetylbenzene = Acetophenone
Acetylene dichloride = 1,2-Dichloroethylene
Acetylene tetrachloride = Tetrachloroethane

Acetylene = Acetylene Acetylenogen = Calcium carbide Acetylmethyl bromide = Bromoacetone

Acid ammonium carbonate = Ammonium bicarbonate Acid ammonium fluoride = Ammonium bifluoride

Acraldehyde = Acrolein
Acridine = Acridine
Acrolein = Acrolein
Acrylaldehyde = Acrolein

Acrylamide solution Acrylamide solution Acrylic acid amide (50%) Acrylamide solution = Acrylic acid, 2-ethylhexylester 2-Ethylhexyl acrylate Acrylic acid, decyl ester n-Decyl acrylate = Ethyl acrylate Acrylic acid, ethyl ester = Acrylic acid, isobutyl ester iso-butyl acrylate Acrylic acid, methyl ester = Methyl acrylate Acrylic acid, n-butyl ester n-Butyl acrylate

Acrylic acid, n-butyl ester = n-Butyl acryl Acrylic acid = Acrylic acid Acrylic aldehyde = Acrolein

Acrylic amide 50% = Acrylamide solution
Acrylonitrile = Acrylonitrile
Activated charcoal = Charcoal
Adacene-12 = 1-Dodecene

Adipic acid, bis (2-ethylhexyl) ester = Di-(2-ethylhexyl) adipate

Adipic acid, bis (2-ethylhexyl) ester = Dioctyl adipate
Adipic acid, dimethyl ester = Dimethyl adipate
Adipic acid = Adipic acid

Adipic acid = Adipic acid
Adipinic acid = Adipic acid
Adipol 2EH = Dioctyl adipate
Adiponitrile = Adiponitrile
Adronal = Cyclohexanol

Aerosol surfactant = Dioctyl sodium sulfosuccinate

Aerothene = Trichloroethane
AIP = Aluminum phosphide
Alaninol = 2-Propanolamine
Albone = Hydrogen peroxide

Albus = Mercuric ammonium chloride

Alcohol C-10 = n-Decyl alcohol

## **COMPOUND NAMES**

Alcohol C-11 (undecylic) = Undecanol
Alcohol C-8 = Octanol
Alcohol = Ethyl alcohol
Aldehyde-collidine = Methylethylpyridine
Aldehydine = Methylethylpyridine
Aldifen = 2,4-Dinitrophenol

Aldrin = 2,4-Dinitron

Aldrin = Aldrin

Alfa-tox = Diazinon

Alimet = 2-Hydroxy-4-(methylthio)-butanoic acid

Alkaway liquid alkaline deruster = Boiler compound, liquid Alkron = Methyl parathion

Alkyl $(C_{11} - C_{17})$ benzenesulfonic acid = Alkyl $(C_{11} - C_{17})$ benzenesulfonic acid = Alkyl $(C_{11} - C_{17})$ benzenesulfonic acid = Sodium alkylbenzenesulfonates = Methyl acetylene, propadiene mixture

Allomaleic acid Fumaric acid Allyl alcohol Allyl alcohol Allyl aldehyde Acrolein Allyl bromide Allyl bromide Allyl chloride Allyl chloride Allyl chlorocarbonate Allyl chloroformate Allyl chloroformate Allyl chloroformate Allyl trichloride 1,2,3-Trichloropropane

Allylethylene = 1,4-Pentadiene Allylsilicone trichloride = Allyltrichlorosilane Allyltrichlorosilane = Allyltrichlorosilane

Allyltrichlorosilane = Allyltrichlorosilane alpha,alpha,alpha-trifluoro-2,6-Dinitro- = Trifluralin

n,n-dipropyl-p-toluidine

1-Amino-2-fluorobenzene

Alrowet D65 = Dioctyl sodium sulfosuccinate

Alum = Aluminum sulfate

Aluminum chloride solution = Aluminum chloride solution
Aluminum chloride = Aluminum chloride

Aluminum ethyl dichloride = Ethylaluminum dichloride Aluminum fluoride = Aluminum fluoride

Aluminum monophosphide = Aluminum phosphide
Aluminum nitrate nonahydrate = Aluminum nitrate
Aluminum phosphide = Aluminum nitrate
Aluminum phosphide = Aluminum phosphide

Aluminum phosphide = Aluminum phosphide
Aluminum sulfate solution = Aluminum sulfate solution
Aluminum sulfate = Aluminum sulfate

Aluminum triethyl = Triethylaluminum
Aluminum triisobutyl = Triisobutylaluminum
Amchlor = Ammonium chloride
American palm kernel oil = Oils, edible; tucum

3-Amino-1-methylbenzene = m-Toluidine
2-Amino-1-methylbenzene = o-Toluidine
4-Amino-1-methylbenzene = p-Toluidine
2-Amino-1-propanol = 2-Propanolamine
3-Amino-1-propanol = n-Propanolamine
1-Amino-2-ethylhexane = 2-Ethylhexylamine

2-Amino-2-methyl-1-propanol (90% or less) = 2-Amino-2-methyl-1-propanol (90% or less)

=

2-Fluoroaniline

## **COMPOUND NAMES**

1-Amino-2-methylpropane 2-Amino-2-methylpropane 1-Amino-2-nitrobenzene 1-Amino-2-propanol

1-Amino-4-chlorobenzene 1-Amino-4-fluorobenzene 1-Amino-4-nitrobenzene 2-Amino-5-chlorotoluene

Aminobenzene 1-Aminobutane Aminocaproic lactam Aminocyclohexane Aminodimethylbenzene

2-Aminodimethylethanol

Aminoethane 2-Aminoethanol

beta-Aminoethyl alcohol N-Aminoethyl piperazine Bis-(2-Aminoethyl) amine

2-[(2-Aminoethyl) amino] ethanol N-(2-Aminoethyl) ethanolamine N-(2-Aminoethyl) piperazine 1-(2-Aminoethyl) piperazine

N,N'-bis-(2-Aminoethyl)ethylenediamine

Aminoethylethanolamine

Aminoform

2-Aminoisobutane beta-Aminoisobutanol

Aminomercuric chloride

Aminomethane Aminomethane 3-Aminomethyl-3.5.5-

trimethylcyclohexylamine

1-Aminonaphthalene 2-Aminopropane 1-Aminopropane 4-Aminopyridine p-Aminopyridine alpha-Aminotoluene 3-Aminotoluene 2-Aminotoluene 4-Aminotoluene

Ammate Ammoneric Ammonia soap Ammonia solution

Ammonia water

Ammonia, anhydrous Ammoniated mercury Ammonioformaldehyde Isobutvlamine tert-Butylamine 2-Nitroaniline

Monoisopropanolamine

p-chloroaniline 4-Fluoroaniline 4-Nitroaniline 4-Chloro-o-toluidine

Aniline = n-Butylamine = Caprolactam Cvclohexvlamine 2,6-Dimethylaniline =

2-Amino-2-methyl-1-propanol (90% or =

less)

Ethylamine

=

Monoethanolamine Monoethanolamine N-Aminoethyl piperazine Diethylenetriamine Aminoethylethanolamine = Aminoethylethanolamine N-Aminoethyl piperazine

N-Aminoethyl piperazine Triethylenetetramine = Aminoethylethanolamine = Hexamethylenetetramine =

tert-Butylamine

2-Amino-2-methyl-1-propanol (90% or

less)

Mercuric ammonium chloride

= Methylamine

Methylamine solution Isophorone diamine

1-Naphthylamine = Isopropylamine n-Propylamine = 4-Aminopyridine 4-Aminopyridine Benzylamine m-Toluidine o-Toluidine p-Toluidine

Ammonium sulfamate Ammonium chloride Ammonium oleate

Ammonium hydroxide (<28% aqueous

ammonia)

Ammonium hydroxide (<28% aqueous

ammonia)

Ammonia, anhydrous

Mercuric ammonium chloride Hexamethylenetetramine

## **COMPOUND NAMES**

Ammonium acetate Ammonium acid fluoride Ammonium amidosulfonate Ammonium amidosulphate Ammonium aminoformate Ammonium benzoate Ammonium bicarbonate Ammonium bichromate Ammonium bifluoride Ammonium bisulfite Ammonium borofluoride Ammonium bromide Ammonium carbamate Ammonium carbazoate Ammonium carbonate Ammonium chloride Ammonium chromate Ammonium citrate, dibasic Ammonium citrate, dibasic Ammonium citrate

Ammonium cupric sulfate

Ammonium decaborate octahydrate

Ammonium dichromate

Ammonium disulfatonickelate (II)

Ammonium ferric citrate

Ammonium ferric oxalate trihydrate

Ammonium ferrous sulfate Ammonium fluoborate Ammonium fluoride Ammonium fluorosilicate Ammonium formate Ammonium gluconate

Ammonium hydrogen carbonate Ammonium hydrogen difluoride Ammonium hydrogen fluoride Ammonium hydrogen sulfide solution

Ammonium hydrogen sulfite Ammonium hydrosulfite

Ammonium hydroxide (<28% aqueous ammonia)

Ammonium hypo solution

Ammonium hypophosphite Ammonium hyposulfite solution

Ammonium hyposulfite Ammonium iodide Ammonium lactate svrup Ammonium lactate Ammonium lauryl sulfate Ammonium molybdate Ammonium monosulfite Ammonium muriate Ammonium nickel sulfate

Ammonium acetate Ammonium bifluoride Ammonium sulfamate Ammonium sulfamate Ammonium carbamate Ammonium benzoate Ammonium bicarbonate Ammonium dichromate Ammonium bifluoride Ammonium bisulfite Ammonium fluoborate Ammonium bromide Ammonium carbamate Ammonium picrate, wet = Ammonium carbonate Ammonium chloride Ammonium chromate Ammonium citrate, dibasic Ammonium citrate, dibasic

Ammonium citrate, dibasic Copper sulfate, ammoniated Ammonium pentaborate Ammonium dichromate Nickel ammonium sulfate Ferric ammonium citrate Ferric ammonium oxalate Ferrous ammonium sulfate Ammonium fluoborate Ammonium fluoride Ammonium silicofluoride Ammonium formate Ammonium gluconate

Ammonium bicarbonate Ammonium bifluoride Ammonium bifluoride Ammonium sulfide Ammonium bisulfite Ammonium bisulfite

Ammonium hydroxide (<28% aqueous ammonia)

Ammonium thiosulfate solution (60% or less)

Ammonium hypophosphite

Ammonium thiosulfate solution (60% or less)

Ammonium thiosulfate Ammonium iodide Ammonium lactate Ammonium lactate Ammonium lauryl sulfate Ammonium molybdate Ammonium bisulfite Ammonium chloride = Nickel ammonium sulfate

## **COMPOUND NAMES**

Ammonium nitrate-phosphate mixture Ammonium nitrate-sulfate mixture Ammonium nitrate-urea solution

Ammonium nitrate Ammonium oleate

Ammonium oxalate hydrate

Ammonium oxalate

Ammonium pentaborate tetrahydrate

Ammonium pentaborate
Ammonium pentachlorozincate

Ammonium perchlorate
Ammonium peroxydisulfate
Ammonium persulfate

Ammonium phosphate, dibasic

Ammonium phosphate
Ammonium picrate (yellow)
Ammonium picrate, wet
Ammonium picronitrate
Ammonium rhodanate
Ammonium rhodanide
Ammonium silicofluoride
Ammonium stearate dispersion

Ammonium stearate Ammonium sulfamate Ammonium sulfate

Ammonium sulfhydrate solution Ammonium sulfide solution

Ammonium sulfide
Ammonium sulfite
Ammonium sulfocyanate
Ammonium sulfocyanide
Ammonium tartrate
Ammonium tetrafluoborate
Ammonium thiocyanate

Ammonium thiosulfate solution (60% or

less)

Ammonium thiosulfate
Ammonium trioxalatoferrate(III) trihydrate

Ammonium zinc chloride Amorphous phosphorus

AMP-95

AMP

AMS

Amyl acetate (all isomers) Amyl acetate, mixed isomers

sec-Amyl acetate tert-Amyl acetate 1-Amyl alcohol n-Amyl alcohol Amyl aldehyde Amyl aldehyde n-Amyl chloride Ammonium nitrate-phosphate mixture
 Ammonium nitrate-sulfate mixture
 Ammonium nitrate-urea solution

= Ammonium nitrate
= Ammonium oleate
= Ammonium oxalate
= Ammonium oxalate
= Ammonium pentaborate

Ammonium pentaborate
 Zinc ammonium chloride
 Ammonium perchlorate
 Ammonium persulfate
 Ammonium persulfate
 Ammonium phosphate
 Ammonium phosphate

Ammonium picrate, wet
 Ammonium picrate, wet
 Ammonium picrate, wet
 Ammonium thiocyanate
 Ammonium thiocyanate
 Ammonium silicofluoride

Ammonium stearate
 Ammonium stearate
 Ammonium sulfamate
 Ammonium sulfate
 Ammonium sulfide
 Ammonium sulfide
 Ammonium sulfide
 Ammonium sulfite

Ammonium thiocyanate
 Ammonium thiocyanate
 Ammonium tartrate
 Ammonium fluoborate

Ammonium thiocyanate
 Ammonium thiosulfate solution (60% or

less)

Ammonium thiosulfate
 Ferric ammonium oxalate
 Zinc ammonium chloride

Phosphorus, red

= 2-Amino-2-methyl-1-propanol (90% or

= 2-Amino-2-methyl-1-propanol (90% or less)

Ammonium sulfamateAmyl acetate (all isomers)Amyl acetate (all isomers)

= sec-Amyl acetate
= tert-Amyl acetate
= n-Amyl alcohol
= n-Amyl alcohol
= n-Valeraldehyde
= Valeraldehyde
= n-Amyl chloride

## **COMPOUND NAMES**

Amyl chloride
Amyl ethyl ketone
Amyl hydrosulfide
n-Amyl mercaptan
n-Amyl methyl ketone

n-Amyl nitrate
iso-Amyl nitrite
Amyl nitrite
Amyl phthalate
n-Amyl propionate
Amyl sulfhydrate
Amyl thioalcohol
n-Amylcarbinol
Amylcarbinol
alpha-n-Amylene

n-Amyltrichlorosilane = Anacardic acid =

Anesthesia ether Anesthetic ether Anglislite

"Anhydride" of ammonium carbonate

Anhydrone

Anhydrous aluminum chloride

Anhydrous chloral

Aniline oil

Aniline, 2,6-diethyl Aniline, 2,6-dimethyl

Aniline

Anone

Anilinobenzene Anilinomethane Animal carbon o-Anisic acid Anisoyl chloride p-Anisoyl chloride Anol

Ansar Ansul ether 12' Ansul ether 121

Antimonous bromide

Anthon Anthracene Anthracin

Antimony (III) chloride Antimony (V) chloride Antimony pentachloride Antimony pentafluoride Antimony perchloride Antimony potassium tartrate

Antimony tribromide
Antimony trichloride
Antimony trifluoride
Antimony trioxide
Aouara oil

n-Amyl chloride
Ethyl amyl ketone
n-Amyl mercaptan
n-Amyl mercaptan
n-Amyl methyl ketone
n-Amyl nitrate
iso-Amyl nitrite

iso-Amyl nitrite
 Amyl phthalate
 n-Pentyl propionate
 n-Amyl mercaptan
 n-Amyl mercaptan

= 1-Hexanol = 1-Hexanol = 1-Pentene

=

n-AmyltrichlorosilaneOil, misc: cashew nut shell

Ethyl etherEthyl etherLead sulfate

Ammonium carbamateMagnesium perchlorateAluminum chlorideTrichloroacetaldehyde

= Aniline

= 2,6-Diethylaniline= 2,6-Dimethylaniline

= Aniline

DiphenylamineN-MethylanilineCharcoal

Methyl salicylate
 Anisoyl chloride
 Anisoyl chloride
 Cyclohexanol
 Cyclohexanone
 Cacodylic acid

Ethylene glycol dimethyl etherEthylene glycol dimethyl ether

TrichlorfonAnthraceneAnthracene

Antimony tribromide
 Antimony trichloride
 Antimony pentachloride
 Antimony pentachloride
 Antimony pentafluoride
 Antimony pentachloride
 Antimony potassium tartrate

Antimony potassium
 Antimony tribromide
 Antimony trichloride
 Antimony trifluoride
 Antimony trioxide
 Oils, edible: tucum

## **COMPOUND NAMES**

APO = Tris(Aziridinyl)phosphine oxide

Aqua ammonia = Ammonium hydroxide (<28% aqueous

ammonia)

Aquacide = Diquat

Aqueous ammonia = Ammonium hydroxide (<28% aqueous

ammonia)

Arsenic trisulfide

Arcosolv = Dipropylene glycol methyl ether Arcton 6 = Dichlorodifluoromethane

Arcton 9 = Trichlorofluoromethane

Argentous fluoride = Silver fluoride Argentous oxide = Silver oxide Arizole = Oil, misc: pine

Arochlor = Polychlorinated biphenyl Arosol = Ethylene glycol phenyl ether

Arsenic acid anhydride = Sodium cacodylate
Arsenic acid anhydride = Arsenic pentaoxide
Arsenic chloride = Arsenic trichloride

Arsenic chloride = Arsenic trichloride
Arsenic disulfide = Arsenic disulfide
Arsenic oxide = Arsenic pentaoxide
Arsenic pentaoxide = Arsenic pentaoxide

Arsenic pentoxide = Arsenic acid
Arsenic pentoxide = Arsenic pentaoxide
Arsenic sesquioxide = Arsenic trioxide
Arsenic trichloride = Arsenic trichloride
Arsenic trioxide = Arsenic trioxide
Arsenic trisulfide = Arsenic trisulfide

Arsenic yellow = Arsenic
Arsenic, metallic = Arsenic
Arsenic, solid = Arsenic
Arsenic = Arsenic

Arsenious acid, potassium salt = Potassium arsenite
Arsenious chloride = Arsenic trichloride
Arsenous acid anhydride = Arsenic trioxide
Arsenous acid, calcium salt = Calcium arsenite

Arsenous acid = Arsenic trioxide
Arsenous chloride = Arsenic trichloride
Arsenous oxide = Arsenic trioxide
Arsicodile = Sodium cacodylate
Arsycodile = Sodium cacodylate

Arthodibrom = Naled

Artic = Methyl chloride Artificial cinnabar = Mercuric sulfide

Asphalt blending stocks: roofers flux = Asphalt blending stocks: roofers flux Asphalt blending stocks: straight run = Asphalt blending stocks: straight run

residue residue
Asphalt cements = Asphalt
Asphalt = Asphalt
Asphaltic bitumen = Asphalt

Asphaltum oil = Asphalt blending stocks: roofers flux Asphaltum = Asphalt blending stocks: roofers flux

ATE = Triethylaluminum

Atrazine = Atrazine Australene = Pinene

## **COMPOUND NAMES**

Avitrol 4-Aminopyridine Avlothane Hexachloroethane Dimethyl phthalate Avolin 10-Azaanthracene Acridine

Hexamethylenimine Azacycloheptane

1-Azanaphthalene Quinoline Azinphos methyl Azinphos methyl

Ethyleneimine Azirane = Ethyleneimine Aziridine =

Tris(Aziridinyl)phosphine oxide Tris(1-Aziridinyl) phosphine oxide = Tris(Aziridinyl)phosphine oxide Tris(Aziridinyl)phosphine oxide =

Azoic diazo component 37 4-Nitroaniline Azoic diazo component 6 2-Nitroaniline Banana oil = Isoamylacetate

Banana oil = sec-Amyl acetate Banvel D Dicamba

Barium binoxide Barium peroxide

Barium carbonate Barium carbonate Barium chlorate monohydrate Barium chlorate

Barium chlorate Barium chlorate Barium cyanide solid Barium cyanide = Barium cyanide Barium cyanide Barium dioxide Barium peroxide Barium nitrate Barium nitrate =

Barium perchlorate trihydrate Barium perchlorate =

Barium perchlorate Barium perchlorate = Barium permanganate Barium permanganate = Barium peroxide Barium peroxide Barium superoxide Barium peroxide = Basic bismuth choride Bismuth oxychloride = Basic copper acetate Copper subacetate

Basic zirconium chloride Zirconium oxychloride = Battery acid Sulfuric acid

Bay 37344 Mercaptodimethur Bayer 13/59 Trichlorfon

Bearing oil Oils, miscellaneous: spindle

Beet sugar Sucrose Benzal chloride Benzal chloride = Benzaldehyde Benzaldehyde

1-Benzazine Quinoline Benzenamine Aniline =

Benzene-1,3-dicarboxylic acid Isophthalic acid = Benzene chloride Chlorobenzene =

1,2-Benzene dicarboxylic acid, di-(2-Diisobutyl phthalate methylpropyl)ester

Benzene fluoride Fluorobenzene gamma-Benzene hexachloride gamma-Benzene hexachloride Benzene phosphorus dichloride Benzene phosphorus dichloride Benzene phosphorus thiodichloride Benzene phosphorus thiodichloride

Benzene sulfochloride Benzenesulfonyl chloride Benzenesulfonyl chloride Benzene sulfonechloride

Benzene, 1-chloro-2-methyl o-Chlorotoluene Benzene, 1,2,3-trichloro-1,2,3-Trichlorobenzene = Benzene, 1,2,4-trichloro-1,2,4-Trichlorobenzene

# **COMPOUND NAMES**

Benzene, diisopropyl = Diisopropylbenzene (all isomers)

Benzene, hexachloro- = Hexachlorobenzene Benzene, propyl = n-Propylbenzene

Benzene = Benzene

Benzeneamine, 2,6-diethyl- (9ci) = 2,6-Diethylaniline
Benzenecarbinol = Benzyl alcohol
Benzenecarbonyl chloride = Benzoyl chloride
Benzenecarboxylic acid = Benzoic acid
1,2-Benzenedicarboxylic acid anhydride = Phthalic anhydride
1,2-Benzenedicarboxylic acid, di-isononyl = Diisononyl phthalate

ester

1,2-Benzenedicarboxylic acid, di-undecyl = Diundecyl phthalate

ester

1,2-Benzenedicarboxylic acid, diethyl = Diethyl phthalate

ester

1,2-Benzenedicarboxylic acid, dipentyl = Amyl phthalate

ester

1,2-Benzenediol= Catechol1,4-Benzenediol= Hydroquinone1,3-Benzenediol= Resorcinol

Benzenesulfonic (acid) chloride = Benzenesulfonyl chloride Benzenesulfonyl chloride = Benzenesulfonyl chloride Benzenesulfonyl chloride = Benzenesulfonyl chloride

Benzenethiol = Benzenethiol

Benzenethiophosphonyl chloride = Benzene phosphorus thiodichloride

1,2,3-Benzenetriol = Pyrogallic acid Benzidine = Benzidine

Benzinoform = Carbon tetrachloride

Benzo (b) pyridine = Quinoline Benzo (b) quinoline = Acridine

Benzoflex 9-88 SG = Dipropylene glycol dibenzoate
Benzoflex 9-88 = Dipropylene glycol dibenzoate
Benzoflex 9-98 = Dipropylene glycol dibenzoate

Benzole = Benzene
Benzonitrile = Benzonitrile
Benzophenone = Benzophenone
p-Benzoquinone = p-Benzoquinone
1,4-Benzoquinone = p-Benzoquinone

2-Benzothiazolethiol, sodium salt = Sodium 2-mercaptobenzothiazol solution 2-(3h)-Benzothiazolethione, sodium salt = Sodium 2-mercaptobenzothiazol solution

Benzoyl benzene = Benzophenone
Benzoyl chloride = Benzoyl chloride
Benzoyl peroxide = Dibenzoyl peroxide
Benzoyl superoxide = Dibenzoyl peroxide
Benzyl acetate = Benzyl acetate
Benzyl alcohol = Benzyl alcohol

# **COMPOUND NAMES**

Benzvl bromide Benzyl chloride Benzyl chlorocarbonate Benzyl chloroformate Benzyl dichloride Benzyl dimethylamine Benzyl ethanoate

Benzyl ether

Benzyl n-butyl phthalate

Benzylamine

Benzylcarbonyl chloride

Benzyldimethyloctadecylammonium chloride

Benzyldimethylstearyl ammonium chloride

Benzylene chloride Benzylidene chloride

Benzyltrimethylammonium chloride

Beryllia

Beryllium chloride Beryllium fluoride

Beryllium nitrate trihydrate

Beryllium nitrate Beryllium oxide

Beryllium sulfate tetrahydrate

Beryllium sulfate

Beryllium

beta-trichloroethane Betraprone

Betula or gaultheria oil

**BHC** 

p,p'-Bianiline Bibenzene Bichrome

**Bieberite** Biethylene Biformvl

Bioflex 91

(1,1'-Biphenyl)-4,4'-diamine

**Biphenyl** 1,1'-Biphenyl

Bis(2-ethylhexyl) adipate Bis(glycinato) copper

Bis(methylcyclopentadiene)

Bismuth chloride oxide

Bismuth oxychloride Bismuth subchloride Bismuthyl chloride

Bisphenol A - epichlorohydrin

condensate

Bisphenol A diglycidyl ether

Bisphenol A Bitumen Bivinyl

Benzvl bromide Benzyl chloride

Benzyl chloroformate = Benzyl chloroformate Benzal chloride

Benzyl dimethylamine

Benzyl acetate Dibenzyl ether =

Butyl benzyl phthalate =

Benzylamine =

Benzyl chloroformate

Benzyldimethyloctadecylammonium

chloride

Benzyldimethyloctadecylammonium

chloride

Benzal chloride Benzal chloride

Benzyltrimethylammonium chloride

Beryllium oxide Beryllium chloride Beryllium fluoride = Beryllium nitrate Beryllium nitrate Beryllium oxide = Beryllium sulfate =

Beryllium =

=

1,1,2-Trichloroethane beta-Propiolactone = Methyl salicylate =

Beryllium sulfate

gamma-Benzene hexachloride

Benzidine = Diphenvl

Potassium dichromate

Cobalt sulfate Butadiene Glvoxal

Dinonyl phthalate =

Benzidine Diphenyl Diphenyl =

Di-(2-ethylhexyl) adipate =

Copper glycinate =

Methylcyclopentadiene dimer

Bismuth oxychloride = Bismuth oxychloride Bismuth oxychloride = Bismuth oxychloride =

Bisphenol A diglycidyl ether

Bisphenol A diglycidyl ether

Bisphenol A = Asphalt = Butadiene

## **COMPOUND NAMES**

Black leaf 40 (40% water solution) = Nicotine sulfate

Bladan = Tetraethyl pyrophosphate
Bleach = Sodium hypochlorite solution

Blue oil = Aniline

Blue verdigris = Copper subacetate
Blue vitriol = Copper sulfate
Boiler compound, liquid = Boiler compound, liquid

Boiler compound, liquid = Boiler compound, liquid Boletic acid = Fumaric acid Boracic acid = Boric acid

Boracic acid = Boric acid
Borax, anhydrous = Sodium borate
Boric acid = Boric acid

Borohydride = Sodium borohydride Borohydride = Sodium hydroxide solution

Boron chloride = Boron trichloride Boron tribromide = Boron tribromide Boron trichloride = Boron trichloride

Bottled gas = Liquefied petroleum gas

Box toe gum = Collodion

BP = Dibenzoyl peroxide BPO = Dibenzoyl peroxide

Brimstone = Sulfur

Brocide = Ethylene dichloride
Bromallylene = Allyl bromide
Bromelite = Beryllium oxide

Bromex = Naled

Bromine pentafluoride = Bromine pentafluoride Bromine trifluoride = Bromine trifluoride

Bromine = Bromine

1-Bromo-2-propanone = Bromoacetone

Bromoacetone = Bromoacetone

Bromoacetyl bromide = Bromoacetyl bromide

Bromobenzene = Bromobenzene
Bromobenzol = Bromobenzene
1-Bromobutane = 1-Bromobutane
2-Bromobutane = 2-Bromobutane
Bromoethanoyl bromide = Bromoacetyl bromide

Bromoform = Bromoform

Bromofume = Ethylene dibromide
Bromomethane = Methyl bromide
Bromomethyl methyl ketone = Bromoacetone

2-Bromopentane 2-Bromopentane = 1-Bromopropane 1-Bromopropane 3-Bromopropene Allyl bromide 3-Bromopropylene = Allyl bromide Bromotoluene, alpha Benzyl bromide = omega-Bromotoluene Benzyl bromide alpha-Bromotoluene Benzyl bromide =

(-)Brucine dihydrate = Brucine Brucine = Brucine

BTMAC = Benzyltrimethylammonium chloride

Bunker C oil = Oils, fuel: no. 6 1,3-Butadiene, 1,1,2,3,4,4-hexachloro- = Hexachlorobutadiene

## **COMPOUND NAMES**

Butadiene 1,3-Butadiene Butaldehyde Butanal

**Butane** 

1-Butanamine, n-butyl

n-Butane
1,4-Butanedicarboxylic acid
1,4-Butanediol
Butanediol
Butanenitrile
1-Butanethiol
Butanic acid

Butanoic acid, 3-oxo-methyl ester (9ci)

Butanoic acid, butyl ester Butanoic acid, methyl ester

Butanoic acid

1-Butanol, 3-methoxyacetate

Butanol 1-Butanol 2-Butanol

2-Butanone peroxide 2-Butanone, peroxide

2-Butanone

Butanox M50, M105, LPT

Butanoyl chloride 3-Buten-2-one 1-Buten-3-ol, 3-methyl

trans-2-Butenal cis-2-Butene-1, 4-diol 2-Butene-1, 4-diol 1-Butene oxide Butene resins 1-Butene

trans-Butenedioic acid cis-Butenedioic acid cis-Butenedioic anhydride

1,4-Butenediol

1-Butoxy-2,3-epoxypropane

1-Butoxy butane

Butoxydiethylene glycol

Butoxydiglycol

2-Butoxyethanol acetate

2-Butoxyethanol

2-(2-Butoxyethoxy) ethanol acetate

2-(2-Butoxyethoxy) ethanol 2-Butoxyethyl acetate Bis(2-Butoxyethyl) ether

Butoxyl

Butoxypropyl trichlorophenoxyacetate Butryic acid, 2-hydroxy-4-methylthio-

Butter of antimony Butter of arsenic ButadieneButadiene

n-Butyraldehyden-ButyraldehydeDi-n-butylamine

Butane
Butane
Adipic acid
1,4-Butanediol
Butylene glycol
Butyronitrile
n-Butyl mercaptan
n-Butyric acid

Methyl acetoacetateButyl butyrateMethyl butyraten-Butyric acid

3-Methoxybutyl acetate

n-Butyl alcohol
n-Butyl alcohol
sec-Butyl alcohol
2-Butanone peroxide
2-Butanone peroxide
Methyl ethyl ketone
2-Butanone peroxide
Methyl chloride
Methyl vinyl ketone
Methyl vinyl ketone
Methyl butenol

Crotonaldehyde
1,4-Butenediol
1,4-Butylene oxide
Polybutene
Butylene

Fumaric acid

Maleic acid
Maleic anhydride
1,4-Butenediol
n-Butyl glycidyl ether

Di-n-butyl etherDiethylene glycol monobutyl etherDiethylene glycol monobutyl ether

= Ethylene glycol monobutyl ether acetate

Ethylene glycol monobutyl etherDiethylene glycol monobutyl ether

acetate

Diethylene glycol monobutyl etherEthylene glycol monobutyl ether acetate

Diethylene glycol dibutyl ether3-Methoxybutyl acetate

= 2,4,5-T esters

= 2-Hydroxy-4-(methylthio)-butanoic acid

Antimony trichlorideArsenic trichloride

## **COMPOUND NAMES**

Buttercup vellow

Butyl "carbitol" acetate

Zinc chromate

Diethylene glycol monobutyl ether

Butvl "carbitol"

Butyl "cellosolve" acetate

Butyl 2-methacrylate Butyl 2-methyl-2-propenoate n-Butyl 2-propenoate

Butyl 2,4-dichlorophenoxyacetate Butyl 2,4,5- trichlorophenoxyacetate

Butyl a-hydroxypropionate

n-Butvl acetate Butyl acetate sec-Butyl acetate tert-Butvl acetate iso-Butyl acrylate n-Butyl acrylate Butyl acrylate Butyl alcohol n-Butyl alcohol sec-Butyl alcohol tert-Butyl alcohol

n-Butyl alpha-methylacrylate Butyl benzyl phthalate

n-Butvl bromide Butyl bromide sec-Butyl bromide Butyl butanoate Butyl butyrate Butyl cellosolve

Butvl aldehvde

n-Butyl chloride

Butvl chloride

n-Butvl chlorocarbonate n-Butyl chloroformate

Butvl dialvme

Butvl ethanoate Butyl ether n-Butyl ether Butyl ethyl ketone n-Butyl formal n-Butyl formate n-Butyl glycidyl ether

tert-Butyl hydroperoxide

Butvl lactate n-Butyl mercaptan n-Butyl methacrylate Butvl methacrylate tert-Butyl methyl ether n-Butyl methyl ketone Butyl phthalate

n-Butyl propionate Butyl titanate monomer

Butyl titanate

acetate

Diethylene glycol monobutyl ether =

Ethylene glycol monobutyl ether acetate

n-Butyl methacrylate n-Butyl methacrylate = n-Butyl acrylate = 2.4-D esters =

2,4,5-T esters = **Butyl lactate** 

n-Butvl acetate n-Butyl acetate = sec-Butyl acetate tert-Butvl acetate iso-butyl acrylate

n-Butyl acrylate n-Butyl acrylate n-Butyl alcohol n-Butyl alcohol sec-Butyl alcohol =

n-Butvraldehvde n-Butyl methacrylate = Butyl benzyl phthalate

tert-Butyl alcohol

1-Bromobutane 1-Bromobutane 2-Bromobutane Butyl butyrate = Butyl butyrate =

Ethylene glycol monobutyl ether

Butyl chloride = Butvl chloride

n-Butvl chloroformate n-Butyl chloroformate

Diethylene glycol dibutyl ether

n-Butvl acetate Di-n-butyl ether = Di-n-butyl ether = Ethyl butyl ketone n-Valeraldehyde = n-Butyl formate n-Butyl glycidyl ether = tert-Butyl hydroperoxide

**Butvl** lactate n-Butyl mercaptan n-Butyl methacrylate = n-Butvl methacrvlate Methyl tert-butyl ether Methyl n-butyl ketone

n-Butyl propionate = Tetrabutyl titanate = Tetrabutyl titanate

Dibutyl phthalate

## **COMPOUND NAMES**

Butyl toluene =

Butyl, decyl, cetyl-eicosyl methacrylate Butyl, decyl, cetyl, eicosyl 2-methyl-2-

propenoate

Butylacetic acid
Butylaldechyde
iso-Butylamine
n-Butylamine
Butylamine
Mono-n-Butylamine
sec-Butylamine
tert-Butylamine

n-Butylcarbinol
n-Butylcarbinyl chloride
2-Butylene dichloride
1,4-Butylene glycol
Butylene glycol
Butylene hydrate
Butylene oxide
Alpha-Butylene oxide
1,2-Butylene oxide

Butylene

Butylethylacetaldehyde Butylethylacetaldehyde Butylethylacetic acid Butylethylamine p-tert-Butylphenol p-tert-Butyltoluene 4-tert-Butyltoluene n-Butyltrichlorosilane Butyltrichlorosilane 2-Butyne-1, 4-diol 1.4-Butvnediol iso-Butvraldehvde n-Butyraldehyde Butyraldehyde Butyric acid nitrile Butyric acid, butyl ester Butyric acid, ethyl ester

Butyric acid, methyl ester

n-Butyric acid
Butyric acid
Butyric aldehyde
Butyric ether
Butyrol chloride
Butyronitrile
n-Butyryl chloride
Butyryl chloride
C-1297
C-8 acid

Cadmium acetate dihydrate

Cadmium acetate

Cacodylic acid

Cadmium bromide tetrahydrate

Butyl toluene

Butyl, decyl, cetyl-eicosyl methacrylate

Butyl, decyl, cetyl-eicosyl methacrylate

Hexanoic acid
n-Butyraldehyde
Isobutylamine
n-Butylamine
n-Butylamine
n-Butylamine
sec-Butylamine
tert-Butylamine
n-Amyl alcohol
n-Amyl chloride

= n-Amyl chloride = Dichlorobutene = 1,4-Butanediol = Butylene glycol = sec-Butyl alcohol = 1,2-Butylene oxide = 1,2-Butylene oxide = 1,2-Butylene oxide

Butylene

Ethylhexaldehyde Ethylhexaldehyde = 2-Ethylhexanoic acid N-Ethyl-n-butylamine p-tert-butylphenol = Butyl toluene Butyl toluene Butyltrichlorosilane = Butyltrichlorosilane 1,4-Butynediol = 1.4-Butvnediol iso-butvraldehvde n-Butyraldehyde n-Butyraldehyde Butvronitrile Butyl butyrate = Ethyl butyrate = Methyl butyrate n-Butyric acid = n-Butyric acid = n-Butyraldehyde =

Lauric acid
Octanoic acid
Cacodylic acid
Cadmium acetate
Cadmium acetate
Cadmium bromide

Ethyl butyrate

Butvronitrile

Butvrvl chloride

Butyryl chloride

Butvrvl chloride

=

=

## **COMPOUND NAMES**

Cadmium bromide = Cadmium bromide
Cadmium chloride = Cadmium chloride
Cadmium fluoborate solution = Cadmium fluoroborate
Cadmium fluoborate = Cadmium fluoroborate

Cadmium fluoroborate = Cadmium fluoroborate
Cadmium fume = Cadmium oxide
Cadmium nitrate tetrahydrate = Cadmium nitrate
Cadmium nitrate = Cadmium nitrate
Cadmium oxide = Cadmium oxide

Cadmium sulfate=Cadmium sulfateCadox HDP=Cyclohexanone peroxideCadox PS=Di-(p-chlorobenzoyl) peroxideCadox TBH=tert-Butyl hydroperoxideCake aluminum=Aluminum sulfate

Cake aluminum = Aluminum sulfate
Calamine = Zinc carbonate
Calcium abietate = Calcium resinate
Calcium abietate = Calcium resinate

Calcium alkylaromatic sulfonate = Dodecylbenzenesulfonic acid, calcium

salt

Calcium alkylbenzenesulfonate = Dodecylbenzenesulfonic acid, calcium

salt

Calcium arsenate Calcium arsenate Calcium arsenite solid Calcium arsenite Calcium arsenite Calcium arsenite Calcium biphosphate Calcium phosphate Calcium carbide Calcium carbide = Calcium chlorate Calcium chlorate \_ Calcium chloride hydrates Calcium chloride

Calcium chloride, anhydrous Calcium chloride Calcium chloride Calcium chloride = Calcium chromate (vi) Calcium chromate Calcium chromate dihydrate = Calcium chromate Calcium chromate Calcium chromate Calcium cvanide Calcium cyanide Calcium dioxide Calcium peroxide = Calcium fluoride Calcium fluoride

Calcium hydroxide Calcium hydroxide Calcium hypochlorite Calcium hypochlorite = Calcium nitrate tetrahydrate Calcium nitrate = Calcium nitrate Calcium nitrate Calcium oxide Calcium oxide = Calcium peroxide Calcium peroxide = Calcium phosphate Calcium phosphate = Calcium phosphide Calcium phosphide Calcium pyrophosphate Calcium phosphate Calcium resinate, fused Calcium resinate Calcium resinate Calcium resinate

Calcium rosin = Calcium resinate
Calcium superphosphate = Calcium phosphate

Calcium = Calcium

Calochlor = Mercuric chloride
Calomel = Mercurous chloride

Camphene = Camphene Camphor oil = Camphor oil

## **COMPOUND NAMES**

Cane sugar Sucrose Capraldehyde Decaldehyde n-Capric acid Decanoic acid Capric alcohol n-Decyl alcohol Capric aldehyde Decaldehyde Caprinic acid Decanoic acid Caproaldehyde n-Hexaldehyde n-Caproic acid Hexanoic acid epsilon-Caprolactam Caprolactam = Caprolactam Caprolactam = Capronaldehyde n-Hexaldehyde Capronic acid Hexanoic acid Capronic aldehyde n-Hexaldehyde = n-Caproylaldehyde n-Hexaldehyde Caprylene = 1-Octene n-Caprylic acid Octanoic acid Captan Captan

Carbamaldehyde Formamide

Carbamic acid, ammonium salt Ammonium carbamate

Carbamide peroxide Urea peroxide Carbamide Urea =

Carbaryl Carbaryl Carbide Calcium carbide

Carbitol Diethylene glycol monoethyl ether

Carbobenzoxy chloride Benzyl chloroformate

Carbofuran Carbofuran =

Carbolic oil (mixture) Carbolic acid =

Carbolic acid Phenol

Carbolic oil (mixture) Carbolic oil (mixture) = Carbon bisulfide Carbon disulfide = Carbon dioxide Carbon dioxide Carbon disulfide Carbon disulfide Carbon monoxide Carbon monoxide Carbon oxyfluoride Carbon oxvfluoride Carbon tetrachloride Carbon tet

Carbon tetrachloride Carbon tetrachloride Carbonic acid gas Carbon dioxide Carbonic acid, diethyl ester Diethyl carbonate = Carbonic acid, monoammonium salt Ammonium bicarbonate Thallium carbonate

Carbonic acid, thallium (1+) salt Carbonic anhydride Carbon dioxide Carbonic difluoride Carbon oxyfluoride n-Butyl chloroformate Carbonochloridic acid, butyl ester =

Carbonyl chloride Phosgene Carbonyl diamine peroxide Urea peroxide Carbonyl difluoride Carbon oxyfluoride Carbonyl fluoride Carbon oxyfluoride

Carbonvldiamide Urea Carboxylbenzene Benzoic acid = Carene Carene

3-Carene Carene Carolid AL Diphenyl =

Carpeting medium Asphalt blending stocks: straight run

=

residue

# **COMPOUND NAMES**

Carthamus tinctorius oil Carwinate 125 M

Cashew nutshell liquid Cashew nutshell oil

Casoron

Catalyst 9915

Catechin Catechol

Caustic arsenic chloride Caustic potash solution Caustic potash Caustic soda solution

Caustic soda Cellosolve acetate

Cellosolve acetate

Cellosolve

Cellosolve

Cellulose nitrate solution

Cetyl sodium sulfate

Cetyltrimethylammonium chloride

solution

CGA24705

Chaloxyd MEKP-ha 1, -la 1

Chamber acid Charcoal Chem bam Chile saltpeter

Chinese red Chinese tannin Chinese tannin Chinoline Chloracetic acid

Chloracetic acid

Chloracetyl chloride Chloral

Chlorate of potash Chlorate of potassium Chlorate of soda

Chlorate of soda

Chlorbenzal Chlordan Chlordane Chlordecone

2-Chlorethanol Chlorethylene

Chlorex Chloride of amyl

Chlorinated biphenvl Chlorinated hydrochloric ether

Chlorine trifluoride

Chlorine

2-Chloro-1-ethanal 2-Chloro-1-hydroxybenzene 3-Chloro-1-methylbenzene

Oils. edible: safflower

Diphenylmethane diisocyanate Oil. misc: cashew nut shell Oil. misc: cashew nut shell

Dichlobenil

Benzyl dimethylamine

Catechol = Catechol

= Arsenic trichloride = Caustic potash solution Potassium hydroxide Caustic soda solution Sodium hydroxide = = 2-Ethoxyethyl acetate

Ethylene glycol monoethyl ether acetate

2-Ethoxyethanol

Ethylene glycol monoethyl ether

= Collodion

Hexadecyl sulfate, sodium salt =

Hexadecyltrimethylammonium chloride

Metolachlor

2-Butanone peroxide

Sulfuric acid = Charcoal Nabam =

Sodium nitrate Mercuric sulfide Tannic acid Tannic acid = Quinoline

Chloroacetic acid

Chloroacetic acid (80% or less)

Chloroacetyl chloride Trichloroacetaldehyde Potassium chlorate Potassium chlorate Sodium chlorate

Sodium chlorate solution

Benzal chloride = Chlordane Chlordane = Kepone =

Ethylene chlorohydrin

Vinvl chloride

2,2-Dichloroethyl ether

n-Amyl chloride =

Polychlorinated biphenyl 1.1-Dichloroethane Chlorine trifluoride

Chlorine

Chloroacetaldehyde = o-Chlorophenol = m-Chlorotoluene

## **COMPOUND NAMES**

2-Chloro-1-methylbenzene 4-Chloro-1-methylbenzene 1-Chloro-1-nitropropane

3-Chloro-1, 2-propylene oxide

2-Chloro-1, 3-butadiene

1-Chloro-1,1,2,2-tetrafluoroethane

5-Chloro-2-aminotoluene 4-Chloro-2-methylaniline 3-Chloro-2-methylpropene 1-Chloro-2-nitrobenzene 1-Chloro-2,3-epoxypropane 1-Chloro-3-methylbenzene 2-Chloro-4-ethylamino-6-1-Chloro-4-methylbenzene

Chloroacetaldehyde, monomer

Chloroacetaldehyde

4-Chloro-o-toluidine

Chloroacetic acid (80% or less) Chloroacetic acid, ethyl ester

Chloroacetic acid, methyl ester

Chloroacetic acid Chloroacetophenone

omega-Chloroacetophenone alpha-Chloroacetophenone Chloroacetyl chloride 2-Chloroallyl chloride p-Chloroaniline 4-Chloroaniline Chlorobenzene

Bis-(p-Chlorobenzoy) peroxide p-Chlorobenzoyl peroxide p,p'-Chlorobenzoyl peroxide 2-Chlorobuta-1, 3-diene 2-Chlorobutadiene 1-Chlorobutane

Chlorocarbonic acid, methyl ester Chlorocarbonic acid, n-butyl ester

Chlorodifluoromethane

4-Chlorobutyronitrile

Chloroethanal Chloroethane Chloroethanoic acid 2-Chloroethanol 2-Chloroethyl alcohol Bis (2-Chloroethyl) ether

Chloroform

Chloroformic acid dimethylamide Chloroformic acid. benzvl ester Chloroformic acid, benzyl ester Chloroformic acid, ethyl ester Chloroformic acid, methyl ester

Chloroformic acid, n-butyl ester

Chloroformyl chloride

Chlorohydrins

o-Chlorotoluene p-Chlorotoluene

1-Chloro-1-nitropropane

**Epichlorohydrin** = Chloroprene =

Monochlorotetrafluoroethane

4-Chloro-o-toluidine = 4-Chloro-o-toluidine = Methallyl chloride = o-Chloronitrobenzene = **Epichlorohydrin** m-Chlorotoluene =

Atrazine =

p-Chlorotoluene 4-Chloro-o-toluidine Chloroacetaldehyde Chloroacetaldehyde

= Chloroacetic acid (80% or less)

Ethyl chloroacetate = Methyl chloroacetate Chloroacetic acid = Chloroacetophenone Chloroacetophenone Chloroacetophenone = Chloroacetyl chloride = 2,3-Dichloropropene = p-chloroaniline = p-chloroaniline

Chlorobenzene Di-(p-chlorobenzoyl) peroxide = Di-(p-chlorobenzoyl) peroxide = Di-(p-chlorobenzoyl) peroxide

Chloroprene Chloroprene = Butyl chloride 4-Chlorobutyronitrile = Methyl chloroformate n-Butyl chloroformate = Chlorodifluoromethane = Chloroacetaldehyde Ethyl chloride

Chloroacetic acid (80% or less) =

Ethylene chlorohydrin = Ethylene chlorohydrin 2.2-Dichloroethyl ether

Chloroform

=

N,N-Dimethylcarbamoyl chloride =

Benzyl chloroformate Benzyl chloroformate = Ethyl chloroformate Methyl chloroformate n-Butyl chloroformate =

Phosgene = Chlorohydrins

## **COMPOUND NAMES**

4,4'-dichloro-alpha-trichloromethyl

benzhvdrol

2,2'-Dichloroisopropyl ether

Methallyl chloride

Methyl chloride

gamma-Chloroisobutvlene

Bis (2-Chloroisopropyl) ether

Chloromethane

Chloromethyl methyl ether Chloromethyl methyl ether = Chloromethyl phenyl ketone Chloroacetophenone = Chloromethyloxirane **Epichlorohydrin** o-Chloronitrobenzene o-Chloronitrobenzene = o-Chlorophenol o-Chlorophenol = 4-Chlorophenol p-Chlorophenol = p-Chlorophenol p-Chlorophenol =

1,1-Bis(p-Chlorophenyl)-2,2,2-

trichloroethanol

4-Chlorophenylamine p-chloroaniline = Trichlorfon Chlorophos Chloropicrin = Chloropicrin Chloroprene Chloroprene beta-Chloroprene Chloroprene 1-Chloropropane = n-Propyl chloride 3-Chloropropanoic acid 3-Chloropropionic acid

3-Chloropropene Allyl chloride 2-Chloropropionic acid 2-Chloropropionic acid = alpha-Chloropropionic acid 2-Chloropropionic acid beta-Chloropropionic acid 3-Chloropropionic acid 3-Chloropropionic acid 3-Chloropropionic acid = Epichlorohydrin =

gamma-Chloropropylene oxide 3-Chloropropylene Allyl chloride = Chlorosulfonic acid Chlorosulfonic acid = Chlorosulfuric acid Chlorosulfonic acid Chlorotetrafluoroethane Monochlorotetrafluoroethane

Chlorothene

Trichloroethane = omega-Chlorotoluene Benzyl chloride = alpha-Chlorotoluene = Benzyl chloride 3-Chlorotoluene m-Chlorotoluene m-Chlorotoluene m-Chlorotoluene 2-Chlorotoluene o-Chlorotoluene o-Chlorotoluene o-Chlorotoluene p-Chlorotoluene p-Chlorotoluene 4-Chlorotoluene p-Chlorotoluene = Trifluorochloroethylene Chlorotrifluoroethylene

Chlorotrifluoromethane Monochlorotrifluoromethane Chlorotrimethylsilane Trimethylchlorosilane = n-Amyl chloride 1-Chlorpentane =

Chlorpyrifos Dursban =

Chlorsulfonic acid Chlorosulfonic acid Chlorthepin Endosulfan Chlorylen Trichloroethylene =

CHP Cumene hydroperoxide = Chromic (III) acetate Chromic acetate

Chromic acetate Chromic acetate Chromic acid, dilithium salt Lithium chromate Chromic acid, strontium salt (1:1) Strontium chromate Chromic acid Chromic anhydride =

Chromic anhydride Chromic anhydride = Chromic anhydride Chromic oxide

## **COMPOUND NAMES**

Chromic sulfate

Chromic sulfate Chromium (VI) dioxychloride

Chromyl chloride Chromium acetate Chromic acetate Chromium chloride Chromous chloride Chromium dichloride Chromous chloride Chromium III sulfate Chromic sulfate Chromium lithium oxide Lithium chromate = Chromium oxychloride Chromyl chloride = Chromium sulfate Chromic sulfate = Chromium triacetate Chromic acetate Chromic anhydride Chromium trioxide Chromous chloride Chromous chloride

Chromyl chloride Chromyl chloride = Cianurina = Mercuric cyanide

Citric acid, diammonium salt = Ammonium citrate, dibasic

Citric acid Citric acid

Clorox Sodium hypochlorite

Clorox = Sodium hypochlorite solution

Co-ral Coumaphos = Coal tar pitch Coal tar pitch

Coalite NTP Trixylenyl phosphate = Cobalt (II) bromide Cobalt bromide (ous) Cobalt (II) chloride Cobalt chloride Cobalt (II) fluoride Cobalt fluoride

Cobalt acetate tetrahydrate Cobalt acetate Cobalt acetate Cobalt acetate = Cobalt amino sulfonate Cobalt sulfamate Cobalt bromide (ous) Cobalt bromide (ous) Cobalt chloride Cobalt chloride

Cobalt dibromide Cobalt bromide (ous) = Cobalt difluoride Cobalt fluoride Cobalt diformate Cobalt formate Cobalt fluoride Cobalt fluoride Cobalt formate Cobalt formate Cobalt nitrate Cobalt nitrate Cobalt sulfamate Cobalt sulfamate Cobalt sulfate Cobalt sulfate Cobalt(II) acetate Cobalt acetate \_ Cobalt(II) nitrate Cobalt nitrate Cobalt(II) sulfate Cobalt sulfate

Cobaltous acetate Cobalt acetate Cobalt bromide (ous) Cobaltous bromide Cobaltous chloride dihydrate Cobalt chloride = Cobaltous chloride hexahydrate Cobalt chloride

Cobaltous chloride Cobalt chloride Cobaltous formate Cobalt formate Cobaltous nitrate hexahydrate Cobalt nitrate Cobaltous nitrate Cobalt nitrate Cobaltous sulfamate = Cobalt sulfamate

Cobaltous sulfate heptahydrate Cobalt sulfate Oils, edible: coconut Coconut butter Coconut oil Oils, edible: coconut = Cocure 26 Phenylmercuric acetate =

Codal Metolachlor

Common verdigris

Copper oxalate

Coumaphos

## **COMPOUND NAMES**

Codoil = Oils, miscellaneous: resin
Codoil = Oils, miscellaneous: rosin

Collodion=CollodionCologne spirit=Ethyl alcoholColonial spirit=Methyl alcoholColumbian spirit=Methyl alcohol

Combustion improver C-12 = Methylcyclopentadienylmanganese

tricarbonyl
= Copper subacetate
= Sodium fluoroacetate

Copper oxalate

Coumaphos

Compound 1080 = Sodium fluoroacetate
Condensed phosphoric acid = Polyphosphoric acid

Conoco SA 597 = Dodecylbenzenesulfonic acid

Copper acetate = Copper acetate
Copper acetoarsenite = Copper acetoarsenite

Copper ammonium sulfate = Copper sulfate, ammoniated

Copper fluoroborate Copper fluoroborate Copper formate Copper formate Copper glycinate Copper glycinate = Copper iodide Copper iodide Copper lactate Copper lactate = Copper monobromide Copper bromide (ous) = Copper naphthenate Copper naphthenate Copper nitrate Copper nitrate = Copper orthoarsenite Copper arsenite =

Copper subacetate = Copper subacetate
Copper sulfate pentahydrate = Copper sulfate

Copper sulfate, ammoniated = Copper sulfate, ammoniated

Copper sulfate = Copper sulfate
Copper tartrate = Copper tartrate
Copper(II) fluoborate solution = Copper fluoroborate
Copperas

Copperas = Ferrous sulfate
Copra oil = Oils, edible: coconut
Corflex 880 = Diisooctyl phthalate
Corn sugar solution = Dextrose solution

Corn syrup = Corn syrup
Corrosive mercury chloride = Mercuric chloride

Cosan PMA-100 = Phenylmercuric acetate
Cotoran multi = Metolachlor

Crankcase oil = Oils, miscellaneous: lubricating
Crankcase oil = Oils, miscellaneous: motor

=

Creosote (wood) = Creosote (wood)
Creosote oil = Creosote, coal tar
Creosote, coal tar = Creosote (wood)
Creosote = Creosote (wood)

Creosote = Creosote (wood)
Cresol, epoxypropyl ether = Cresyl glycidyl ether

m-Cresol = m-Cresol

## **COMPOUND NAMES**

 3-Cresol
 = m-Cresol

 o-Cresol
 = o-Cresol

 2-Cresol
 = o-Cresol

 p-Cresol
 = p-Cresol

 Cresols
 = Cresols

Cresyl glycidyl ether = Cresyl glycidyl ether

Cresylate spent caustic solution = Cresylate spent caustic solution

Cresylate spent caustic = Cresylate spent caustic solution

m-Cresylic acid = m-Cresol
Cresylic acid = Xylenol
Cresylic acids = Cresols

o-Cresylphosphate (>= Tricresyl phosphate (>= 1% ortho

isomer)

Croplas EH = Ethyl hexyl tallate Crotenaldehyde = Crotonaldehyde

Croton oil = Oils, miscellaneous: croton
Croton tiglium oil = Oils, miscellaneous: croton

Crotonaldehyde = Crotonaldehyde Crotonic aldehyde = Crotonaldehyde

Crotonoel = Oils, miscellaneous: croton

Crude epichlorohydrin = Chlorohydrins
Crystallized verdigris = Copper acetate
CTF = Chlorine trifluoride
CTFE = Trifluorochloroethylene
Cucumber dust = Calcium arsenate

Cumene bottoms = Diisopropylbenzene (all isomers)

Cumene hydroperoxide = Cumene hydroperoxide

Cumene = Cumene
Cumol = Cumene

Cumyl hydroperoxide = Cumene hydroperoxide Cuprammonium sulfate = Copper sulfate, ammoniated

Cupric acetate monohydrate = Copper acetate
Cupric acetate, basic = Copper subacetate
Cupric amino acetate = Copper glycinate

Cupric ammine sulfate = Copper sulfate, ammoniated

Cupric arsenite=Copper arseniteCupric bromide, anhydrous=Copper bromideCupric chloride dihydrate=Copper chlorideCupric diformate=Copper formateCupric fluoborate solution=Copper fluoroborate

Cupric green = Copper nuoroborate

Cupric green = Copper arsenite

Cupric oxalate trihydrate = Copper oxalate

Cupric sulfate = Copper sulfate

Cupricin = Copper cyanide (ous)

Cupriethylenediamine hydroxide solution = Cupriethylenediamine solution = Cupriethylenediamine solution

Cuprous cyanide = Copper cyanide (ous)
Cuprous iodide = Copper iodide
Curaterr = Cyanoacetic acid = Cyanoacetic acid
Cyanide of calcium = Calcium cyanide
Cyanide of zinc = Zinc cyanide

Cyanide = Potassium cyanide

## **COMPOUND NAMES**

Cyanoacetic acid
Cyanoacetonitrile
Cyanobenzene
Cyanoethane
2-Cyanoethanol
Cyanoethylene

Cyanogas A-dust
Cyanogas G-fumigant
Cyanogen bromide
Cyanogen chloride
Cyanogen
Cyanomethane
Cyanopropane
2-Cyanopropene-1

Cyclodan

1,5,9-Cyclododecatriene

Cycloheptane

2,5-Cyclohexadiene-1,4-dione 1,4-Cyclohexadienedione

Cyclohexane Cyclohexanol

Cyclohexanone peroxide

Cyclohexanone
Cyclohexanyl acetate
Cyclohexenyltrichlorosilane
2-Cyclohexyl-4,6-dinitrophenol

Cyclohexyl acetate
Cyclohexyl alcohol
Cyclohexyl ethane
Cyclohexyl ketone
Cyclohexylamine, n-ethyl
Cyclohexylamine, n,n-dimethyl

Cyclohexylamine

N-Cyclohexylethylamine Cyclohexylmethane Cyclopentane, methyl

Cyclopentane Cyclopentene Cyclopropane p-Cymene Cymol

Cythion insecticide D-D soil fumigant

2,4-D esters D.D. turpentine

2,4-D Dalapon

Dalmation-insect powder

2,6-DBN DBP DCEE DCP DDD Cyanoacetic acidPropanedinitrileBenzonitrilePropionitrile

Ethylene cyanohydrin

Acrylonitrile
Calcium cyanide
Calcium cyanide
Cyanogen bromide
Cyanogen chloride

= Cyanogen= Acetonitrile= Butyronitrile= Methacrylonitrile= Endosulfan

= 1,5,9-Cyclododecatriene

= Cycloheptane= p-Benzoquinone= p-Benzoquinone= Cyclohexane= Cyclohexanol

Cyclohexanone peroxide

CyclohexanoneCyclohexyl acetate

Cyclohexenyltrichlorosilane4,6-Dinitro-o-cyclohexyl phenol

Cyclohexyl acetateCyclohexanolEthyl cyclohexaneCyclohexanone

N-Ethylcyclohexylamine

N,N-Dimethylcyclohexylamine

= Cyclohexylamine
= N-Ethylcyclohexylamine
= Methylcyclohexane
= Methyl cyclopentane
= Cyclopentane
= Cyclopentene

Cyclopropanep-Cymenep-CymeneMalathion

Dichloropropene, dichloropropane

mixture

= 2,4-D esters= Turpentine

2,4-Dichlorophenoxyacetic acid2,2-Dichloropropanoic acid

= Pyrethrins
= Dichlobenil
= Dibutyl phthalate
= 2,2-Dichloroethyl ether
= Calcium phosphate

= DDD

## **COMPOUND NAMES**

 $\begin{array}{lll} p,p'\text{-DDT} & = & DDT \\ DDT & = & DDT \\ DDVP & = & Dichlorvos \end{array}$ 

Decaborane = Decaborane Decachloroketone = Kepone

Decahydronaphthalene = Decahydronaphthalene

Decaldehyde = Decaldehyde

Decalin = Decahydronaphthalene

Decanal = Decaldehyde

Bicyclo[4.4.0]Decane = Decahydronaphthalene

n-Decane = Decane
Decane = Decane
1-Decanecarboxylic acid = Undecanoic acid
Decanoic acid = Decanoic acid
Decanoic acid = Decanoic acid

Decanoic acid = Decanoic acid
1-Decanol = n-Decyl alcohol
alpha-Decene = 1-Decene
1-Decene = Mirex

Decyl acrylate, inhibited n-Decyl acrylate = Decyl acrylate n-Decyl acrylate = n-Decyl acrylate n-Decyl acrylate n-Decyl alcohol n-Decyl alcohol = n-Decyl aldehyde Decaldehyde = n-Decylbenzene n-Decylbenzene Decylbenzene n-Decylbenzene =

Decylbenzenesulfonic acid =  $Alkyl(C_{11}, C_{17})$ benzenesulfonic acid

n-Decylic acid = Decanoic acid

Deep lemon yellow = Strontium chromate

DEG = Diethylene glycol

DEHP = Di-(2-ethylhexyl)phthalate
DEHPA = Di-(2-ethylhexyl)phosphoric acid

Dehydrite = Magnesium perchlorate

DEK = Diethyl ketone
Demeton = Demeton
DEN = Diethylamine
Denatured alcohol = Ethyl alcohol

Detergent alkylate # = Dodecylbenzene Detergent HD-90 = Dodecyl benzene sulfonic acid, sodium

salt

Dexol stump remover = Potassium nitrate

Dextrone = Diquat

Dextrose solution = Dextrose solution
Di-(2-chloroethyl) ether = 2,2-Dichloroethyl ether
Di-(2-ethylhexyl) adipate = Di-(2-ethylhexyl) adipate

Di-(2-ethylhexyl) phosphate = Di-(2-ethylhexyl)phosphoric acid Di-(2-ethylhexyl) sulfosuccinate, sodium = Dioctyl sodium sulfosuccinate

salt

**COMPOUND NAMES** 

Di-(2-ethylhexyl)phosphoric acid

Di-(2-ethylhexyl)phthalate Di-(4-chlorobenzoyl) peroxide Di-(6-methylheptyl) phthalate

Di-(p-chlorobenzoyl) peroxide

Di-(p-chlorophenyl)

trichloromethylcarbinol Di-beta-hydroxyethoxyethane

Di-n-amyl phthalate
Di-n-butyl ether
Di-n-butyl ketone
Di-n-butylamine
Di-n-hexyl adipate
Di-n-nonyl phthalate
Di-n-propyl ether
Di-n-propylamine

Di-on

Di-sec-octyl phthalate

Di-syston

2,6-Di-tert-butylphenol Di (2-ethylhexyl) adipate Di (2-ethylhexyl) phthalate Di(2-hydroxyethyl) amine Di(7-methyloctyl) phthalate

Di(ethylene oxide)
Diacetic ether
Diacetone alcohol

Diacetone

Diacetyl peroxide solution

Diacetylmethane

1,6-Diamino-2,2,4(or2,4,4)trimethylhexane

1,11-Diamino-3,6,9-triazaundecane p.p'-Diaminobiphenyl

2,2'-Diaminodiethylamine p-Diaminodiphenyl 1,2-Diaminoethane 1,2-Diaminoethane 1,6-Diaminohexane 2,4-Diaminotoluene Diammonium chromate

Diammonium citrate
Diammonium hydrogen phosphate
Diammonium orthophosphate

Diammonium oxalate

Diammonium salt of zinc EDTA

Diamyl phthalate Diamyl phthalate Diantimony trioxide

Diazinon

Dibenzo [b,e] pyridine

Dibenzol dipropylene glycol ester

Dibenzoyl peroxide Dibenzyl ether Di-(2-ethylhexyl)phosphoric acidDi-(2-ethylhexyl)phthalate

Di-(p-chlorobenzoyl) peroxide

= Diisooctyl phthalate

Di-(p-chlorobenzoyl) peroxide

= 4,4'-dichloro-alpha-trichloromethyl

benzhydrol

Triethylene glycol
Di-n-amyl phthalate
Di-n-butyl ether
Di-n-butyl ketone
Di-n-butylamine
Di-n-hexyl adipate
Dinonyl phthalate
n-Propyl ether
Di-n-propylamine

= Diuron

= Di-(2-ethylhexyl)phthalate

Disulfoton
Dibutylphenol
Dioctyl adipate
Dioctyl phthalate
Diethanolamine
Diisononyl phthalate

= 1,4-Dioxane

Ethyl acetoacetateDiacetone alcoholDiacetone alcoholAcetyl peroxide solution

= Acetylacetone

Trimethyl hexamethylene diamine

= Tetraethylenepentamine

Benzidine

= Diethylenetriamine

= Benzidine

EthylenediamineEthylenediamineHexamethylenediamine

= Hexamethylenediamine

Toluenediamine

Ammonium chromateAmmonium citrate, dibasic

Ammonium citrate, dibasAmmonium phosphateAmmonium phosphate

Ammonium oxalate

Diammonium salt of zinc EDTA

Amyl phthalateDi-n-amyl phthalateAntimony trioxide

DiazinonAcridine

= Dipropylene glycol dibenzoate

Dibenzoyl peroxideDibenzyl ether

## **COMPOUND NAMES**

DIBK Diisobutvl ketone Dibrom Naled 1,2-Dibromo-2,2-dichloroethyl dimethyl Naled

phosphate

1,2-Dibromoethane Ethylene dibromide Ethylene dibromide sym-Dibromoethane Dibromomethane Dibromomethane =

Ethylene glycol dibutyl ether 1,2-Dibutoxyethane 2,2'-Dibutoxyethyl ether Diethylene glycol dibutyl ether Dibutyl carbitol Diethylene glycol dibutyl ether =

Dibutyl cellosolve Ethylene glycol dibutyl ether n-Dibutyl ether Di-n-butvl ether = Dibutyl ether Di-n-butyl ether = Dibutyl oxide = Di-n-butyl ether Dibutyl phthalate Dibutyl phthalate Dibutylamine Di-n-butylamine Dibutylphenol Dibutylphenol

Dicalcium phosphate = Calcium phosphate

Dicamba Dicamba = Dicarbomethoxyzinc Zinc acetate Dichlobenil Dichlobenil Dichlone Dichlone Dichlorfendism Diuron

Dichloricide p-Dichlorobenzene 1,1-Dichloro-1-nitroethane 1,1-Dichloro-1-nitroethane 2,3-Dichloro-1-propane 2,3-Dichloropropene

2,3-Dichloro-1,4-naphthoquinone Dichlone = cis-1,4-Dichloro-2-butene Dichlorobutene trans-1,4-Dichloro-2-butene Dichlorobutene 1,4-Dichloro-2-butene Dichlorobutene = 1,4-Dichloro-2-butylene Dichlorobutene

1,1-Dichloro-2,2-bis(p-chlorophenyl) = DDD ethane

4,4'-Dichloro-alpha-trichloromethyl 4.4'-Dichloro-alpha-trichloromethyl benzhydrol benzhydrol

3,6-Dichloro-o-anisic acid Dicamba Dichloroacetic acid. methyl ester Methyl dichloroacetate

meta-Dichlorobenzene m-Dichlorobenzene m-Dichlorobenzene m-Dichlorobenzene 1,3-Dichlorobenzene m-Dichlorobenzene o-Dichlorobenzene o-Dichlorobenzene ortho-Dichlorobenzene o-Dichlorobenzene 1.2-Dichlorobenzene o-Dichlorobenzene = p-Dichlorobenzene p-Dichlorobenzene

p,p'-Dichlorobenzoyl peroxide = Di-(p-chlorobenzoyl) peroxide

Dichlorobutene Dichlorobutene = Dichlorodiethyl ether 2.2-Dichloroethyl ether Dichlorodifluoromethane Dichlorodifluoromethane = Dichlorodiphenyldichloroethane DDD

Dichlorodiphenylsilane Diphenyldichlorosilane Dichlorodiphenylsilicane Diphenyldichlorosilane =

Dichlorodiphenyltrichloroethane DDT =

2.6-Dichlorobenzonitrile

1,1-Dichloroethane 1,1-Dichloroethane

Dichlobenil

# **COMPOUND NAMES**

1,2-Dichloroethane
Dichloroether

2,2-Dichloroethyl ether trans-1,2-Dichloroethylene sym-Dichloroethylene cis-1,2-Dichloroethylene 1,2-Dichloroethylene 1,1-Dichloroethylene unsym-Dichloroethylene Dichlorofluoromethane 1,6-Dichlorohexane

2,2'-Dichloroisopropyl ether 2,2'-Dichloroisopropyl ether

Dichloromethane

Dichloromonofluoromethane

2,4-Dichlorophenol

2,4-Dichlorophenoxyacetic acid, butoxyethyl ester

2,4-Dichlorophenoxyacetic acid Dichlorophenylphosphine

Dichlorophos

1,1-Dichloropropane
1,2-Dichloropropane
Dichloropropane
1,3-Dichloropropane

2,2-Dichloropropanoic acid 1,3-Dichloropropene and 1,2-

Dichloropropane

Dichloropropene, dichloropropane mixture

1,3-Dichloropropene
Dichloropropene
2,3-Dichloropropene
2,2-Dichloropropionic acid
2,3-Dichloropropylene
Dichlorotetrafluoroethane
1,2-Dichlorotetrafluoroethane
2,2-Dichlorovinyl O,O-dimethyl

phosphate

Dichlorvos Dichromium sulfate

Dichromium trisulfate

Dicofol

Dicy Dicyan

1,4-Dicyanobutane Dicyanogen

Dicyclohexanone diperoxide

Dicyclopentadiene

Dieldrin

Diesel ignition improver

Diesel oil (light) Diesel oil, medium Ethylene dichloride
2,2-Dichloroethyl ether
2,2-Dichloroethyl ether
1,2-Dichloroethylene
1,2-Dichloroethylene
1,2-Dichloroethylene
1,2-Dichloroethylene
Vinylidene chloride

= Dichloromonofluoromethane

= 1,6-Dichlorohexane

Vinylidene chloride

= 2,2'-Dichloroisopropyl ether= 2,2'-Dichloroisopropyl ether

= Dichloromethane

= Dichloromonofluoromethane

= 2,4-Dichlorophenol

= 2,4-D esters

=

2,4-Dichlorophenoxyacetic acidBenzene phosphorus dichloride

= Dichlorvos

= 1,1-Dichloropropane
 = 1,2-Dichloropropane
 = 1,2-Dichloropropane
 = 1,3-Dichloropropane

= 2,2-Dichloropropanoic acid

= Dichloropropene, dichloropropane mixture

= Dichloropropene, dichloropropane mixture

1,3-Dichloropropene
1,3-Dichloropropene
2,3-Dichloropropene
2,2-Dichloropropanoic acid
2,3-Dichloropropene
Dichlorotetrafluoroethane
Dichlorotetrafluoroethane

= Dichlorvos

DichlorvosChromic sulfateChromic sulfate

4,4'-Dichloro-alpha-trichloromethyl

benzhydrol

Dicvclopentadiene

= Cyanogen= Adiponitrile= Cyanogen

Cyclohexanone peroxideDicyclopentadiene

Dieldrinn-Amyl nitrateOils, fuel: 1-DOils, fuel: 2-D

## **COMPOUND NAMES**

Diethanolamine lauryl sulfate solution = Dodecyl sulfate, diethanolamine salt

Diethanolamine = Diethanolamine

Diethion = Ethion 1,1-Diethoxyethane = Acetal

1,2-Diethoxyethane = Ethylene glycol diethyl ether

O,O-Diethyl-5-2-(ethylthio)ethyl = Disulfoton phosphodithioate

O,O-Diethyl-O-(3-chloro-4-methyl-2-oxo- = Coumaphos

(2h)-1-benzopyran-7-yl) phosphorothioate

Diethyl "cellosolve" = Ethylene glycol diethyl ether

Diethyl acetal = Acetal

Diethyl carbonate = Diethyl carbonate

Diethyl ether = Ethyl ether

Diethyl ketone = Diethyl ketone

O,O-Diethyl O-(2-isopropyl-6-methyl-4- = Diazinon pyrimidinyl)phosphorothioate

Diethyl oxide = Ethyl ether
Diethyl phthalate = Diethyl phthalate
Diethyl sulfate = Diethyl sulfate
Diethyl sulphate = Diethyl sulfate
Diethylamine = Diethylamine

2-N-Diethylaminoethanol = N,N-Diethylethanolamine Diethylaminoethanol = N,N-Diethylethanolamine

2,6-Diethylaniline = 2,6-Diethylaniline Diethylbenzene = Diethylbenzene

Diethylene glycol di-n-butyl ether = Diethylene glycol dibutyl ether
Diethylene glycol dimethyl ether = Diethylene glycol dibutyl ether
Diethylene glycol dimethyl ether = Diethylene glycol dimethyl ether
Diethylene glycol ethyl ether acetate
Diethylene glycol ethyl ether = Diethylene glycol monoethyl ether

Diethylene glycol methyl ether acetate

Diethylene glycol methyl ether

Diethylene glycol monobutyl ether

Diethylene glycol monobutyl ether

Diethylene glycol monobutyl ether

Diethylene glycol monobutyl ether

acetate acetate

Diethylene glycol monobutyl ether = Diethylene glycol monobutyl ether = Diethylene glycol monomethyl ether = Diethylene glycol monomethyl ether Diethylene glycol n-hexyl ether = Diethylene glycol n-hexyl ether

Diethylene glycol phthalate Diethylene glycol phthalate Diethylene glycol Diethylene glycol = Diethylene imidoxide Morpholine = Diethylene oxide Tetrahydrofuran = Diethylene oximide Morpholine Diethylenediamine Piperazine Diethyleneimide oxide Morpholine

Diethylenetriamine = Diethylenetriamine N,N-Diethylethanolamine = N,N-Diethylethanolamine

Diethylzinc=DiethylzincDieyanomethane=Propanedinitrile1,1-Difluoroethane=1,1-DifluoroethaneDifluorophosphoric acid=Difluorophosphoric acidDifluorophosphorus acid=Difluorophosphoric acid

Diformyl = Glyoxal

## **COMPOUND NAMES**

Diglycidyl ether of Bisphenol A Diglycol monobutyl ether acetate Bisphenol A diglycidyl etherDiethylene glycol monobutyl ether acetate

Diglycol monobutyl ether

Diethylene glycol monobutyl etherDiethylene glycol

Diglycol Diglyme

= Diethylene glycol dimethyl ether

Diheptyl phthalate

Diheptyl phthalateMaleic hydrazide

1,2-Dihydro-3,6-pyridazinedione 2.5-Dihydroperoxy-2,5-dimethylhexane

Maleic hydrazideDimethylhexane dihydroperoxide

1,4-Dihydroxy-2-butene 1,4-Dihydroxy-2-butyne 2,2-Dihydroxy-3,3,5,5,6,6= 1,4-Butenediol= 1,4-Butynediol= Hexachlorophene

hexachlorodiphenylmethane

1,2-Dihydroxybenzene p-Dihydroxybenzene 1,3-Dihydroxybenzene m-Dihydroxybenzene Dihydroxybenzol 1,4-Dihydroxybutane Dihydroxybutane = Catechol
= Hydroquinone
= Resorcinol
= Resorcinol
= Resorcinol
= 1,4-Butanediol
= Butylene glycol
= Diethanolamine
= Bisphenol A

Diisopropanolamine

Ethylene glycol

Propylene glycol

Diisobutyl ketone

Diisobutyl phthalate

2,2'-Dihydroxydiethyl amine

p,p'-Dihydroxydiphenyldimethylmethane =

p,p'-Dihydroxydiphenyldimetr 2,2'-Dihydroxydipropylamine 1,2-Dihydroxyethane 1,2-Dihydroxypropane Diisobutyl ketone Diisobutyl phthalate Diisobutylamine Diisobutylcarbinol Diisobutylene Diisodecyl phthalate

Diisobutylamine Diisobutylcarbinol = Diisobutylene = Diisodecyl phthalate Diisononyl adipate Diisononyl adipate = Diisononyl phthalate Diisononyl phthalate Diisooctyl phthalate Diisooctyl phthalate = Diisopropanolamine Diisopropanolamine = Diisopropyl ether Isopropyl ether

=

=

=

=

Diisopropyl naphthalene 2,6-Diisopropyl naphthalene

Diisopropyl oxide

Diisopropyl percarbonate Diisopropyl peroxydicarbonate

5-Diisopropylacetone Diisopropylamine

Diisopropylbenzene (all isomers)
Diisopropylbenzene hydroperoxide

Dilauroyl peroxide
Dilithium chromate
Dilute sulfuric acid
Dimazine

1,2-Dimethoxyethane
Dimethoxymethane

10,11-Dimethoxystrychnine

Dimethyl-1-hexanols 3,3-Dimethyl-2-methylene norcamphane

Diisopropyl naphthaleneDiisopropyl naphthalene

= Isopropyl ether

Isopropyl percarbonate Isopropyl percarbonate Diisobutyl ketone Diisopropylamine

Diisopropylbenzene (all isomers)Diisopropylbenzene hydroperoxide

Lauroyl peroxide
Lithium chromate
Sulfuric acid, spent
1,1-Dimethylhydrazine

Ethylene glycol dimethyl ether

Methyl formalBrucine

Isooctyl alcohol Camphene

## **COMPOUND NAMES**

2,2-Dimethyl-3-methylene norborane = Camphene
2,6-Dimethyl-4-heptane = Diisobutyl ketone
2,6-Dimethyl-4-heptanol = Diisobutylcarbinol
N,N-Dimethyl-n-(2-hydroxyethyl) amine alpha, alpha-Dimethyl-propionic acid = Trimethylacetic acid

N,N-Dimethyl acetamide solution (40% or less) = N,N-Dimethyl acetamide solution (40% or less)

Dimethyl acetone = Diethyl ketone
Dimethyl adipate = Dimethyl adipate
N,N-Dimethyl benzene methanamine = Benzyl dimethylamine
N,N-Dimethyl benzylamine = Benzyl dimethylamine

Dimethyl carbamic chloride = N,N-Dimethylcarbamoyl chloride Dimethyl cellosolve = Ethylene glycol dimethyl ether

Dimethyl ether = Dimethyl ether
Dimethyl formal = Methyl formal
Dimethyl glutarate = Dimethyl glutarate
Dimethyl hexanedioate = Dimethyl adipate

Dimethyl hydrogen phosphite = Dimethyl hydrogen phosphite

Dimethyl ketone = Acetone

O,O-Dimethyl o-p-nitrophenyl = Methyl parathion thiophosphate

2,2-Dimethyl octanoic acid = Neodecanoic acid

Dimethyl phosphite = Dimethyl hydrogen phosphite

Dimethyl phthalate = Dimethyl phthalate O,O-Dimethyl s-[(4-oxo-1,2,3- = Azinphos methyl

benzotriazine-3-(4h)yl)methyl]phosphorodithioate

Dimethyl silicone fluids = Dimethylpolysiloxane
Dimethyl silicone oil = Dimethylpolysiloxane
Dimethyl succinate = Dimethyl succinate
Dimethyl sulfate = Dimethyl sulfate
Dimethyl sulfide = Dimethyl sulfide

Dimethyl sulfoxide = Dimethyl sulfoxide

Dimethyl terephthalate = Dimethyl terephthalate

N,N-(Dimethyl) a-tolueneamine = Benzyl dimethylamine

N-N-Dimethylacetamide = Dimethylacetamide

Dimethylacetamide = Dimethylacetamide

Dimethylacetamide = N,N-Dimethyl acetamide solution (40% or

less)

Dimethylacetic acid = Isobutyric acid

Dimethylacetylenecarbinol = 2-Methyl-2-hydroxy-3-butyne

Dimethylamine = Dimethylamine

2-(Dimethylamino)ethanol = Dimethylethanolamine
a-(Dimethylamino)toluene = Benzyl dimethylamine
B-Dimethylaminoethyl alcohol = Dimethylethanolamine
2,6-Dimethylaniline = 2,6-Dimethylaniline
Dimethylarsinic acid = Cacodylic acid

alpha,alpha-Dimethylbenzene = Cumene hydroperoxide

hydroperoxide
1,3-Dimethylbenzene = m-Xylene
1,2-Dimethylbenzene = o-Xylene
1,4-Dimethylbenzene = p-Xylene

Dimethylbenzyl hydroperoxide = Cumene hydroperoxide

2,2-Dimethylbutane = Neohexane

## **COMPOUND NAMES**

2,2-Dimethylcaprylic acid

N,N-Dimethylcarbamoyl chloride Dimethylcarbamylchloride

Dimethylcarbinol

N,N-Dimethylchloroformamide n-Dimethylcyclohexanamine N,N-Dimethylcyclohexylamine

N,N-Dimethylcyclohexylam Dimethyldichlorosilane Dimethylethanolamine

1,1-Dimethylethylamine

Dimethylethynylcarbinol N,N-Dimethylformamide Dimethylformamide Dimethylhexanals

2,5-Dimethylhexane-2,5-dihydroperoxide

Dimethylhexane dihydroperoxide

1,1-Dimethylhydrazine unsym-Dimethylhydrazine sym-Dimethylhydrazine 1,2-Dimethylhydrazine Dimethylmethane

2,2-Dimethyloctanoic acid Dimethylol propane

Dimethylphenol phosphate (3:1)

Dimethylphenol Dimethylphosphonate Dimethylpolysiloxane

2,2-Dimethylpropane-1,3-diol 1,1-Dimethylpropargyl alcohol Bis(Dimethylthiocarbamyl)disulfide

Dimethyltrimethylene glycol

Dimethylzinc 2,4-Dinitraniline

2,4-Dinitro-6-cyclohexylphenol

2,6-Dinitro-n,n-dipropyl-4trifluoromethylaniline

3,5-Dinitro-o-cresol 2,6-Dinitro-o-cresol 4,6-Dinitro-o-cresol

4,6-Dinitro-o-cyclohexyl phenol Dinitro-o-cyclohexylphenol

2,4-Dinitroaniline
m-Dinitrobenzene
1,3-Dinitrobenzene
meta-Dinitrobenzene
o-Dinitrobenzene
1,2-Dinitrobenzene
1,4-Dinitrobenzene
p-Dinitrobenzene
1,3-Dinitrobenzol
Dinitrobenzol

Dinitrogen monoxide

o-Dinitrobenzol

Dinitrocresol

2,2-Dimethyloctanoic acid

N,N-Dimethylcarbamoyl chlorideN.N-Dimethylcarbamoyl chloride

Isopropyl alcohol

N,N-Dimethylcarbamoyl chloride
 N,N-Dimethylcyclohexylamine
 N,N-Dimethylcyclohexylamine

DimethyldichlorosilaneDimethylethanolamine

= tert-Butylamine

= 2-Methyl-2-hydroxy-3-butyne

DimethylformamideDimethylformamideIsooctaldehyde

Dimethylhexane dihydroperoxideDimethylhexane dihydroperoxide

= 1,1-Dimethylhydrazine = 1,1-Dimethylhydrazine = 1,2-Dimethylhydrazine = 1,2-Dimethylhydrazine

Propane

= 2,2-Dimethyloctanoic acid= 2,2-Dimethylpropane-1,3-diol

= Trixylenyl phosphate

= Xylenol

= Dimethyl hydrogen phosphite

= Dimethylpolysiloxane

= 2,2-Dimethylpropane-1,3-diol= 2-Methyl-2-hydroxy-3-butyne

= Thiram

2,2-Dimethylpropane-1,3-diol

Dimethylzinc2,4-Dinitroaniline

4,6-Dinitro-o-cyclohexyl phenol

Trifluralin

DinitrocresolDinitrocresolDinitrocresol

4,6-Dinitro-o-cyclohexyl phenol4,6-Dinitro-o-cyclohexyl phenol

2,4-Dinitroaniline
 m-Dinitrobenzene
 m-Dinitrobenzene
 m-Dinitrobenzene
 o-Dinitrobenzene
 o-Dinitrobenzene
 p-Dinitrobenzene
 p-Dinitrobenzene
 m-Dinitrobenzene
 m-Dinitrobenzene
 Dinitrobenzene
 Dinitrobenzene
 Nitrous oxide

## **COMPOUND NAMES**

Dinitrogen tetroxide Nitrogen tetroxide 2,4-Dinitrophenol 2,4-Dinitrophenol alpha-Dinitrophenol 2.4-Dinitrophenol 2,5-Dinitrophenol 2,5-Dinitrophenol gamma-Dinitrophenol 2,5-Dinitrophenol beta-Dinitrophenol 2,6-Dinitrophenol 2,6-Dinitrophenol 2,6-Dinitrophenol o-o-Dinitrophenol 2,6-Dinitrophenol 2.4-Dinitrotoluene 2.4-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrotoluene 3,4-Dinitrotoluene 3,4-Dinitrotoluene 2.4-Dinitrotoluol 2.4-Dinitrotoluene Dinonyl 1,2-benzenedicarboxylate Dinonyl phthalate Dinonyl phthalate = Dinonyl phthalate Dioctyl adipate = Dioctyl adipate Dioctyl phthalate Dioctyl phthalate

Dioctyl sodium sulfosuccinate = Dioctyl sodium sulfosuccinate

Dioform = 1,2-Dichloroethylene

Dioxane = 1,4-Dioxane
p-Dioxane = 1,4-Dioxane
1,4-Dioxane = 1,4-Dioxane
Dioxonium perchlorate solution = Perchloric acid
1,3-Dioxophthalan = Phthalic anhydride

DIPB = Diisopropylbenzene (all isomers)

Dipentene = Dipentene
Dipentyl phthalate = Amyl phthalate
Dipentyl phthalate = Di-n-amyl phthalate

Diphenyl-diphenyl ether mixture Dowtherm Diphenyl ether Diphenyl ether Diphenyl ketone Benzophenone = Diphenyl methanone Benzophenone Diphenyl oxide Diphenyl ether = Diphenvl Diphenvl Diphenvlamine Diphenvlamine

Diphenyldichlorosilane = Diphenyldichlorosilane

Diphenylmethane-4,4'-diisocyanate = Diphenylmethane diisocyanate Diphenylsilicon dichloride = Diphenylmethane diisocyanate Diphenylsilicon dichloride = Diphenyldichlorosilane

Dipropanediol dibenzoate = Dipropylene glycol dibenzoate

Dipropylene glycol dibenzoate = Dipropylene glycol dibenzoate
Dipropylene glycol methyl ether
Dipropylene glycol monomethyl ether = Dipropylene glycol methyl ether

Dipropylene glycol = Dipropylene glycol

Dipterex = Trichlorfon
Diquat dibromide = Diquat
Diquat = Diquat

Disodium arsenate heptahydrate = Sodium arsenate
Disodium dihydrogen pyrophosphate = Sodium phosphate
Disodium ethylenebis[dithiocarbamate] = Nabam

Disodium methane arsonate = Methanearsonic acid, sodium salt
Disodium methyl arsonate = Methanearsonic acid, sodium salt
Disodium nitrilotriacetate = Nitrilotriacetic acid and salts

## **COMPOUND NAMES**

Disodium selenite = Sodium selenite

Distillates: flashed feed stocks = Distillates: flashed feed stocks

Distillates: straight run

Distokal

Distopan

Distopan

Distopan

Distopan

Exactloroethane

Exactloroethane

Exactloroethane

Exactloroethane

Exactloroethane

Exactloroethane

Disulfoton = Disulfoton

Dithallium carbonate = Thallium carbonate

Dithane = Nabam

Dithiopyrophosphoric acid, O,O,O,O = Tetraethyl dithiopyrophosphate

tetraethyl ester

Dithiosystox = Disulfoton

Ditridecyl phthalate = Ditridecyl phthalate

Diundecyl phthalate = Diundecyl phthalate

Diurex=DiuronDiuron=DiuronDivinyl=ButadieneDivinylene oxide=Furan

divinylmethane = 1,4-Pentadiene

DMCC = N,N-Dimethylcarbamoyl chloride

DMCC = N,N-Dimethylcarbam

DMDT = Methoxychlor

DMF = Dimethylformamide

DMP = Dimethyl phthalate

DMS = Dimethyl sulfide

DMSO = Dimethyl sulfoxide

m-DNB = m-Dinitrobenzene

2,5-DNP = 2,5-Dinitrophenol

m-DNB = m-Dinitrobenzene
2,5-DNP = 2,5-Dinitrophenol
DNP = 2,6-Dinitrophenol
DNT = 2,4-Dinitrotoluene
2,6-DNT = 2,6-Dinitrotoluene
3,4-DNT = 3,4-Dinitrotoluene
DO 14 = Propargite

DOA = Dioctyl adipate
1-Dodecanethiol = Lauryl mercaptan
n-Dodecanol = Lauric acid
Dodecanol = Dodecanol
Dodecanol = Lauric acid
- Dodecanol = Dodecanol

Dodecanoyl peroxide = Lauroyl peroxide
Dodecene (non-linear) = Dodecene
Dodecene (non-linear) = Propylene tetramer

1-Dodecene
Dodecene
Dodecene
Dodecene
Dodecene
Dodecene
Dodecene

Dodecyl-2-methyl-2-propenoate = Dodecylmethacrylate

Dodecyl alcohol = Dodecanol

Dodecyl benzene sulfonic acid, sodium = Dodecyl benzene sulfonic acid, sodium

Dodecyl diphenyl ether disulfonate = Dodecyl diphenyl ether disulfonate solution

Dodecyl diphenyl ether sulfonate, = Dodecyl diphenyl ether disulfonate disodium salt, aqueous solution solution

Dodecyl mercaptan
Dodecyl phenol

= Lauryl mercaptan
Dodecyl phenol

Dodecyl sulfate, ammonium salt = Ammonium lauryl sulfate

Dodecyl sulfate, diethanolamine salt = Dodecyl sulfate, diethanolamine salt

# **COMPOUND NAMES**

Dodecyl sulfate, magnesium salt Dodecyl sulfate, sodium salt

Dodecyl sulfate, triethanolamine salt Dodecyl/pentadecyl methacrylate

Dodecylbenzene n-Dodecylbenzene n-Dodecylbenzene

Dodecylbenzenesulfonate sodium salt

Dodecylbenzenesulfonic acid, calcium

salt

Dodecylbenzenesulfonic acid, isopropylamine salt Dodecylbenzenesulfonic acid.

triethanolamine salt Dodecylbenzenesulfonic acid

alpha-Dodecylene Dodecylethylene Dodecylmethacrylate Dodecyltrichlorosilane

DOP Dormant oil

Dow-fume 40 Dowanol-50B Dowanol 33B Dowanol DB Dowanol DE Dowanol DM

Dowanol DPM Dowanol EB Dowanol EE

Dowanol EE Dowanol eipat Dowanol EM Dowanol EP

Dowanol EPH Dowanol PM Dowanol TE

Dowanol TPM

Dowco 179 Dowfax 2A1

Dowfume N

Dowicide 2 Dowicide 7 Dowtherm A

Dowtherm e

Dowtherm
Dracyclic acid
Dri-tri

Drycleaner naphtha Drying oil epoxides

DSMA

Dodecyl sulfate, magnesium saltDodecyl sulfate, sodium salt

Dodecyl sulfate, triethanolamine saltDodecyl/pentadecyl methacrylate

DodecylbenzeneDodecylbenzeneDodecylbenzene

= Dodecyl benzene sulfonic acid, sodium

salt

= Dodecylbenzenesulfonic acid, calcium

salt

 Dodecylbenzenesulfonic acid, isopropylamine salt
 Dodecylbenzenesulfonic acid,

triethanolamine salt = Dodecylbenzenesulfonic acid

1-Dodecene
 1-Tetradecene
 Dodecylmethacrylate
 Dodecyltrichlorosilane
 Dioctyl phthalate

Oils, miscellaneous: spray

Ethylene dibromide

Dipropylene glycol methyl ether
 Propylene glycol methyl ether
 Diethylene glycol monobutyl ether
 Diethylene glycol monoethyl ether
 Diethylene glycol monomethyl ether
 Dipropylene glycol methyl ether
 Ethylene glycol monobutyl ether

= 2-Ethoxyethanol

Ethylene glycol monoethyl ether
 Ethylene glycol isopropyl ether
 Ethylene glycol monomethyl ether
 Ethylene glycol phenyl ether
 Ethylene glycol phenyl ether
 Propylene glycol methyl ether

= Ethoxy triglycol

= Tripropylene glycol methyl ether

= Dursban

= Dodecyl diphenyl ether disulfonate

solution

Dichloropropene, dichloropropane

mixture

TrichlorophenolPentachlorophenol

= Dowtherm

= o-Dichlorobenzene

Dowtherm
Benzoic acid

Sodium phosphate, tribasicNaphtha: stoddard solventEpoxidized vegetable oils

Methanearsonic acid, sodium salt

# **COMPOUND NAMES**

DTDP = Ditridecyl phthalate

Du-sprex=DichlobenilDual=MetolachlorDuodecylic acid=Lauric acid

Duodex = Sodium 2-mercaptobenzothiazol solution

Dursban = Dursban

Dust-laying oil = Asphalt blending stocks: roofers flux

Dutch liquid=Ethylene dichlorideDylox=TrichlorfonDytol S-91=n-Decyl alcoholE3314=Heptachlor

EAA = Ethyl acetoacetate

EADC = Ethylaluminum dichloride

EASC = Ethylaluminum sesquichloride

EB = Ethylbenzene
EBDC, sodium salt = Nabam
Ecrinitrit = Sodium nitrite
EDC = Ethylene dichloride

Edible tallow = Tallow

EDTA-zinc complex = Diammonium salt of zinc EDTA
EDTA-zinc = Diammonium salt of zinc EDTA
EDTA zinc salt = Diammonium salt of zinc EDTA

EDTA zinc sait = Diammonium sait of zinc EDTA

EDTA = Ethylenediamine tetracetic acid

Eqitol = Hexachloroethane

Egitol = Hexachloroethane Ektasolve DB acetate = Diethylene glycol monobutyl ether

acetate

Ektasolve EP = Ethylene glycol propyl ether
Electrical insulating oil = Oils, miscellaneous: transformer

Embafume = Methyl bromide
Emerald green = Copper acetoarsenite
Emerssence 1160 = Ethylene glycol phenyl ether
Emery 6705 = Ethylene glycol phenyl ether

Enanthic acid = Heptanoic acid Enanthic alcohol = Heptanol Endosulfan = Endosulfan

Endrate = Ethylenediamine tetracetic acid

Endrin = Endrin ENT-16391 = Kepone ENT 25,719 = Mirex

ENT 262 = Dimethyl phthalate

ENT 27,311 = Dursban

Epichlorohydrin resin = Bisphenol A diglycidyl ether

Epichlorohydrin = Epichlorohydrin

Epoxidized drying oils = Epoxidized vegetable oils
Epoxidized oils = Epoxidized vegetable oils

Epoxidized tall oil oath actor

Epoxidized tall oil, octyl ester = Octyl epoxy tallate
Epoxidized vegetable oils = Epoxidized vegetable oils
1,2-Epoxybutane = n-Butyl glycidyl ether
1,2-Butylene oxide

1,2-Epoxyethane = Ethylene oxide
1,2-Epoxypropane = Propylene oxide
2,3-Epoxypropyl butyl ether = n-Butyl glycidyl ether
Eriocholcite (anhydrous) = Copper chloride

Eskimon-22 = Chlorodifluoromethane

Ether cyanatus

## **COMPOUND NAMES**

Eskimon 11 = Trichlorofluoromethane Eskimon 12 = Dichlorodifluoromethane

Essence of mirbane = Nitrobenzene
Essence of Niobe = Methyl benzoate
Ethanal, trichloro- = Trichloroacetaldehyde

Ethanal = Acetaldehyde
Ethane dinitrile = Cyanogen
Ethane hexachloride = Hexachloroethane
Ethane pentachloride = Pentachloroethane

Ethane, 1,1,2-trichloro- 1,2,2-trifluoro- = 1,1,2-Trichloro-1,2,2-trifluoroethane

Ethane, 1,1,2-trichloro- = 1,1,2-Trichloroethane Ethane, 1,2-dibutoxy = Ethylene glycol dibutyl ether

Ethane, pentachloro- = Pentachloroethane

Ethane = Ethane

Ethanecarboxylic acid = Propionic acid Ethanedial = Glyoxal

1,2-Ethanediamine = Ethylenediamine 1,2-Ethanediamine = Ethylenediamine Ethanedioic acid, disodium salt = Sodium oxalate

Ethanedioic acid = Oxalic acid

1,2-Ethanediol, monoacetate = Ethylene glycol acetate

1,2-Ethanediol=Ethylene glycolEthanenitrile=AcetonitrileEthanethiol=Ethyl mercaptanEthanoic acid=Acetic acidEthanoic anlydride=Acetic anhydride

Ethanol, 2-isopropoxy = Ethylene glycol isopropyl ether

Ethanol = Ethyl alcohol
Ethanolamine = Monoethanolamine
Ethanoyl chloride = Acetyl chloride
Ethene = Ethylene

Ether ethylene glycol dibutyl = Ethylene glycol dibutyl ether Ether. bis(2-chloro-1-methylethyl) = 2,2'-Dichloroisopropyl ether

=

Propionitrile

Ether, hydrochloric = Ethyl chloride

Ether, vinyl ethyl = Vinyl ethyl ether

Ether = Ethyl ether

Ethine = Acetylene

Ethion = Ethion

Ethiops mineral = Mercuric sulfide

1-Ethoxy-2-propanol = Propylene glycol ethyl ether

2-Ethoxy-3,4-dihydro-2h-pyran = Ethoxydihydropyran

Ethoxy diglycol = Diethylene glycol monoethyl ether Ethoxy propionic acid, ethyl ester = Ethyl-3-ethoxypropionate

Ethoxy propionic acid, ethyl ester = Ethyl-3-ethoxypropion
Ethoxy triglycol = Ethoxy triglycol
Ethoxydihydropyran = Ethoxydihydropyran

Ethoxyethane = Ethyl ether = 2-Ethoxyethanol

2-Ethoxyethanol = Ethylene glycol monoethyl ether 2-(2-Ethoxyethoxy) ethanol = Diethylene glycol monoethyl ether

2-Ethoxyethyl acetate = 2-Ethoxyethyl acetate

2-Ethoxyethyl acetate = Ethylene glycol monoethyl ether acetate

Ethoxylated dodecanol = Ethoxylated dodecanol Ethoxylated dodecyl alcohol = Ethoxylated dodecanol

### **COMPOUND NAMES**

Ethoxylated lauryl alcohol Ethoxylated dodecanol Ethoxylated myristyl alcohol Ethoxylated tetradecanol Ethoxylated nonviphenol Ethoxylated nonviphenol Ethoxylated pentadecanol = Ethoxylated pentadecanol Ethoxylated pentadecanol Ethoxylated pentadecylalcohol Ethoxylated tetradecanol Ethoxylated tetradecanol Ethoxylated tetradecyl alcohol Ethoxylated tetradecanol = Ethoxylated tridecanol Ethoxylated tridecanol = Ethoxylated tridecyl alcohol Ethoxylated tridecanol

Ethoxytriethylene glycol Ethoxy triglycol =

2-Ethyl-1-hexanol hydrogen phosphate Di-(2-ethylhexyl)phosphoric acid

2-Ethyl-1-hexanol 2-Ethyl hexanol 2-Ethyl-1-hexylamine 2-Ethylhexylamine = 2-Ethyl-2-hexenal 2-Ethyl-3-propylacrolein 5-Ethyl-2-methyl pyridine Methylethylpyridine 6-Ethyl-2-methylaniline 2-Methyl-6-ethyl aniline 1-Ethyl-2-methylbenzene 2-Ethyl toluene

5-Ethyl-2-picoline = Methylethylpyridine Ethyl-3-ethoxypropionate Ethyl-3-ethoxypropionate 2-Ethyl-3-propylacrolein 2-Ethyl-3-propylacrolein 2-Ethyl-3-propylacrylaldehyde 2-Ethyl-3-propylacrolein =

2-Ethyl-I-butanol Ethyl butanol N-Ethyl-n-butylamine N-Ethyl-n-butylamine

6-Ethyl-o-toluidine 2-Methyl-6-ethyl aniline = Ethyl 2-hydroxypropanoate Ethyl lactate Ethyl 2-hydroxypropionate Ethyl lactate = Ethyl 2-methacrylate Ethyl methacrylate = Ethyl 2-methyl-2-propenoate Ethyl methacrylate Ethyl 2-propenoate Ethyl acrylate = Ethyl 3-oxobutanoate Ethyl acetoacetate = Ethyl acetate Ethyl acetate Ethyl acetoacetate Ethyl acetoacetate Ethyl acetone 2-Pentanone Ethyl acrylate Ethyl acrylate

Ethyl alcohol Ethyl alcohol Ethyl aldehyde Acetaldehyde Ethyl alpha-hydroxypropionate Ethyl lactate Ethyl alpha-methylmethacrylate Ethyl methacrylate = Ethyl amyl ketone Ethyl amyl ketone =

Ethyl beta-ethoxypropionate Ethyl-3-ethoxypropionate

Ethyl butanoate Ethyl butyrate = Ethyl butanol Ethyl butanol Ethyl butyl ketone Ethyl butyl ketone = Ethyl butyrate Ethyl butyrate Ethyl carbonate Diethyl carbonate Ethyl chloracetate Ethyl chloroacetate = Ethyl chloride Ethyl chloride = Ethyl chloroacetate Ethyl chloroacetate Ethyl chlorocarbonate Ethyl chloroformate Ethyl chloroethanoate Ethyl chloroacetate Ethyl chloroformate Ethyl chloroformate Ethyl chlorothioformate Ethyl chlorothioformate =

Ethyl chlorothiolformate

Ethyl cyclohexane

=

Ethyl chlorothioformate

Ethyl cyclohexane

### **COMPOUND NAMES**

Ethyl dichlorophosphate = Ethyl phosphorodichloridate

Ethyl dl-lactate Ethyl lactate Ethyl ethanoate Ethyl acetate Ethyl ether Ethyl ether Ethyl formate Ethyl formate Ethyl formic ester Ethyl formate 2-Ethyl hexaldehyde Ethylhexaldehyde = 2-Ethyl hexanol 2-Ethyl hexanol Ethyl hexyl phthalate Ethyl hexyl phthalate Ethyl hexyl tallate Ethyl hexyl tallate = Ethyl lactate Ethyl lactate Ethyl mercaptan Ethyl mercaptan =

Ethyl methacrylate-inhibited = Ethyl methacrylate
Ethyl methacrylate = Ethyl methacrylate
Ethyl methanoate = Ethyl formate
Ethyl methyl ketone = Methyl ethyl ketone
n-Ethyl morpholine = n-Ethyl morpholine

Ethyl nitrile = Acetonitrile
Ethyl nitrite = Ethyl nitrite
Ethyl orthosilicate = Ethyl silicate
Ethyl parathion = Parathion

Ethyl phosphate = Triethyl phosphate

Ethyl phosphonothioic dichloride = Ethyl phosphonothioic dichloride Ethyl phosphorodichloridate = Ethyl phosphorodichloridate Ethyl phosphorodichloridothionate = Ethyl phosphonothioic dichloride

Ethyl phthalate = Diethyl phthalate
Ethyl propionate = Ethyl propionate
Ethyl propionyl = Diethyl ketone
Ethyl silicate 40 = Ethyl silicate
Ethyl silicate condensed = Ethyl silicate
Ethyl silicate = Ethyl silicate

Ethyl silicate = Ethyl silicate
Ethyl sulfate = Diethyl sulfate
Ethyl sulfhydrate = Ethyl mercaptan

Ethyl thionophosphoryl dichloride = Ethyl phosphonothioic dichloride

2-Ethyl toluene = 2-Ethyl toluene Ethyl vinyl ether = Vinyl ethyl ether Ethylacetic acid = n-Butyric acid

Ethylaluminum dichloride = Ethylaluminum dichloride Ethylaluminum sesquichloride = Ethylaluminum sesquichloride

Ethylamine = Ethylamine
Ethylbenzene = Ethylbenzene
2-Ethylbutyl alcohol = Ethyl butanol

Ethylbutylamine = N-Ethyl-n-butylamine
2-Ethylcaproaldehyde = Ethylhexaldehyde
alpha-Ethylcaproic acid = 2-Ethylhexanoic acid
Ethylcarbinol = n-Propyl alcohol
Ethylcyanide = Propionitrile

N-Ethylcyclohexanamine = N-Ethylcyclohexylamine
N-Ethylcyclohexylamine = N-Ethylcyclohexylamine
Ethyldichlorosilane = Ethyldichlorosilane
Ethylene acetate = Ethylene glycol diacetate

Ethylene aldehyde = Acrolein

Ethylene bis (iminodiacetic acid) = Ethylenediamine tetracetic acid

Ethylene bromide = Ethylene dibromide

### **COMPOUND NAMES**

Ethylene carboxylic acid Ethylene chlorhydrin Ethylene chloride Ethylene chlorohydrin Ethylene cyanohydrin Ethylene diacetate Ethylene dibromide Ethylene dichloride

Ethylene dihydrate

Ethylene glycol acetate
Ethylene glycol diacetate
Ethylene glycol dibutyl ether
Ethylene glycol diethyl ether

Ethylene glycol dihydroxydiethyl ether

Ethylene glycol dimethyl ether

Ethylene glycol ethyl ether

Ethylene glycol ethyl ether Ethylene glycol isopropyl ether Ethylene glycol methyl ether acetate

Ethylene glycol monobutyl ether acetate

Ethylene glycol monobutyl ether

Ethylene glycol monoethyl ether acetate

Ethylene glycol monoethyl ether acetate

Ethylene glycol monoethyl ether Ethylene glycol monoethyl ether

Ethylene glycol monomethyl ether

acetate

Ethylene glycol monomethyl ether Ethylene glycol monopropyl ether Ethylene glycol phenyl ether Ethylene glycol propyl ether Ethylene glycol, monoacetate

Ethylene glycol Ethylene oxide Ethylene

Ethylenebis [dithiocarbamic acid],

disodium salt

Ethylenediamine tetracetic acid

Ethylenediamine Ethylenediamine trans-1,2-Ethylenedicarboxylic acid

cis-1,2-Ethylenedicarboxylic acid (Ethylenedinitrilo) tetraacetic acid

2,2'-Ethylenedioxydiethanol

Ethyleneimine
Ethylhexaldehyde
2-Ethylhexanal
2-Ethylhexanoic acid
2-Ethylhexoic acid
2-Ethylhexyl acetate
2-Ethylhexyl acrylate

2-Ethylhexyl alcohol

Bis-(2-Ethylhexyl) hydrogen phosphate

Bis(2-Ethylhexyl) phthalate

= Acrylic acid

Ethylene chlorohydrin
 Ethylene dichloride
 Ethylene chlorohydrin
 Ethylene cyanohydrin
 Ethylene glycol diacetate

Ethylene dibromideEthylene dichlorideEthylene glycol

Ethylene glycol acetate
 Ethylene glycol diacetate
 Ethylene glycol dibutyl ether
 Ethylene glycol diethyl ether

= Triethylene glycol

= Ethylene glycol dimethyl ether

= 2-Ethoxyethanol

Ethylene glycol monoethyl ether
 Ethylene glycol isopropyl ether
 Ethylene glycol methyl ether acetate
 Ethylene glycol monobutyl ether acetate

= Ethylene glycol monobutyl ether

2-Ethoxyethyl acetate

= Ethylene glycol monoethyl ether acetate

= 2-Ethoxyethanol

Ethylene glycol monoethyl etherEthylene glycol methyl ether acetate

Ethylene glycol monomethyl ether

Ethylene glycol propyl ether
 Ethylene glycol phenyl ether
 Ethylene glycol propyl ether
 Ethylene glycol acetate

= Ethylene glycol = Ethylene oxide = Ethylene = Nabam

= Ethylenediamine tetracetic acid

EthylenediamineEthylenediamineFumaric acidMaleic acid

= Ethylenediamine tetracetic acid

Triethylene glycol
Ethyleneimine
Ethylhexaldehyde
Ethylhexaldehyde
2-Ethylhexanoic acid
2-Ethylhexanoic acid
2-Ethylhexyl acetate
2-Ethylhexyl acrylate
2-Ethyl hexanol

= Di-(2-ethylhexyl)phosphoric acid

Di-(2-ethylhexyl)phthalate

### **COMPOUND NAMES**

bis-(2-Ethylhexyl) phthalate = Dioctyl phthalate

Bis-(2-Ethylhexyl) sodium sulfosuccinate = Dioctyl sodium sulfosuccinate

Bis-(2-Ethylhexyl)phthalate = Ethyl hexyl phthalate 2-Ethylhexyl, 2-propenoate = 2-Ethylhexyl acrylate 2-Ethylhexylamine = 2-Ethylhexylamine beta-Ethylhexylamine = 2-Ethylhexylamine Ethylidene chloride = 1,1-Dichloroethane Ethylidene dichloride = 1,1-Dichloroethane

Ethylidene diethylether = Acetal

Ethylidene difluoride = 1,1-Difluoroethane
Ethylidene fluoride = 1,1-Difluoroethane
Ethylidene norbornene = Ethylidene norbornene
Ethylidenenorbornylene = Ethylidene norbornene

Ethylidenenorbornylene = Ethylidene norbornene Ethylidenenorcamphene = Ethylidene norbornene

o-Ethylmethylbenzene = 2-Ethyl toluene
Ethylmethylketone peroxide
n-Ethylmorpholine = n-Ethyl morpholine
4-Ethylmorpholine = n-Ethyl morpholine
2-Ethylphenol = Ethylphenol

Ethylphenol = Ethylphenol = Ethylphenol = Ethylphenol

Ethylphenyldichlorosilane = Ethylphenyldichlorosilane Ethylpyrophosphate = Tetraethyl pyrophosphate Ethylsilicon trichloride = Ethyltrichlorosilane o-Ethyltoluene = 2-Ethyl toluene

Ethyltrichlorosilane = Ethyltrichlorosilane Ethylzinc = Diethylzinc

Ethyne = Acetylene Ethynyl carbinol = Propargyl alcohol Ethynyl methanol = Propargyl alcohol

Eufin Diethyl carbonate Eunatrol Oleic acid. sodium salt Antimony trioxide Exitelite Trichlorofluoromethane F-11 F-114 Dichlorotetrafluoroethane F-12 Dichlorodifluoromethane F-124 Monochlorotetrafluoroethane F-13 Monochlorotrifluoromethane

F-21 = Dichloromonofluoromethane
Falkitol = Hexachloroethane
Fasciolin = Hexachloroethane
Fast red GG base = 4-Nitroaniline
Fast red IG base = 4-Nitroaniline

Fast white = Lead sulfate

Fast red TR base

Fenoprop = 2-(2,4,5-Trichlorophenoxy) propanoic

acio

4-Chloro-o-toluidine

Fermentation alcohol = Ethyl alcohol
Fermentation amyl alcohol = Isoamyl alcohol
Fermentation butyl alcohol = Isobutyl alcohol
Fermine = Dimethyl phthalate
Ferric ammonium citrate, brown = Ferric ammonium citrate

Ferric ammonium citrate, brown = Ferric ammonium citrate Ferric ammonium citrate, green = Ferric ammonium citrate

### **COMPOUND NAMES**

Ferric ammonium citrate = Ferric ammonium citrate Ferric ammonium oxalate = Ferric ammonium oxalate

Ferric chloride, anhydrous = Ferric chloride Ferric chloride, hexahydrate = Ferric chloride Ferric chloride = Ferric chloride Ferric fluoride = Ferric fluoride

Ferric glycerophosphate = Ferric glycerophosphate

Ferric nitrate nonahydrate = Ferric nitrate

Ferric nitrate = Ferric nitrate

Ferric sulfate = Ferric sulfate

Ferrophosphorus = Ferrophosphorus

Ferrosilicon = Ferrosilicon

Ferrous ammonium sulfate hexahydrate = Ferrous ammonium sulfate Ferrous ammonium sulfate = Ferrous ammonium sulfate

Ferrous borofluoride = Ferrous fluoroborate
Ferrous chloride tetrahydrate = Ferrous chloride
Ferrous chloride = Ferrous chloride
Ferrous fluoroborate = Ferrous fluoroborate
Ferrous oxalate dihydrate = Ferrous oxalate
Ferrous oxalate = Ferrous oxalate
Ferrous sulfate = Ferrous sulfate

Ferrox = Ferrous oxalate
Fertilizer acid = Sulfuric acid
Filmerine = Sodium nitrite

Flaxseed oil = Oils, miscellaneous: linseed

Flexol plasticizer DIOP = Diisooctyl phthalate
Flouristan = Stannous flouride
Flowers of antimony = Antimony trioxide
Fluophosgene = Carbon oxyfluoride

Fluorane 114 = Dichlorotetrafluoroethane

Fluorine = Fluorine

2-Fluoro-1-methylbenzene = 2-Fluorotoluene
4-Fluoro-1-methylbenzene = 4-Fluorotoluene
1-Fluoro-2-methylbenzene = 2-Fluorotoluene
1-Fluoro-3-methylbenzene = 3-Fluorotoluene
1-Fluoro-4-methylbenzene = 4-Fluorotoluene
Fluoroacetic acid, sodium salt = Sodium fluoroacetate
0-Fluoroaniline = 2-Fluoroaniline
2-Fluoroaniline = 2-Fluoroaniline

2-Fluoroaniline = 2-Fluoroaniline 4-Fluoroaniline = 4-Fluoroaniline p-Fluoroaniline = 4-Fluoroaniline 2-Fluorobenzenamine = 2-Fluoroaniline 4-Fluorobenzenamine = 4-Fluoroaniline Fluorobenzene = Fluorobenzene

Fluorodichloromethane = Dichloromonofluoromethane

Fluoroethylene = Vinyl fluoride
Fluoroformyl fluoride = Carbon oxyfluoride
2-Fluorophenylamine = 2-Fluoroaniline
4-Fluorophosgene = Carbon oxyfluoride
Fluorosilic acid = Fluosilicic acid

Fluorosilic acid = Hydrofluorosilicic acid (25% or less)

Fluorosulfonic acid = Fluosulfonic acid Fluorosulfuric acid = Fluosulfonic acid

### **COMPOUND NAMES**

2-Fluorotoluene 2-Fluorotoluene o-Fluorotoluene 2-Fluorotoluene m-Fluorotoluene 3-Fluorotoluene 3-Fluorotoluene 3-Fluorotoluene 4-Fluorotoluene 4-Fluorotoluene p-Fluorotoluene 4-Fluorotoluene Fluorspar Calcium fluoride Fluosilicic acid = Fluosilicic acid Fluospar Calcium fluoride Fluosulfonic acid Fluosulfonic acid

Fluxing oil = Asphalt blending stocks: roofers flux

Foliage oil = Oils, miscellaneous: spray

Formaldehyde dimethylacetol = Methyl formal
Formaldehyde polymer = Paraformaldehyde
Formaldehyde solution
Formalin = Formaldehyde solution
Formalith = Formaldehyde solution

Formamide = Formamide Formic acid, amide = Formamide

Formic acid, ammonium salt = Ammonium formate
Formic acid, ethyl ester = Ethyl formate
Formic acid, methyl ester = Methyl formate
Formic acid, zinc salt = Zinc formate
Formic acid = Formic acid

Formic aldehyde solution = Formaldehyde solution

Formic ether = Ethyl formate Formyl tribromide = Bromoform

Formylformic acid = Glyoxylic acid (50% or less)

Formylic acid = Formic acid
2-Formylphenol = Salicylaldehyde
Fowlers solution = Potassium arsenite
Freemans white lead = Lead sulfate

French verdigris = Copper subacetate
Freon-22 = Chlorodifluoromethane
Freon 11 = Trichlorofluoromethane

Freon 113 = 1,1,2-Trichloro-1,2,2-trifluoroethane

Freon 114 = Dichlorotetrafluoroethane
Freon 12 = Dichlorodifluoromethane
Freon 13 = Monochlorotrifluoromethane
Freon 21 = Dichloromonofluoromethane
Frigen 11 = Trichlorofluoromethane

Frigen 113TR = 1,1,2-Trichloro-1,2,2-trifluoroethane

Frigen 12 = Dichlorodifluoromethane

Fuel oil 1-D = Oils: diesel
Fuel oil 2-D = Oils: diesel
Fuel oil no. 1 = Jet fuels: JP-1
Fuel oil no. 1 = Kerosene

Fuel oil no. 1 = Oils, miscellaneous: range

Fumaric acid = Fumaric acid Fumigrain = Acrylonitrile Fuming liquid arsenic = Arsenic trichloride

Fuming sulfuric acid = Oleum
Furadan = Carbofuran
Fural/pyromucic aldehyde = Furfural

### **COMPOUND NAMES**

Fural = Furfural 2-Furaldehyde = Furfural Furan = Furan

2-Furancarbinol = Furfuryl alcohol 2,5-Furanedione = Maleic anhydride

Furfural = Furfural

Furfuralcohol = Furfuryl alcohol

Furfuraldehyde = Furfural Furfuran = Furan Furfurole = Furfural

Furfuryl alcohol = Furfuryl alcohol
2-Furylcarbinol = Furfuryl alcohol
Fusel oil = Isoamyl alcohol

Fyde = Formaldehyde solution
Galena = Lead sulfide

Galena = Lead sulfide
Gallic acid monohydrate = Gallic acid
Gallic acid = Gallic acid
Gallotannic acid = Tannic acid
Gallotannin = Tannic acid

Gammexane = gamma-Benzene hexachloride

Gas oil: cracked = Gas oil: cracked

Gasoline blending stocks: alkylates
Gasoline blending stocks: reformates
Gasolines: automotive (<4.23g lead/gal)
Gasolines: aviation (< 4.86g lead/gal)

= Gasoline blending stocks: alkylates
Gasoline blending stocks: reformates
Gasolines: automotive (<4.23g lead/gal)
Gasolines: aviation (< 4.86g lead/gal)

Kepone

Gasolines: casinghead = Gasolines: casinghead Gasolines: polymer = Gasolines: polymer Gasolines: straight run = Gasolines: straight run

GC-1189

Gelbin yellow ultramarine = Calcium chromate
Gemalgene = Trichloroethylene
Genetron-22 = Chlorodifluoromethane
Genetron 11 = Trichlorofluoromethane
Genetron 1113 = Trifluorochloroethylene
Genetron 12 = Dichlorodifluoromethane

Gerhardite = Copper nitrate
Glacial acetic acid = Acetic acid
D-Glucitol = Sorbitol

Glucose solution = Dextrose solution Glutaraldehyde solution = Glutaraldehyde solution

Glycerine = Glycerine Glycerite = Tannic acid

Glycerol trichlorhydrin = 1,2,3-Trichloropropane

Glycerol = Glycerine

Glyceryl trichlorhydrin 1.2.3-Trichloropropane Glycidyl alpha-methyl acrylate Glycidyl methacrylate Glycidyl isopropyl ether Isopropyl glycidyl ether = Glycidyl methacrylate Glycidyl methacrylate Glycine copper complex Copper glycinate = Glycocoll-copper Copper glycinate Glycol-monoacetin Ethylene glycol acetate

Glycol butyl ether = Ethylene glycol monobutyl ether

Glycol chlorohydrin = Ethylene chlorohydrin Glycol cyanohydrin = Ethylene cyanohydrin

### **COMPOUND NAMES**

Glycol diacetate Ethylene glycol diacetate Glycol dibromide Ethylene dibromide Glycol dichloride Ethylene dichloride Glycol monoacetate Ethylene glycol acetate

Glycol monobutyl ether acetate Ethylene glycol monobutyl ether acetate

Glycol monoethyl ether acetate 2-Ethoxyethyl acetate

Glycol monoethyl ether acetate Ethylene glycol monoethyl ether acetate =

Glycol monoethyl ether 2-Ethoxyethanol =

Glycol monoethyl ether Ethylene glycol monoethyl ether Glycol monomethyl ether acetate Ethylene glycol methyl ether acetate = Glycol monomethylether Ethylene glycol monomethyl ether

Ethylene alvcol

Glycol = Glyoxal Glyoxal =

Glyoxylic acid (50% or less) = Glyoxylic acid (50% or less)

Grain alcohol Ethyl alcohol Grape sugar solution Dextrose solution

Gray arsenic Arsenic

Green nickel oxide Nickel hydroxide Green oil Anthracene Green verdigris Copper subacetate Green vitriol Ferrous sulfate Gum turpentine **Turpentine** 

Azinphos methyl Gusathion insecticide Azinphos methyl Guthion insecticide =

Dichloromonofluoromethane Halocarbon 21 Halogenated waxes Polychlorinated biphenyl Dichloromonofluoromethane Halon 112

Halon 122 Dichlorodifluoromethane Halon 241 Monochlorotetrafluoroethane Halon 242 Dichlorotetrafluoroethane Hartshorn Ammonium carbonate Hatcol XPE 1-Phenyl-1-xylyl ethane

**HCBD** Hexachlorobutadiene 2-Hydroxyethyl acrylate HEA

Undecanoic acid Hendecanoic acid Undecanol Hendecanoic alcohol Undecanol 1-Hendecanol

Heod Dieldrin \_ Heptachlor Heptachlor 1,4,5,6,7,8,8a-Heptachlor

Heptachlorodicyclopentadiene

1-Heptadecanecarboxylic acid Stearic acid cis-8-Heptadecylenecarboxylic acid Oleic acid =

Heptane Heptane n-Heptane Heptane 1-Heptanecarboxylic acid Octanoic acid Heptanoic acid Heptanoic acid = 1-Heptanol Heptanol

Heptanol Heptanol 3-Heptanone Ethyl butyl ketone 2-Heptanone Methylamyl ketone 2-Heptanone n-Amyl methyl ketone

Heptanyl acetate Heptyl acetate 1-Heptene 1-Heptene

### **COMPOUND NAMES**

Hepthlic acid Heptanoic acid n-Heptoic acid Heptanoic acid Heptyl acetate Heptyl acetate n-Heptyl acetate Heptyl acetate 1-Heptyl acetate Heptyl acetate Heptyl alcohol Heptanol Heptylcarbinol Octanol Heptylene 1-Heptene n-Heptylethylene 1-Nonene = n-Heptylic acid Heptanoic acid

Hexamethylenetetramine Hexa Hexachloro-1.3-butadiene Hexachlorobutadiene Aldrin

1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8ahexahydro-1,4-endo-exo-5,8-

dimethanonaphthalene.

endo, exo-1, 2, 3, 4, 10, 10-Hexachloro-6, 7-

expoxy-1,4,4a,5,6,7,8,8aoctahydro-1,4:5,8dimethanonaphthalene

Hexachlorobenzene Hexachlorobenzene Hexachlorobutadiene Hexachlorobutadiene

1,2,3,4,5,6-Hexachlorocyclohexane gamma-Benzene hexachloride

Dieldrin

Hexachlorocyclopentadiene dimer

Hexachlorocyclopentadiene Hexachlorocyclopentadiene

Hexachloroethane Hexachloroethane = Hexachlorophene Hexachlorophene Hexacid 1095 Decanoic acid Hexacid 698 Hexanoic acid Hexacid 898 Octanoic acid

Hexadecyl sulfate, sodium salt Hexadecyl sulfate, sodium salt =

Hexadecyltrimethylammonium chloride Hexadecyltrimethylammonium chloride =

Endrin

Hexadrin

Hexafluosilicic acid Fluosilicic acid Hexahvdric alcohol Sorbitol Hexahydro-1,4-diazine **Piperazine** Hexahydro-2h-azepine-2-one Caprolactam Hexahydroaniline Cyclohexylamine Hexahydroazepine Hexamethylenimine = Hexahydrobenzene Cyclohexane

Hexahydrocresols 2-Methylcyclohexanol Isopropyl cyclohexane Hexahydrocumene =

Cyclohexanol Hexahydrophenol = Piperazine Hexahydropyrazine =

Hexahydrotoluene Methylcyclohexane n-Hexaldehvde n-Hexaldehvde Hexalin = Cyclohexanol Hexamethylene Cyclohexane Hexamethylenediamine Hexamethylenediamine

Hexamethylenetetramine Hexamethylenetetramine Hexamethylenimine Hexamethylenimine Hexamine Hexamethylenetetramine

n-Hexaldehyde Hexanal = Cyclohexane Hexanaphthene = Hexane carboxylic acid Heptanoic acid

### **COMPOUND NAMES**

Hexane, 1,6-diisocyanato- 2,2,4(2,4,4)- = Trimethylhexamethylene diisocyanate

trimethyl-

 $\begin{array}{lll} \mbox{Hexane} & = & \mbox{n-Hexane} \\ \mbox{n-Hexane} & = & \mbox{n-Hexane} \end{array}$ 

1,6-Hexanediamine, 2,2,4(or2,4,4)- = Trimethyl hexamethylene diamine

trimethyl-1.6-Hexanediamine

1,6-Hexanediamine = Hexamethylenediamine Hexanedinitrile = Adiponitrile Hexanedioic acid, dimethyl ester = Dimethyl adipate

Hexanedioic acid = Adipic acid 1,2,3,4,5,6-Hexannehexol = Sorbitol

Hexanoic acid, 2-ethylHexanoic acid
Hexanoic acid
Hexanoic acid
Hexanoic acid

n-Hexanol = 1-Hexanol 1-Hexanol = 1-Hexanol

2-Hexanone = Methyl n-butyl ketone
Hexaplas M/1B = Diisobutyl phthalate
Hexaplas M/O = Diisooctyl phthalate
alpha-Hexene = 1-Hexene

1-Hexene = 1-Hexene iso-Hexene = 2-Methyl-1-pentene

n-Hexoic acid = Hexanoic acid Hexone = Methyl isobutyl ketone

n-Hexyl acetate = Hexyl acetate
Hexyl acetate = Hexyl acetate
1-Hexyl acetate = Hexyl acetate
Hexyl acetate = Methyl amyl acetate
Hexyl acetate = Methyl amyl acetate

Hexyl alcohol, acetate
n-Hexyl alcohol
sec-Hexyl alcohol
= Hexyl acetate
= 1-Hexanol
= Ethyl butanol

Hexyl carbitol = Diethylene glycol n-hexyl ether Hexyl ethanoate = Hexyl acetate Hexylene glycol = Hexylene glycol

Hexylene giycoi = Hexylene giyc Hexylene = 1-Hexene

HFSA = Hydrofluorosilicic acid (25% or less)

HHDN = Aldrin

Hi-dry = Tetraethylene glycol

High speed bearing oil = Oils, miscellaneous: spindle Higher fatty alcohol = Tallow fatty alcohol

HMDA = Hexamethylenediamine

Home-heating oil = Oils, fuel: 2 Homopiperidine = Hexamethylenimine

Household ammonia = Ammonium hydroxide (<28% aqueous

ammonia)

HSDB 5700 = 2-Hydroxy-4-(methylthio)-butanoic acid HTH dry chlorine = Calcium hypochlorite

HTH = Calcium hypochlorite
Hydracrylic acid, beta-lactone = beta-Propiolactone

Hydrazinobenzene = Phenylhydrazine
Hydrazoic acid, sodium salt = Sodium azide
Hydrobromic acid monoammoniate = Ammonium bromide

### **COMPOUND NAMES**

Hydrobromic acid, anhydrous Hydrochloric acid, anhydrous

Hydrochloric acid

Hydrocyanic acid, sodium salt

Hydrocyanic acid Hydrocyanic ether

Hydrofluoric acid, anhydrous

Hydrofluoric acid

Hydrofluorosilicic acid (25% or less)

Hydrofluosilic acid

Hydrofol acid 1255 or 1295 Hydrogen bromide, anhydrous

Hydrogen bromide
Hydrogen chloride
Hydrogen cyanide
Hydrogen fluoride

Hydrogen hexafluorosilicate Hydrogen peroxide carbamide

Hydrogen peroxide Hydrogen sulfide Hydrogen para-Hydrogen

1-Hydroperoxycyclohexyl

Hydroquinol Hydroquinone

N-Hydroxethyl-1,2-ethanediamine

2-Hydroxy-1,2,3-propane-tricarboxylic

acid

1-Hydroxy-2-cyanoethane 2-Hydroxy-2-methyl-3-butyne 2-Hydroxy-2-methylpropanenitrile

1-Hydroxy-2-phenoxyethane

1-Hydroxy-2,4-dinitro-benzene 6-Hydroxy-3-(2h)-pyridazinone

2-Hydroxy-4-(methylthio)-butanoic acid

4-Hydroxy-4-methyl-2-pentanone

2-Hydroxy-m-xylene

beta-Hydroxy-tricarboxylic acid

Alpha-Hydroxy isobutronitrile O-Hydroxybenzaldehyde

Hydroxybenzene o-Hydroxybenzoic acid 1-Hydroxybutane 2-Hydroxybutane

2-Hydroxychlorobenzene Hydroxycyclohexane

1-Hydroxycyclohexyl peroxide Hydroxydimethylarsine oxide

Bis-[2-(2-Hydroxyethoxy) ethyl ether 2-Hydroxyethyl 2-propenoate

2-Hydroxyethyl acetate 2-Hydroxyethyl acrylate beta-Hydroxyethyl acrylate

b-Hydroxyethyl isopropyl ether

Hydrogen bromideHydrogen chlorideHvdrochloric acid

Sodium cyanideHydrogen cyanide

= Propionitrile= Hydrogen fluoride= Hydrofluoric acid

= Hydrofluorosilicic acid (25% or less)

= Fluosilicic acid= Lauric acid

Hydrogen bromide
 Hydrogen bromide
 Hydrogen chloride
 Hydrogen cyanide
 Hydrogen fluoride
 Fluosilicic acid
 Urea peroxide
 Hydrogen peroxide

Hydrogen sulfideHydrogenHydrogen

Cyclohexanone peroxide

HydroquinoneHydroquinone

= Aminoethylethanolamine

Citric acid

= Ethylene cyanohydrin

Methyl butynolAcetone cyanohydrin

= Ethylene glycol phenyl ether

= 2,4-Dinitrophenol= Maleic hydrazide

= 2-Hydroxy-4-(methylthio)-butanoic acid

Diacetone alcohol

XylenolCitric acid

Acetone cyanohydrinSalicylaldehyde

Salicylaidenyde
Phenol
Salicylic acid
n-Butyl alcohol
sec-Butyl alcohol
o-Chlorophenol
Cyclohexanol

= Cyclohexanone peroxide

Cacodylic acid
 Tetraethylene glycol
 2-Hydroxyethyl acrylate
 Ethylene glycol acetate
 2-Hydroxyethyl acrylate
 2-Hydroxyethyl acrylate

= Ethylene glycol isopropyl ether

### **COMPOUND NAMES**

1-Hydroxyheptane = Heptanol 1-Hydroxyhexane = 1-Hexanol

Hydroxylamine sulfate = Hydroxylamine sulfate Hydroxylamine = Hydroxylamine

2,2-bis(Hydroxymethyl)-1,3-propanediol = Pentaerythritol
2-Hydroxymethylfuran = Furfuryl alcohol
2-Hydroxynitrobenzene = 2-Nitrophenol
3-Hydroxynitrobenzene = 3-Nitrophenol
4-Hydroxynitrobenzene = 4-Nitrophenol

2,2-Bis(4-Hydroxyphenyl)propane = Bisphenol A 3-Hydroxypropanenitrile = Ethylene cyanohydrin

2-Hydroxypropanoic acid = Lactic acid alpha-Hydroxypropionic acid = Lactic acid

2-Hydroxypropionitrile = Lactonitrile solution (80% or less)

Hydroxypropyl acrylate = Hydroxypropyl acrylate
Hydroxypropyl methacrylate = Hydroxypropyl methacrylate
Tris(2-Hydroxypropyl) amine = Triisopropanolamine
2-Hydroxypropylamine = Monoisopropanolamine

Alpha-Hydroxytoluene Benzyl alcohol = 3-Hydroxytoluene m-Cresol = o-Hydroxytoluene o-Cresol = 4-Hydroxytoluene p-Cresol Hydroxytoluenes Cresols = beta-Hydroxytricarballylic acid Citric acid =

2-Hydroxytriethylamine = N,N-Diethylethanolamine Hylene M50 = Diphenylmethane diisocyanate Hylene T = Toluene 2.4-diisocyanate

Hystrene 9512 = Lauric acid
Hytrol O = Cyclohexanone
IBN = Isobutyronitrile
Illuminating oil = Kerosene

1,1'-Iminodi-2-propanol = Diisopropanolamine
2,2'-Iminodiethanol = Diethanolamine
Imperial green = Copper acetoarsenite

Inedible tallow = Tallow

Insulating oil = Oils, miscellaneous: transformer

lodomethane = Methyl iodide

IPDI = Isophorone diisocyanate

Iron (ous) sulfate = Ferrous sulfate

Iron ammonium sulfate = Ferrous ammonium sulfate

Iron dichloride Ferrous chloride Iron fluoride Ferric fluoride Iron III chloride Ferric chloride Ferric chloride Iron perchloride Iron protochloride Ferrous chloride Iron protoxalate Ferrous oxalate Iron sesquisulfate = Ferric sulfate Iron tersulfate = Ferric sulfate

### **COMPOUND NAMES**

Iron trichloride=Ferric chlorideIron vitriol=Ferrous sulfateIron(III) sulfate=Ferric sulfate

Isceon 11 = Trichlorofluoromethane

Isoamyl alcohol=Isoamyl alcoholIsoamyl ethanoate=IsoamylacetateIsoamylacetate=IsoamylacetateIsobutane=Isobutane

Isobutanol-2-amine = 2-Amino-2-methyl-1-propanol (90% or

less)

Isobutanol amine = 2-Amino-2-methyl-1-propanol (90% or

less)

Isobutanol = Isobutyl alcohol Isobutene trimer = Triisobutylene Isobutene = Isobutylene

Isobutyl 2-methyl-2-propenoate=Isobutyl methacrylateIsobutyl 2-propenoate=iso-butyl acrylateIsobutyl acetate=Isobutyl acetateIsobutyl alcohol=Isobutyl alcoholIsobutyl alpha-methacrylate=Isobutyl methacrylate

Isobutyl alpha-methacrylate Isobutyl methacrylate = Isobutyl isobutyrate Isobutyl isobutyrate = Isobutyl methacrylate Isobutyl methacrylate Isobutyl methyl ketone Methyl isobutyl ketone Isobutyl methylmethanol Methyl amyl alcohol = Isobutyl phthalate Diisobutyl phthalate = Isobutylaldehyde iso-butyraldehyde = Isobutylamine Isobutylamine = Isobutylcarbinol Isoamyl alcohol Isobutylene Isobutylene =

Isobutylmethylcarbinol Methyl amyl alcohol = Methyl isobutyl carbinol Isobutylmethylcarbinol Isobutyraldehyde iso-butyraldehyde = 1-Isobutvrate 1-Isobutvrate Isobutvric acid Isobutvric acid Isobutyric aldehyde iso-butyraldehyde Isobutyronitrile Isobutyronitrile =

Isoctyl trichlorophenoxyacetate = 2,4,5-T esters Isocumene = n-Propylbenzene

Isocyanatomethane=Methyl isocyanateIsocyanic acid, methyl ester=Methyl isocyanateIsodecaldehyde, mixed isomers=IsodecaldehydeIsodecaldehyde-Isodecaldehyde

Isodecalderlyde | Isodecalderl

Isodiprene = Carene

Isodurene = 1,2,3,5-Tetramethylbenzene

Isohexane Isohexane Isonitropropane 2-Nitropropane Isooctaldehyde Isooctaldehyde Isooctyl alcohol Isooctyl alcohol Isooctyl ester Isooctyl ester Isooctylaldehyde Isooctaldehyde = Isopentane Isopentane = Isopentyl acetate Isoamylacetate

# **COMPOUND NAMES**

Isopentyl alcohol Isopentyl nitrite

Isophorone diamine diisocyanate

Isophorone diamine Isophorone diisocyanate

Isophorone
Isophthalic acid
Isoprene
Isopropanol
Isopropanolamine
Isopropene cyanide
Isopropenyl methyl ketone
Isopropenylbenzene
Isopropenylnitrile
2-Isopropoxy propane
2-Isopropoxyethanol

Isopropyl 2, 4-dichlorophenoxy acetate

Isopropyl acetate
Isopropyl alcohol
Isopropyl cellosolve
Isopropyl cyanide
Isopropyl cyclohexane
Isopropyl epoxypropyl ether

Isopropyl ether

Isopropyl glycidyl ether

Isopropyl glycol Isopropyl mercaptan Isopropyl methyl ketone Isopropyl percarbonate Isopropyl peroxydicarbonate

o-Isopropyl phenol 2-Isopropyl phenol Isopropylacetone Isopropylamine

dodecylbenzenesulfonate

Isopropylamine

Isopropylamino-s-triazine

Isopropylbenzene hydroperoxide

Isopropylbenzene Isopropylcarbinol

Isopropylcumyl hydroperoxide

Isopropylformic acid 4,4'-Isopropylidendiphenol Isopropylideneacetone 4,4'-Isopropylidenediphenol-

p-Isopropyltoluene Isopropyltoluol

Isothiocyanatomethane

Isothiocyanic acid, methyl ester

Isothiourea Isotridecanol Isotridecyl alcohol

Isotron-22 Isotron 11 Isoamyl alcoholiso-Amyl nitrite

Isophorone diisocyanate Isophorone diamine Isophorone diisocyanate

Isophorone Isophthalic acid

= Isoprene

Isopropyl alcohol Monoisopropanolamine Methacrylonitrile

Methyl isopropenyl ketone
alpha-Methylstyrene
Methacrylonitrile
Isopropyl ether

Ethylene glycol isopropyl ether

= 2,4-D esters= Isopropyl acetate= Isopropyl alcohol

Ethylene glycol isopropyl ether

= Isobutyronitrile

Isopropyl cyclohexaneIsopropyl glycidyl ether

= Isopropyl ether

= Isopropyl glycidyl ether

= Ethylene glycol isopropyl ether

Isopropyl mercaptan
 3-Methyl-2-butanone
 Isopropyl percarbonate
 Isopropyl percarbonate
 o-Isopropyl phenol
 o-Isopropyl phenol
 Methyl isobutyl ketone

 Dodecylbenzenesulfonic acid, isopropylamine salt

Isopropylamine

= Atrazine

= Cumene hydroperoxide

CumeneIsobutyl alcohol

= Diisopropylbenzene hydroperoxide

Isobutyric acid Bisphenol A Mesityl oxide

Bisphenol A diglycidyl ether

p-Cymenep-Cymene

Methyl isothiocyanateMethyl isothiocyanateThiocarbamideTridecanol

= Tridecanol

ChlorodifluoromethaneTrichlorofluoromethane

### **COMPOUND NAMES**

Isotron 12 Dichlorodifluoromethane Isovaleral Isovaleraldehyde Isovaleraldehvde Isovaleraldehvde Isovaleraldehyde

Isovaleric aldehyde Isovalerone Diisobutyl ketone

Javelle water Sodium hypochlorite solution Jayflex DTDP Ditridecyl phthalate

Jet fuel: JP-1 Kerosene Jet fuels: JP-1 Jet fuels: JP-1 Jet fuels: JP-3 Jet fuels: JP-3 Jet fuels: JP-4 Jet fuels: JP-4 Jet fuels: JP-5 Jet fuels: JP-5

JP-1 = Oils, fuel: no. 1 JP-1 Oils, miscellaneous: range K-flex DP Dipropylene glycol dibenzoate

Karmex Diuron

Kel F monomer Trifluorochloroethylene Kelthane 4,4'-Dichloro-alpha-trichloromethyl

benzhydrol

4,4'-Dichloro-alpha-trichloromethyl Kelthanethanol

benzhydrol

Kepone Kepone Jet fuels: JP-5 Kerosene, heavy

Kerosene, heavy Oils, miscellaneous: spray

Jet fuels: JP-1 Kerosene Kerosene = Kerosene Kerosene Oils, fuel: no. 1

Kerosene Oils, miscellaneous: range

Kerosine Jet fuels: JP-1 Kerosine = Kerosene Kerosine Oils, fuel: no. 1

Kerosine Oils, miscellaneous: range 2-Ketoheptane n-Amyl methyl ketone

2-Ketohexamethylenimine Caprolactam Ketone, heptyl methyl =

Methyl heptyl ketone 2-Butanone peroxide Ketonox

Kettle rendered lard Oils, edible: lard Killax Tetraethyl pyrophosphate =

Killmaster Dursban

King's gold Arsenic trisulfide King's green = Copper acetoarsenite King's yellow = Arsenic trisulfide Korax 1-Chloro-1-nitropropane =

2-(2,4,5-Trichlorophenoxy) propanoic Kurosalg

acid

Kwik-kil Strychnine

Ammonium lactate DL-Lactic acid, ammonium salt = Ethyl lactate Lactic acid, ethyl ester

Lactic acid Lactic acid Lactonitrile solution (80% or less) Lactonitrile solution (80% or less)

Lithium aluminum hydride LAH Lanarkite Lead sulfate =

Lard Oils, edible: lard = Latex, liquid synthetic Latex, liquid synthetic

### **COMPOUND NAMES**

Laughing gas = Nitrous oxide

Lauric acid = Lauric acid

Laurostearic acid = Lauric acid

Lauroyl peroxide = Lauroyl peroxide

Lauryl alcohol = Dodecanol

Lauryl ammonium sulfate = Ammonium lauryl sulfate

Lauryl magnesium sulfate = Dodecyl sulfate, magnesium salt

Lauryl mercaptan = Lauryl mercaptan

Lauryl methacrylate = Dodecylmethacrylate

- Dodecyl sulfate and immediate = Dodecyl sulfate = Do

Lauryl sodium sulfate = Dodecyl sulfate, sodium salt Lauryl sulfate, diethanolamine salt = Dodecyl sulfate, diethanolamine salt

solution

Lauryl sulfate, magnesium salt = Dodecyl sulfate, magnesium salt Lauryl sulfate, sodium salt = Dodecyl sulfate, sodium salt

Lauryl sulfate, triethanolamine salt = Dodecyl sulfate, triethanolamine salt

Laurylbenzene = Dodecylbenzene

Laurylbenzenesulfonic acid = Dodecylbenzenesulfonic acid

Lead (II) chloride = Lead chloride
Lead acetate trihydrate = Lead acetate
Lead acetate
Lead alkyls = Lead arsenate
Lead arsenate = Lead arsenate
Lead bottoms = Lead sulfate

Lead arsenate = Lead arsenate

Lead bottoms = Lead sulfate

Lead chloride = Lead chloride

Lead difluoride = Lead fluoride

Lead fluoroborate

Lead fluoroborate = Lead fluoroborate

Lead fluoroborate = Lead fluoroborate

Lead fluoroborate solution=Lead fluoroborateLead fluoroborate=Lead fluoroborateLead hyposulfite=Lead thiosulfateLead iodide=Lead iodide

Lead louide

Lead IV acetate

Lead monoxide

Lead nitrate

Lead oxide yellow

Lead protoxide

Lead stearate

Lead stearate

Lead sulfate

Lead sulfide

= Lead louide

Lead tetraacetate

Lead nitrate

Lead nitrate

Lead nitrate

Lead side side stearate

Lead sulfate

Lead sulfide

Lead sulfide = Lead sulfide Lead sulfocyanate = Lead thiocyanate Lead tetraacetate = Lead tetraacetate Lead tetraethyl = Tetraethyl lead Lead tetramethyl Tetramethyl lead Lead thiocyanate Lead thiocyanate Lead thiosulfate Lead thiosulfate = Lead tungstate Lead tungstate Lead wolframate Lead tungstate Leaf lard Oils, edible: lard Diphenyl Lemonene

Levepox hardener T3 = Pentaethylenehexamine

Lichenic acid = Fumaric acid

Leucol

=

Quinoline

### **COMPOUND NAMES**

Light naphtha Light naphtha Liaht oil

Limed wood rosin

Limonene Lindane

Linear alcohols

Linseed oil

Liquamon 28

Liquefied natural gas Liquefied petroleum gas

Liquefied phenol Liquid ammonia Liquid asphalt

Liquid asphalt

Liquid bleach Liquid camphor Liquid gum camphor Liquid hydrogen Liquid impure camphor

Liquid nitrogen Liquid oxygen

Liquid petrolatum

Litharge

Lithium aluminum hydride Lithium bichromate dihydrate

Lithium bichromate Lithium chromate Lithium dichromate Lithium hydride

Lithium LNG

Long-time burning oil

Lorol-22 Lorsban LOX LPG

Lubricating oil Lucidol Lumbrical

Lunar caustic Luperco JDB-50-T

Lve Lye Lye Lve

M-B-C fumigant

MAA MAAC

Macquer's salt

Magnesium dodecyl sulfate Magnesium lauryl sulfate Magnesium nitrate hexahydrate Naphtha: solvent Naphtha: VM & P

Oils, miscellaneous: coal tar

Calcium resinate

Dipentene

gamma-Benzene hexachloride

Linear alcohols

Oils, miscellaneous: linseed

Urea, ammonium nitrate soln (w/aqua

ammonia)

Liquefied natural gas Liquefied petroleum gas = Carbolic oil (mixture) Ammonia, anhydrous

Asphalt blending stocks: roofers flux

Oils, miscellaneous: road Sodium hypochlorite

Camphor oil Camphor oil = Hydrogen Camphor oil Nitrogen Oxygen

Oils, miscellaneous: mineral

Litharge

Lithium aluminum hydride

Lithium bichromate Lithium bichromate Lithium chromate Lithium bichromate = Lithium hydride

Lithium

Liquefied natural gas

Oils, miscellaneous: mineral seal

n-Decyl alcohol

Dursban Oxygen

Liquefied petroleum gas Oils, miscellaneous: motor

Dibenzoyl peroxide Piperazine

= Silver nitrate

= Cyclohexanone peroxide = Caustic potash solution Caustic soda solution Potassium hydroxide = Sodium hydroxide Methyl bromide

Methyl isobutyl carbinol Methyl amyl acetate Potassium arsenate

Dodecyl sulfate, magnesium salt = Dodecyl sulfate, magnesium salt =

Magnesium nitrate

# **COMPOUND NAMES**

Magnesium nitrate
Magnesium perchlorate hexahydrate
Magnesium perchlorate, anhydrous

Magnesium perchlorate

Magnesium Malathion Malazide

Maleic acid hydrazide

Maleic acid
Maleic anhydride
Maleic hydrazide
Maleinic acid
Malenic acid
Malix
Malonic dinitrile

Malonic mononitrile Malononitrile MAOH MAOH

MAPP gas

Marlate 50 Marmer Marsh gas Marshite Massicot MCB

MCP MDEA MDI

Meadow green

Mediben MEK

MEKP Mendrin

Menite p-Mentha-1,8-diene

MEP

Mercaptobenzene Mercaptodimethur Mercaptoethane Mercaptomethane Mercurialin

Mercurialin Mercuric acetate

Mercuric oxide

Mercuric ammonium chloride Mercuric chloride, ammoniated

Mercuric chloride
Mercuric cyanide
Mercuric iodide, red
Mercuric iodide
Mercuric nitrate
Mercuric oxide, red
Mercuric oxide, yellow

Magnesium nitrate
 Magnesium perchlorate
 Magnesium perchlorate
 Magnesium perchlorate

MagnesiumMalathionMaleic hydrazide

Maleic hydrazide
Maleic acid
Maleic anhydride
Maleic hydrazide
Maleic acid
Maleic acid
Endosulfan
Propanedinitrile
Cyanoacetic acid
Propanedinitrile

Methyl amyl alcohol

Methyl isobutyl carbinol

Methyl acetylene, propadiene mixture

Methoxychlor
Diuron
Methane
Copper iodide
Litharge
Chlorobenzene
Calcium phosphate
Methyl diethanolamine

Diphenylmethane diisocyanate

= Copper acetoarsenite

Dicamba

Methyl ethyl ketone2-Butanone peroxide

= Endrin= Phosdrin= Dipentene

Methylethylpyridine
 Benzenethiol
 Mercaptodimethur
 Ethyl mercaptan
 Methyl mercaptan
 Methylamine

Methylamine solutionMercuric acetate

Mercuric ammonium chlorideMercuric ammonium chloride

Mercuric chloride
 Mercuric cyanide
 Mercuric iodide
 Mercuric iodide
 Mercuric nitrate
 Mercuric oxide
 Mercuric oxide
 Mercuric oxide

### **COMPOUND NAMES**

Mercuric sulfate Mercuric sulfate Mercuric sulfide, black Mercuric sulfide Mercuric sulfide, red Mercuric sulfide Mercuric sulfide = Mercuric sulfide Mercuric sulfocyanate Mercuric thiocyanate Mercuric sulfocyanide Mercuric thiocyanate Mercuric thiocyanate Mercuric thiocyanate Mercurous chloride Mercurous chloride Mercurous nitrate monohydrate Mercurous nitrate

Mercurous nitrate monohydrate = Mercurous nitrate
Mercury (II) chloride = Mercuric chloride
Mercury (II) cyanide = Mercuric cyanide
Mercury (II) nitrate = Mercuric nitrate
Mercury (II) sulfate (1:1) = Mercuric sulfate

Mercury amide chloride = Mercuric ammonium chloride Mercury ammonium chloride = Mercuric ammonium chloride

Mercury bichloride = Mercuric chloride
Mercury biniodide = Mercuric iodide
Mercury bisulfate = Mercuric sulfate
Mercury cyanide = Mercuric cyanide
Mercury monochloride = Mercuric cyanide
Mercury nitrate monohydrate = Mercuric nitrate

Mercury oxide Mercuric oxide Mercury perchloride Mercuric chloride Mercury pernitrate Mercuric nitrate Mercury persulfate Mercuric sulfate Mercury protochloride Mercurous chloride Mercury protonitrate Mercurous nitrate Mercury rhodanide Mercuric thiocyanate Mercury subchloride Mercurous chloride =

Mercury Mercury Merex Kepone = Mesityl oxide Mesityl oxide Mesurol Mercaptodimethur Diethyl ketone Metacetone Metallic resinate Calcium resinate Metelilachlor Metolachlor Metelilachlor Metolachlor Methacetone Diethyl ketone Methacrylate monomer Methyl methacrylate

Methacrylic acid, 2, 3-epoxypropyl ester = Glycidyl methacrylate Methacrylic acid, butyl ester = n-Butyl methacrylate

Methacrylic acid, butyl, decyl, cetyl and = Butyl, decyl, cetyl-eicosyl methacrylate

eicosyl ester mix

Methacrylic acid, dodecyl and pentadecyl = Dodecyl/pentadecyl methacrylate

Methacrylic acid, dodecyl ester = Dodecylmethacrylate
Methacrylic acid, ethyl ester = Ethyl methacrylate
Methacrylic acid, isobutyl ester = Isobutyl methacrylate

ester mix

Methacrylic acid, lauryl and pentadecyl = Dodecyl/pentadecyl methacrylate

ester mix

Methacrylic acid, methyl ester = Methyl methacrylate
Methacrylic acid = Methacryloritrile

Methacrylonitrile

beta-Methallyl chloride Methallyl chloride Methanal solution Methanamide

Methane, isocyanato-Methane, tribromo-

Methane

Methanearsonic acid, sodium salt

Methaneethiol Methanethiomethane Methanoic acid, amide Methanoic acid

4,7-Methanoindene, 3a,4,7,7atetrahydrodimethyl

Methanol Metheneamine Methenyl tribromide

Methiocarb

Methionine hydroxy analog

Methmercapturon

2-Methoxy-2-methyl propane 1-Methoxy-2-propanol acetate

1-Methoxy-2-propanol

Methoxy DDT

o-Methoxybenzoic acid 3-Methoxybutyl acetate

Methoxychlor 2-Methoxyethanol

2-(2-Methoxyethoxy)-ethanol 2-Methoxyethyl acetate Bis-(2-Methoxyethyl)-ether

Methoxyethylene

2,2-bis-(p-Methoxyphenyl)-1,1,1trichloroethane

3-Methyl-1-butanol 3-Methyl-1-buten-3-ol 2-Methyl-1-butene-3-one

6-Methyl-1-heptanal 6-Methyl-1-heptanol 2-Methyl-1-pentene 4-Methyl-1-pentene

1-Methyl-1-phenylethylene 2-Methyl-1-propanol

2-Methyl-1-propyl acetate 1-Methyl-1 propylethylene 2-Methyl-1 3-butadiana

2-Methyl-1, 3-butadiene

Methyl-1,3-butylene glycol acetate 1-Methyl-2-(3-pyridyl)pyrrolidine

3-Methyl-2-butanone 2-Methyl-2-butynol

1-Methyl-2-chlorobenzene 1-Methyl-2-fluorobenzene

2-Methyl-2-hydroxy-3-butyne 1-Methyl-2-hydroxyethylamine

### **COMPOUND NAMES**

Methallyl chlorideMethallyl chlorideFormaldehyde solution

FormamideMethyl isocyanate

BromoformMethane

= Methanearsonic acid, sodium salt

Methyl mercaptanDimethyl sulfideFormamideFormic acid

= Methylcyclopentadiene dimer

= Methyl alcohol

= Hexamethylenetetramine

= Bromoform

= Mercaptodimethur

= 2-Hydroxy-4-(methylthio)-butanoic acid

MercaptodimethurMethyl tert-butyl ether

Propylene glycol methyl ether acetate

Propylene glycol methyl ether

MethoxychlorMethyl salicylate3-Methoxybutyl acetate

= Methoxychlor

Ethylene glycol monomethyl ether
 Diethylene glycol monomethyl ether
 Ethylene glycol methyl ether acetate
 Diethylene glycol dimethyl ether

Vinyl methyl etherMethoxychlor

Isoamyl alcohol Methyl butenol

= Methyl isopropenyl ketone

Isooctaldehyde
Isooctyl alcohol
2-Methyl-1-pentene
4-Methyl-1-pentene
alpha-Methylstyrene
Isobutyl alcohol
Isobutyl acetate
2-Methyl-1-pentene

= Isoprene

= 3-Methoxybutyl acetate

= Nicotine

= 3-Methyl-2-butanone

= 2-Methyl-2-hydroxy-3-butyne

o-Chlorotoluene2-Fluorotoluene

= 2-Methyl-2-hydroxy-3-butyne

= 2-Propanolamine

#### **COMPOUND NAMES**

2-Methyl-2-methoxy propane Methyl tert-butyl ether 4-Methyl-2-pentanol acetate Methyl amyl acetate 4-Methyl-2-pentanol Methyl amyl alcohol 4-Methyl-2-pentanol Methyl isobutyl carbinol 4-Methyl-2-pentanone Methyl isobutyl ketone 4-Methyl-2-pentyl acetate Methyl amyl acetate 2-Methyl-2-propanol tert-Butyl alcohol 2-Methyl-2-propen-1-ol Methyl allyl alcohol 1-Methyl-2-pyrrolidinone 1-Methylpyrrolidone =

3-(1-Methyl-2-pyrrolidyl)pyridine = Nicotine

1-Methyl-2, 4-dinitrobenzene 2,4-Dinitrotoluene 2-Methyl-2,4-pentanediol Hexvlene alvcol 2-Methyl-3-buten-2-ol Methyl butenol = 2-Methyl-3-butyn-2-ol Methyl butynol 1-Methyl-3-fluorobenzene 3-Fluorotoluene Methyl-3-oxo-butyrate Methyl acetoacetate 4-Methyl-3-pentene-2-one Mesityl oxide 1-Methyl-4-isopropylbenzene p-Cymene

4-Methyl-4-pentene = 2-Methyl-1-pentene

1-Methyl-4-tert-butylbenzene = Butyl toluene

2-Methyl-6-ethyl aniline = 2-Methyl-6-ethyl aniline 2-Methyl-6-ethyl aniline = 2-Methyl-6-ethyl aniline

2-Methyl-6-methylene-2,7-octadiene = Myrcene

N-Methyl-alpha-pyrrolidone
3-Methyl-buten-(1)-ol(3) = Methyl butenol
Methyl-n-butanoate = Methyl butyrate
Methyl-n-butyrate = Methyl butyrate
p-Methyl-tert-butylbenzene = Butyl toluene
Methyl 2-methyl-2-propenoate = Methyl methacrylate

Methyl acetylene, propadiene mixture = Methyl acetylene, propadiene mixture

Methyl acrylate Methyl acrylate Methyl adipate Dimethyl adipate Methyl alcohol Methyl alcohol Methyl allyl alcohol Methyl allyl alcohol Methyl amyl acetate Methyl amyl acetate = Methyl amyl alcohol Methyl amyl alcohol Methyl amyl ketone n-Amyl methyl ketone =

alpha-Methyl benzene methanol = a-Methylbenzyl alcohol
Methyl benzenecarboxylate = Methyl benzoate
Methyl benzoate = Methyl benzoate
Methyl bromide = Methyl bromide
3-Methyl butan-2-one = 3-Methyl-2-butanone

Methyl butenol = S-Methyl butenol = Methyl butenol

Methyl butynol = 2-Methyl-2-hydroxy-3-butyne

Methyl butynol = Methyl butynol Methyl butyrate = Methyl butyrate

Methyl carbitol acetate = Diethylene glycol methyl ether acetate
Methyl carbitol = Diethylene glycol monomethyl ether

Methyl phosphite

#### **COMPOUND NAMES**

Methyl carbonimide = Methyl isocyanate

Methyl cellosolve acetate = Ethylene glycol methyl ether acetate

Methyl cellosolve = Ethylene glycol monomethyl ether

Methyl chloride = Methyl chloride

Methyl chloroacetate = Methyl chloroacetate

Methyl chlorocarbonate = Methyl chloroformate

Methyl chloroformate = Methyl chloroformate

Methyl chloromethyl ether, anhydrous = Chloromethyl methyl ether

Methyl cyanide = Acetonitrile

Methyl cyclopentane = Methyl cyclopentane

Methyl dichloroacetate = Methyl dichloroacetate

Methyl dichloroacetate = Methyl dichloroacetate

Methyl diethanolamine = Methyl diethanolamine

N-Methyl ethanolamine = Monomethyl ethanolamine

Methyl ether = Dimethyl ether
Methyl ethyl bromo-methane = 2-Bromobutane
Methyl ethyl ketone = Methyl ethyl ketone
Methyl formal = Methyl formal
Methyl formate = Methyl formate
Methyl heptyl ketone = Methyl heptyl ketone

Methyl iodide = Methyl iodide Methyl isobutenyl ketone = Mesityl oxide

Methyl isobutyl carbinol = Methyl isobutyl carbinol

Methyl isobutyl ketone = Methyl isobutyl ketone

Methyl isopropenyl ketone = Methyl isopropenyl ketone

Methyl isopropenyl ketone = Methyl isopropenyl ketone

Methyl isopropenyl ketone Methyl isopropenyl ketone = Methyl isopropyl ketone 3-Methyl-2-butanone = Methyl isothiocyanate Methyl isothiocyanate Methyl mercaptan Methyl mercaptan = Methyl methacrylate Methyl methacrylate = Methyl monochloroacetate Methyl chloroacetate Methyl mustard oil Methyl isothiocyanate = Methyl n-amyl ketone Methylamyl ketone

Methyl n-butyl ketone Methyl n-butyl ketone Methyl n-propyl ketone 2-Pentanone = 2-Methyl nitrobenzene o-Nitrotoluene Methyl nitrobenzene p-Nitrotoluene Methyl parathion Methyl parathion = 2-Methyl pentene-1 2-Methyl-1-pentene = Methyl pentyl ketone n-Amyl methyl ketone Methyl phenyl ketone Acetophenone =

Methyl phosphonothioic dichloride = Methyl phosphonothioic dichloride

=

Trimethyl phosphite

Methyl phthalate Dimethyl phthalate = 2-Methyl propenic acid Methacrylic acid Methyl propyl ketone = Methyl propyl ketone Methyl salicylate Methyl salicylate = Methyl sulfate Dimethyl sulfate Methyl sulfhydrate Methyl mercaptan Methyl sulfide Dimethyl sulfide Methyl sulfoxide Dimethyl sulfoxide Methyl tert-butyl ether Methyl tert-butyl ether =

Methyl thiram = Thiram
Methyl tribromide = Bromoform

### **COMPOUND NAMES**

Methyl tuads Thiram

Methyl vinyl ether Vinyl methyl ether Methyl vinyl ketone Methyl vinyl ketone Methylacetic acid Propionic acid Methylacetic anhydride Propionic anhydride

Methylacetylene-allene mixture Methyl acetylene, propadiene mixture

beta-Methylacrolein Crotonaldehyde = alpha-Methylacrylic acid Methacrylic acid = 2-Methylacrylic acid Methacrylic acid = 2-Methylactonitrile Acetone cyanohydrin = Methyl formal Methylal

beta-Methylallyl chloride Methallyl chloride Methylamine solution Methylamine solution = Methylamine Methylamine

2-(Methylamino)ethanol Monomethyl ethanolamine

N-Methylaminobenzene N-Methylaniline Methylamyl alcohol Methyl isobutyl carbinol Methylamyl ketone Methylamyl ketone Methylaniline (mono) N-Methylaniline m-Methylaniline m-Toluidine 3-Methylaniline m-Toluidine

N-Methylaniline N-Methylaniline 2-Methylaniline o-Toluidine o-Methylaniline o-Toluidine p-Methylaniline p-Toluidine 4-Methylaniline p-Toluidine Propyleneimine 2-Methylaziridine =

Methylbenzene Toluene 3-Methylbenzeneamine m-Toluidine 4-Methylbenzeneamine p-Toluidine =

Methylbenzenesulfonic acid p-Toluenesulfonic acid

Methylbenzol Toluene =

a-Methylbenzyl alcohol a-Methylbenzyl alcohol

alpha-Methylbivinyl 1.3-Pentadiene beta-Methylbivinyl Isoprene 1-Methylbutadiene 1,3-Pentadiene 3-Methylbutanal Isovaleraldehyde 2-Methylbutane Isopentane = 3-Methylbutyl nitrite iso-Amyl nitrite = 3-Methylbutyraldehyde Isovaleraldehyde

Methylcarbamate Carbofuran = Methylchloroform Trichloroethane = Methylcyclohexane Methylcyclohexane = 2-Methylcyclohexanol 2-Methylcyclohexanol o-Methylcyclohexanone o-Methylcyclohexanone 2-Methylcyclohexanone = o-Methylcyclohexanone Methylcyclopentadiene dimer Methylcyclopentadiene dimer =

Methylcyclopentadienylmanganese Methylcyclopentadienylmanganese

tricarbonvl tricarbonyl Methyldichlorosilane Methyldichlorosilane

3-Methylene-7-methyl 1,6-octadiene Myrcene

Methylene bromide Dibromomethane = Methylene chloride Dichloromethane Methylene cyanide Propanedinitrile

### **COMPOUND NAMES**

Methylene dibromide Methylene dichloride Methylene dimethyl ether Methylene tribromide

2,2-Methylene, bis[3,4,6-trichlorophenol]

bis-(1-Methylethyl)-benzene

bis-(1-Methylethyl) ester o-Methylethylbenzene Methylethylcarbinol 1-Methylethylcyclohexane Methylethylene glycol Methylethylene 2-Methylethyleneimine

Methylethylketone peroxide

Methylethylpyridine

Bis-(6-Methylheptyl) phthalate

Methylhydrazine

p-Methylhydroxybenzene

2,2'-Methyliminodiethanol Methylisobutylcarbinol

Methylisobutylcarbinyl acetate

Methylmethane

alpha-Methylnaphthalene 1-Methylnaphthalene 3-Methylnitrobenzene 4-Methylnitrobenzene Methyloxirane 2-Methylpentane Methylphenois m-Methylphenol 2-Methylphenol p-Methylphenol

Methylphenyl methanol Methylphenylamine

2-Methylpropanal 2-Methylpropane 2-Methylpropanenitrile 2-Methylpropanoic acid 2-Methylpropene

alpha-Methylpropionic acid 2-Methylpropionitrile

beta-Methylpropyl ethanoate N,N-bis(2-Methylpropyl)amine

Methylpropylbenzene 2-Methylpyridine alpha-Methylpyridine 3-Methylpyridine 4-Methylpyridine N-Methylpyrrolidinone N-Methylpyrrolidone 1-Methylpyrrolidone

alpha-Methylstyrene

p-Methylstyrene 4-(Methylsulfonyl)-2,6-dinitro

Dibromomethane Dichloromethane Methyl formal **Bromoform** Hexachlorophene =

Diisopropylbenzene (all isomers)

Isopropyl percarbonate

= 2-Ethyl toluene = sec-Butvl alcohol = Isopropyl cyclohexane = Propylene glycol Propylene Propyleneimine = = 2-Butanone peroxide = Methylethylpyridine Diisooctyl phthalate

Methylhydrazine

= p-Cresol

Methyl diethanolamine = Methyl amyl alcohol Methyl amyl acetate

Ethane

=

=

1-Methylnaphthalene 1-Methylnaphthalene = m-Nitrotoluene = p-Nitrotoluene = Propylene oxide = Isohexane Cresols = m-Cresol = o-Cresol p-Cresol

a-Methylbenzyl alcohol

N-Methylaniline = iso-butyraldehyde

Isobutane

Isobutvronitrile = Isobutyric acid = Isobutylene = Isobutyric acid Isobutyronitrile = Isobutyl acetate = Diisobutylamine = p-Cymene 2-Methylpyridine 2-Methylpyridine

3-Methylpyridine = 4-Methylpyridine 1-Methylpyrrolidone 1-Methylpyrrolidone 1-Methylpyrrolidone alpha-Methylstyrene =

Vinyl toluene = **Nitralin** 

### **COMPOUND NAMES**

Methyltrichlorosilane = Methyltrichlorosilane

Methylzinc=DimethylzincMetolachlor=MetolachlorMetron=Methyl parathionMethyl parathion=Dheedrin

Mevinphos = Phosdrin
Mexacarbate = Zectran
MFB = Fluorobenzene

MHA-FA = 2-Hydroxy-4-(methylthio)-butanoic acid MHA acid = 2-Hydroxy-4-(methylthio)-butanoic acid

Methyl isobutyl carbinol **MIBC MIBK** Methyl isobutyl ketone Methyl amyl alcohol MIC MIC Methyl isobutyl carbinol = MIC Methyl isocyanate Middle oil Carbolic oil (mixture) MIK Methyl isobutyl ketone Mild mercury chloride Mercurous chloride

Milk acid = Lactic acid
Milk white = Lead sulfate
Milocep = Metolachlor
Mineral carbon = Charcoal

Mineral colza oil = Oils, miscellaneous: mineral seal

Mineral spirits = Mineral spirits
Mipax = Dimethyl phthalate

Mirex = Mirex

Mitis green = Copper acetoarsenite

Mixed fertilizers = Ammonium nitrate-sulfate mixture

Mixed primary amyl nitrates = n-Amyl nitrate
Mixture of benzene, toluene, xylenes = Naphtha: coal tar
MMH = Methylhydrazine

Mohr's salt = Ferrous ammonium sulfate

Molybdenum trioxide = Molybdic trioxide
Molybdic acid (85%) = Ammonium molybdate
Molybdic anhydride = Molybdic trioxide
Molybdic trioxide = Molybdic trioxide

Mondur TDS = Toluene 2,4-diisocyanate

Mono-n-propylamine = n-Propylamine Mono PE = Pentaerythritol

Monoammonium orthophosphate = Ammonium phosphate

Monobromoacetone=BromoacetoneMonobromobenzene=BromobenzeneMonobromomethane=Methyl bromideMonocalcium phosphate monohydrate=Calcium phosphateMonochlorethane=Ethyl chlorideMonochlorethanoic acid, ethyl ester=Ethyl chloroacetate

Monochloroacetaldehyde = Chloroacetaldehyde Monochloroacetic acid, methyl ester = Methyl chloroacetate

Monochloroacetic acid = Chloroacetic acid
Monochloroacetic acid = Chloroacetic acid (80% or less)

### **COMPOUND NAMES**

Monochlorotrifluoromethane = Monochlorotrifluoromethane

Monoethanolamine=MonoethanolamineMonoethylamine=EthylamineMonoethylene glycol=Ethylene glycolMonofluorobenzene=FluorobenzeneMonofluoroethylene=Vinyl fluoride

Monoglyme = Ethylene glycol dimethyl ether

Monoiodomethane = Methyl iodide Monoisobutylamine = Isobutylamine

Monoisopropanolamine = Monoisopropanolamine

Monoisopropylamine = Isopropylamine

Monomethyl ethanolamine = Monomethyl ethanolamine

Monomethylamine = Methylamine
Monomethylamine = Methylamine solution
Monomethylhydrazine = Methylhydrazine
Mononitrogen monoxide = Nitric oxide

Mononitrogen monoxide = Nitric oxide

Monosodium methane arsonate = Methanearsonic acid, sodium salt

Monosodium methyl arsonate = Methanearsonic acid, sodium salt

Monoxide = Carbon monoxide
Morpholine = Morpholine

Mortopal = Tetraethyl pyrophosphate
Moss green = Copper acetoarsenite

Motor oil = Oils, miscellaneous: lubricating

Motor spirit = Gasolines: automotive (<4.23g lead/gal)

Mouse-tox = Strychnine MPT = Methyl parathion

MPTD = Methyl phosphonothioic dichloride
MSMA = Methanearsonic acid, sodium salt
Multrathane M = Diphenylmethane diisocyanate

Muriatic acid = Hydrochloric acid
Myrcene = Myrcene
Myristic alcohol = Tetradecanol
Myristyl alcohol = Tetradecanol
NA 1760 (DOT) = Hexanoic acid

Nabam = Nabam

Nacap = Sodium 2-mercaptobenzothiazol solution Naccanol NR or SW = Dodecyl benzene sulfonic acid, sodium

salt

Nacconate 100 = Toluene 2,4-diisocyanate
Nacconate 300 = Diphenylmethane diisocyanate
Nacconol 988 A = Dodecylbenzenesulfonic acid

Nadone = Cyclohexanone

Naled = Naled

Naphtha: coal tar = Naphtha: coal tar Naphtha: solvent = Naphtha: solvent

Naphtha: stoddard solvent = Naphtha: stoddard solvent

Naphtha: VM & P

Naphtha

Naphtha

Naphthalene

Naphthalin

Naphthalene

Naphthalene

Naphthalene

Naphthane = Decahydronaphthalene Naphthenic acids = Naphthenic acids

1-Naphthyl n-methylcarbamate = Carbaryl

alpha-Naphthylamine = 1-Naphthylamine

### **COMPOUND NAMES**

1-Naphthylamine = 1-Naphthylamine Naphtol as-kg = p-Toluidine

Napthalane = Decahydronaphthalene

Natural gas = Methane

Natural gasoline = Gasolines: casinghead

Naugatuck DO 14 = Propargite

NCI-C 54773 = Dimethyl hydrogen phosphite

NCI-C06155 Butyl chloride NCI-C06508 Benzyl acetate Tetranitromethane NCI - C55947 = 2,6-Dimethylaniline NCL-C56188 Necatorina Carbon tetrachloride Neo-fat 10 Decanoic acid Neo-fat 12-43 Lauric acid Neo-fat 8 Octanoic acid

Neodecanoic acid, vinyl ester = Vinyl neodecanoate Neodecanoic acid = Neodecanoic acid

Neofat 12 = Lauric acid
Neohexane = Neohexane

Neol = 2,2-Dimethylpropane-1,3-diol

Neopentanoic acid = Trimethylacetic acid

Neopentyl glycol = 2,2-Dimethylpropane-1,3-diol Neopentylene glycol = 2,2-Dimethylpropane-1,3-diol

Nerkol = Dichlorvos

Neutral ammonium chromate = Ammonium chromate
Neutral ammonium fluoride = Ammonium fluoride
Neutral anhydrous calcium hypochlorite = Calcium hypochlorite

Neutral verdigris = Copper acetate
NIA 12 40 = Ethion
NIA 5996 = Dichlobenil
Niagara 10242 = Carbofuran
Nialate = Ethion

Nickel (II) fluoborate = Nickel fluoroborate
Nickel acetate tetrahydrate = Nickel acetate
Nickel acetate = Nickel acetate

Nickel ammonium sulfate hexahydrate = Nickel ammonium sulfate Nickel ammonium sulfate = Nickel ammonium sulfate

Nickel bromide
Nickel bromide
Nickel bromide
Nickel carbonyl

Nickel carbonyl

Nickel chloride hexahydrate = Nickel chloride
Nickel chloride = Nickel chloride
Nickel cyanide
Nickel dihydroxide = Nickel hydroxide
Nickel fluoroborate solution = Nickel fluoroborate

Nickel fluoroborate=Nickel fluoroborateNickel formate dihydrate=Nickel formateNickel formate=Nickel formateNickel hydroxide=Nickel hydroxide

### **COMPOUND NAMES**

Nickel nitrate hexahydrate Nickel nitrate Nickel nitrate Nickel nitrate Nickel sulfate Nickel sulfate Nickel tetracarbonyl Nickel carbonyl Nickel acetate Nickelous acetate Nickel hydroxide Nickelous hydroxide Nickelous sulfate Nickel sulfate = Nicotine sulfate Nicotine sulfate = **Nicotine Nicotine** 

Niobe oil Methyl benzoate

Tetraethyl pyrophosphate **Nitos** 

**Nitralin** Nitralin

Nitram Ammonium nitrate Nitran Methyl parathion o-Nitraniline 2-Nitroaniline Nitratine Sodium nitrate

Nitrex nitrogen solutions (non-pressure) Ammonium nitrate-urea solution

Nitric acid, aluminum salt Aluminum nitrate Nitric acid, iron(III) salt Ferric nitrate Nitric acid, lead II salt Lead nitrate Nitric acid, thallium (I) salt Thallium nitrate Nitric acid, thallous salt Thallium nitrate Nitric acid Nitric acid Nitric oxide Nitric oxide

Nitrilotriacetic acid and salts Nitrilotriacetic acid and salts

2-Nitroaniline 2-Nitroaniline o-Nitroaniline 2-Nitroaniline p-Nitroaniline 4-Nitroaniline 4-Nitroaniline 4-Nitroaniline Nitrobenzene Nitrobenzene Nitrobenzol Nitrobenzene Nitrocarbol = **Nitromethane** Nitrocellulose gum Collodion Nitrocellulose solution Collodion

o-Nitrochlorobenzene o-Chloronitrobenzene

Nitrochloroform Chloropicrin Nitroethane Nitroethane Nitrogen tetroxide Nitrogen dioxide = Nitric oxide Nitrogen monoxide Nitrogen peroxide Nitrogen tetroxide Nitrogen tetroxide Nitrogen tetroxide =

Nitrogen Nitrogen =

Magnesium nitrate Nitromagnesite = Nitromethane Nitromethane o-Nitrophenol 2-Nitrophenol 2-Nitrophenol 2-Nitrophenol 3-Nitrophenol 3-Nitrophenol = m-Nitrophenol 3-Nitrophenol p-Nitrophenol 4-Nitrophenol 4-Nitrophenol 4-Nitrophenol 1-Nitropropane 1-Nitropropane 2-Nitropropane 2-Nitropropane = sec-Nitropropane 2-Nitropropane = Nitrosyl chloride Nitrosyl chloride

### **COMPOUND NAMES**

3-Nitrotoluene m-Nitrotoluene m-Nitrotoluene m-Nitrotoluene o-Nitrotoluene o-Nitrotoluene 2-Nitrotoluene o-Nitrotoluene p-Nitrotoluene p-Nitrotoluene 3-Nitrotoluol m-Nitrotoluene p-Nitrotoluene 4-Nitrotoluol Nitrotrichloromethane Chloropicrin Ethyl nitrite Nitrous ether Nitrous oxide Nitrous oxide No. 4 Oils, fuel: 4 No. 5 Oils, fuel: 5 No. 6 Oils, fuel: no. 6 Nonan-2-one Methyl heptyl ketone Nonane = Nonane

Nonane = Nonane
n-Nonane = Nonane
Nonanol acetate = Nonyl acetate
Nonanol = Nonanol
1-Nonanol = Nonanol

5-Nonanone = Di-n-butyl ketone 2-Nonanone = Methyl heptyl ketone

Nonene (non-linear) = Nonene

Nonene (nonlinear) = Propylene trimer 1-Nonene = 1-Nonene

1-Nonene = 1-Nonene Nonene = Nonene

Nonene = Propylene trimer
Nonyl acetate = Nonyl acetate
n-Nonyl acetate
Nonyl alcohol/pelargonic alcohol = Nonanol

Nonyl alcohol Nonanol = Nonylcarbinol n-Decyl alcohol 1-Nonylene 1-Nonene = n-Nonylethylene 1-Undecene Nonylphenol Nonviphenol S-Noranone Di-n-butyl ketone Normal lead acetate Lead acetate =

Normenthane = Isopropyl cyclohexane

Norvalamine = n-Butylamine 2-NP = 2-Nitropropane

NTA = Nitrilotriacetic acid and salts

NTM = Dimethyl phthalate Nuoplaz = Ditridecyl phthalate

Nux-vomica = Strychnine O,O-Diethyl O-(p-nitrophenyl) = Parathion

phosphorothioate
O,O[diethyl-o(and 5)-]2- = Demeton

(ethylthio)ethyl[phosphorothioate

Octa-klor = Chlordane 1,2,4,5,6,7,8,8-Octachloro-2,3,3a,4,7,7a- = Chlordane

hexahydro-4,7-methanoindene

Octachlorocamphene = Toxaphene Octadecanoic acid = Stearic acid cis-9-Octadecenoic acid = Oleic acid

#### **COMPOUND NAMES**

n-Octadecylic acid = Stearic acid 1,6-Octadiene, 7-methyl-3-methylene = Myrcene

1-Octanal = Octyl aldehydes

Octane = Octane
n-Octane = Octane
Octanoic acid = Octanoic acid
Octanol = Octanol
1-Octanol = Octanol

3-Octanone = Ethyl amyl ketone 1-Octene = 1-Octene n-Octoic acid = Octanoic acid Octoil = Dioctyl phthalate

Octycarbinol = Nonanol

n-Octyl-n-decyl phthalate = Octyl decyl phthalate Octyl acetate = 2-Ethylhexyl acetate

Octyl alcohol = Octanol

Octyl aldehyde = Ethylhexaldehyde
n-Octyl aldehyde = Octyl aldehydes
Octyl aldehydes = Octyl aldehydes
Octyl decyl phthalate = Octyl epoxy tallate

alpha-Octylene = 1-Octene Oil of bitter almond = Benzaldehyde

Oil of cashew nutshell = Oil, misc: cashew nut shell

Oil of mirbane = Nitrobenzene
Oil of Niobe = Methyl benzoate
Oil of vitriol = Sulfuric acid

Oil, misc: cashew nut shell = Oil, misc: cashew nut shell

Oil, misc: pine = Oil, misc: pine
Oils, edible: castor = Oils, edible: castor
Oils, edible: coconut = Oils, edible: coconut
Oils, edible: cottonseed = Oils, edible: cottonseed
Oils, edible: fish = Oils, edible: fish

Oils, edible: lard Oils. edible: lard Oils, edible: olive Oils, edible: olive Oils, edible: palm Oils, edible: palm Oils, edible: peanut Oils, edible: peanut Oils, edible: safflower Oils, edible: safflower = Oils, edible: soya bean Oils, edible: soya bean Oils, edible: tucum Oils, edible: tucum Oils, edible: vegetable Oils, edible: vegetable =

Oils, fuel: 1-D Oils, fuel: 1-D Oils, fuel: 2-D Oils, fuel: 2-D = Oils, fuel: 2 Oils, fuel: 2 Oils. fuel: 4 Oils, fuel: 4 Oils, fuel: 5 Oils, fuel: 5 = Oils, fuel: no. 1 Oils, fuel: no. 1 Oils, fuel: no. 6 Oils, fuel: no. 6

Oils, miscellaneous: absorption
Oils, miscellaneous: coal tar
Oils, miscellaneous: coal tar
Oils, miscellaneous: croton
Oils, miscellaneous: linseed
Oils, miscellaneous: linseed
Oils, miscellaneous: lubricating
Oils, miscellaneous: mineral seal

Oils, miscellaneous: lubricating
Oils, miscellaneous: mineral seal

### **COMPOUND NAMES**

Oils, miscellaneous: mineral Oils, miscellaneous: mineral Oils, miscellaneous: motor Oils, miscellaneous: motor Oils, miscellaneous: neatsfoot Oils, miscellaneous: neatsfoot Oils, miscellaneous: penetrating Oils, miscellaneous: penetrating Oils, miscellaneous: range Oils, miscellaneous: range Oils, miscellaneous: resin Oils, miscellaneous: resin Oils, miscellaneous: road Oils, miscellaneous: road = Oils, miscellaneous: rosin Oils, miscellaneous: rosin = Oils, miscellaneous: sperm Oils, miscellaneous: sperm = Oils, miscellaneous: spindle Oils, miscellaneous: spindle = Oils, miscellaneous: spray Oils, miscellaneous: spray Oils, miscellaneous: tall Oils, miscellaneous: tall = Oils, miscellaneous: tanner's Oils, miscellaneous: tanner's = Oils, miscellaneous: transformer = Oils, miscellaneous: transformer Oils, miscellaneous: turbine = Oils, miscellaneous: turbine

Oils: clarified = Oils: clarified
Oils: crude = Oils: crude
Oils: diesel = Oils: diesel
Olefiant gas = Ethylene

Oleic acid, ammonium salt = Ammonium oleate

Oleic acid, potassium salt

Oleic acid, sodium salt

= Oleic acid, potassium salt

Oleic acid, sodium salt

Oleic acid = Oleic acid
Oleum abietis = Oil, misc: pine
Oleum = Oleum

Omal Trichlorophenol = Omite Propargite = ONA 2-Nitroaniline ONP 2-Nitrophenol Ontrack 8e Metolachlor = Orpiment Arsenic trisulfide Orthoarsenic acid Arsenic acid = Orthoboric acid Boric acid Orthocide Captan

Orthophosphoric acid = Phosphoric acid
Orthotitanic acid, tetrabutyl ester = Tetrabutyl titanate
3-Oxa-1, 5-pentanediol = Diethylene glycol

Oxacetic acid = Glyoxylic acid (50% or less)

Oxacyclopentadiene = Furan
Oxal = Glyoxal
Oxaldehyde = Glyoxal
Oxalic acid dinitrile = Cyanogen

Oxalic acid, diammonium salt = Ammonium oxalate
Oxalic acid, ferrous salt = Ferrous oxalate
Oxalic acid = Oxalic acid
Oxalonitrile = Cyanogen

Oxammonium sulfate = Hydroxylamine sulfate
Oxammonium = Hydroxylamine
2-Oxetanone = beta-Propiolactone

Oxidate LE = Methyl benzoate
Oxides of nitrogen = Nitrogen tetroxide

Oxirane = Ethylene oxide
Oxo octaldehyde = Isooctaldehyde
Oxo octyl alcohol = Isooctyl alcohol

### **COMPOUND NAMES**

3-Oxobutanoic acid methyl ester = Methyl acetoacetate alpha-Oxodiphenylmethane = Benzophenone alpha-Oxoditane = Benzophenone

Oxoethanoic acid = Benzophenone = Benzophenone = Glyoxylic acid (50% or less)

2-Oxohexamethylenimine = Caprolactam
Oxole = Furan
Oxotridecyl alcohol = Tridecanol
1,1'-[Oxybis(methylene)] bis benzene = Dibenzyl ether
2,2'-Oxybisethanol = Diethylene glycol

2,2 -Oxypisethanoi = Diethylene

Oxygen = Oxygen

Oxylite = Dibenzoyl peroxide

Oxyphenic acid = Catechol Oxytoluenes = Cresols

Paint drier = Copper naphthenate
Painter's naphtha = Naphtha: VM & P
Palm butter = Oils, edible: palm
Palm fruit oil = Oils, edible: palm
Palm oil = Oils, edible: palm
Palm seed oil = Oils, edible: tucum
PAN = Phthalic anhydride

Paper maker's alum = Aluminum sulfate solution

PAPI = Polymethylene polyphenyl isocyanate

Paracetaldehyde = Paraldehyde

Paradi = p-Dichlorobenzene
Paradichlorobenzene = p-Dichlorobenzene
Paradow = p-Dichlorobenzene

Paraformaldehyde Paraformaldehyde Paraldehyde Paraldehyde Paramoth p-Dichlorobenzene Paranaphthalene Anthracene Parathion-methyl Methyl parathion Parathion Parathion Paridol Methyl parathion Copper acetoarsenite Paris green Copper acetoarsenite Parrot green

Patent aluminum = Aluminum sulfate PCB = Polychlorinated biphenyl

PE = Pentaerythritol
Pear oil = Isoamylacetate
Pear oil = sec-Amyl acetate
Pearl white = Bismuth oxychloride
Penta-1,4-diene = 1,4-Pentadiene
Penta = Pentachlorophenol

Pentaborane = Pentaborane
(9)-Pentaboron nonahydride = Pentaborane
Pentachloroethane = Pentachloroethane
Pentachlorophenol = Pentachlorophenol
Pentachlorophenyl chloride = Hexachlorobenzene
o-Pentadecadienyl salicylic acid = Oil. misc: cashew nut shell

o-Pentadecadienyl salicylic acid = Oil, misc: cashe
Pentadecanol = Linear alcohols
Pentadecanol = Pentadecanol
1-Pentadecanol = Pentadecanol
Pentadecyl alcohol = Pentadecanol
trans-Pentadiene-1,3 = 1,3-Pentadiene

### **COMPOUND NAMES**

cis-Pentadiene-1,3 = 1,3-Pentadiene 1,3-Pentadiene = 1,3-Pentadiene 1,4-Pentadiene = 1,4-Pentadiene Pentaerythritol = Pentaerythritol

Pentaethylene hexamine Pentaethylenehexamine Pentaethylenehexamine Pentaethylenehexamine Pentalin Pentachloroethane = Pentamethylene Cyclopentane Pentanal n-Valeraldehyde = Pentanal Valeraldehyde Pentane Pentane

1,5-Pentanedial = Glutaraldehyde solution

2,4-Pentanedione Acetylacetone 1-Pentanethiol n-Amyl mercaptan Pentanoic acid Pentanoic acid 1-Pentanol n-Amyl alcohol 2-Pentanone 2-Pentanone 3-Pentanone Diethyl ketone Methyl propyl ketone 2-Pentanone Pentaerythritol Pentek 1-Pentene 1-Pentene

tert-Pentyl acetate = tert-Amyl acetate

Pentyl acetates = Amyl acetate (all isomers)

Pentyl alcohol n-Amyl alcohol 1-Pentyl chloride n-Amyl chloride = Pentyl methyl ketone n-Amyl methyl ketone n-Pentyl propionate n-Pentyl propionate 2-Pentylacetate sec-Amyl acetate 2-Pentylbromide 2-Bromopentane = sec-Pentylcarbinol Ethyl butanol Pentylformic acid Hexanoic acid = Pentylsilicon trichloride n-Amvltrichlorosilane

Peracetic acid = Peracetic acid
Percarbamide = Urea peroxide
Perchloric acid solution = Perchloric acid
Perchloric acid = Perchloric acid
Perchlorobenzene = Hexachlorobutadiene

Perchlorocyclopentadiene = Hexachlorocyclopentadiene Perchlorodihomocubane = Mirex

Perchloroethane = Hexachloroethane
Perchloroethylene = Tetrachloroethylene
Perchloromethane = Carbon tetrachloride

Perchloromethyl mercaptan = Perchloromethyl mercaptan

Perchloromethyl mercaptan = Perchloromethyl mercapt Perclene = Tetrachloroethylene Perhydronapthalene = Decahydronaphthalene Peroxide = Tetrachloroethylene Peroxyacetic acid = Peracetic acid

Peroxydicarbonic acid, = Isopropyl percarbonate

Peroxydisulfuric acid, diammonium salt = Ammonium persulfate

Persian-insect powder = Pyrethrins Petrohol = Isopropyl alcohol

### **COMPOUND NAMES**

Petrol = Gasolines: automotive (<4.23g lead/gal)

Petrolatum jelly = Petrolatum
Petrolatum = Petrolatum
Petroleum asphalt = Asphalt

Petroleum asphalt = Oils, miscellaneous: road
Petroleum distillate = Distillates: flashed feed stocks
Petroleum distillate = Distillates: straight run

Petroleum insulating oil = Oils, miscellaneous: transformer

Petroleum jelly = Petrolatum

Petroleum naphtha = Petroleum naphtha

Petroleum pitch = Asphalt blending stocks: straight run

residue

Petroleum residue = Asphalt blending stocks: straight run

residue

Petroleum solvent = Naphtha: solvent

Petroleum solvent = Naphtha: stoddard solvent

Petroleum solvent = Naphtha: VM & P
Petroleum solvent = Petroleum naphtha
Petroleum spirits = Mineral spirits

Petroleum tailings = Asphalt blending stocks: roofers flux

Petroleum wax = Waxes: paraffin
Petroleum = Oils: crude
Phellandrene = Dipentene
Phenachlor = Trichlorophenol
Phenacyl chloride = Chloroacetophenone

Phenador-X = Diphenyl Phenic acid = Phenol

Phenol, 2,4,6-trinitro-, ammonium salt = Ammonium picrate, wet

Phenol, o-chloro- = o-Chlorophenol Phenol, o-ethyl = Ethylphenol

Phenol, pentachloro-, sodium salt = Sodium pentachlorophenate

Phenol,2-chloro- = o-Chlorophenol

2-Phenoxyethanol = Ethylene glycol phenyl ether 1-Phenyl-1-xylyl ethane = 1-Phenyl-1-xylyl ethane

Phenyl bromide = Bromobenzene

Phenyl cellosolve = Ethylene glycol phenyl ether

Phenyl chloride = Chlorobenzene
Phenyl chloromethylketone = Chloroacetophenone
Phenyl ether = Diphenyl ether

a-Phenyl ethyl alcohol = a-Methylbenzyl alcohol

Phenyl fluoride = Fluorobenzene
Phenyl hydroxide = Phenol
Phenyl mercaptan = Benzenethiol
Phenyl perchloryl = Hexachlorobenzene
Phenyl xylyl ethane = 1-Phenyl-1-xylyl ethane

Phenylamine = Aniline

N-Phenylaniline = Diphenylamine Phenylarsenic dichloride = Phenyldichloroarsine

Phenylbenzene = Diphenyl
Phenylcarbinol = Benzyl alcohol
Phenylcyanide = Benzonitrile
1-Phenyldecane = n-Decylbenzene

# **COMPOUND NAMES**

Phenyldichloroarsine
1-Phenyldodecane
Phenylethane
1-Phenylethanol
1-Phenylethanone
Phenylethylene

Phenylhydrazine hydrochloride

Phenylhydrazine

Phenylhydrazinium chloride Phenylmercuric acetate

Phenylmethanol
Phenylmethyl acetate
Phenylmethyl alcohol
Phenylmethyl amine
Phenylmethyl carbinol

Phenylphosphine dichloride Phenylphosphine thiodichloride Phenylphosphonothioic dichloride Phenylphosphonous dichloride Phenylphosphorus dichloride

1-PhenylpropanePhenylpropylene1-Phenyltetradecane

Phenylthiol 1-Phenyltridecane 1-Phenylundecane

Phlorol Phosdrin Phosfene Phosgene

Phosphinic acid, ammonium salt Phosphonic acid, dimethyl ester Phosphoric acid triethyleneimide Phosphoric acid, tri-butyl ester Phosphoric acid, triethyl ester

Phosphoric acid, tris(2-methylphenyl)

ester

Phosphoric acid Phosphoric sulfide

Phosphorodichloridic acid, ethyl ester Phosphorothioic acid, O,O-diethyl-O-p-

Nitrophenyl ester

Phosphorous acid, triethyl ester

Phosphorous acid
Phosphorus bromide
Phosphorus oxychloride
Phosphorus pentasulfide
Phosphorus persulfide
Phosphorus tribromide
Phosphorus trichloride
Phosphorus, black
Phosphorus, red
Phosphorus, white
Phosphoryl chloride

PhenyldichloroarsineDodecylbenzeneEthylbenzene

a-Methylbenzyl alcohol

AcetophenoneStyrene

= Phenylhydrazine hydrochloride

= Phenylhydrazine

= Phenylhydrazine hydrochloride

= Phenylmercuric acetate

Benzyl alcoholBenzyl acetateBenzyl alcoholBenzylamine

= a-Methylbenzyl alcohol

Benzene phosphorus dichloride
 Benzene phosphorus thiodichloride
 Benzene phosphorus thiodichloride
 Benzene phosphorus dichloride
 Benzene phosphorus dichloride

n-Propylbenzene
 alpha-Methylstyrene
 Tetradecylbenzene
 Benzenethiol
 Tridecylbenzene
 n-Undecylbenzene
 Ethylphenol
 Phosdrin

= Phosdrin= Phosdrin= Phosgene

Ammonium hypophosphiteDimethyl hydrogen phosphiteTris(Aziridinyl)phosphine oxide

Tributyl phosphateTriethyl phosphate

= Tricresyl phosphate (>= 1% ortho

isomer)

Phosphoric acid

Phosphorus pentasulfideEthyl phosphorodichloridate

= Parathion

Triethyl phosphite
Trimethyl phosphite
Phosphorus tribromide
Phosphorus oxychloride
Phosphorus pentasulfide
Phosphorus pentasulfide
Phosphorus tribromide
Phosphorus trichloride
Phosphorus, black
Phosphorus, red
Phosphorus, white
Phosphorus oxychloride

4-Picoline

Plumbous oxide

### **COMPOUND NAMES**

Photophor = Calcium phosphide

PHPH = Diphenyl Phthalandione = Phthalic anhydride

Phthalandione : Phthalic acid anhydride :

Phthalic acid anhydride = Phthalic anhydride Phthalic acid, benzyl butyl ether = Butyl benzyl phthalate

Phthalic acid, bis-(2-ethylhexyl ester) = Di-(2-ethylhexyl)phthalate
Phthalic acid, bis-(7-methyloctyl) ester = Diisononyl phthalate
Phthalic acid, bis (2-ethylhexyl ester) = Dioctyl phthalate

Phthalic acid, bis (2-ethylhexyl ester) = Dioctyl phthalate
Phthalic acid, bis (8-methyl-nonyl) ester = Diisodecyl phthalate

Phthalic acid, di-isobutyl ester Diisobutyl phthalate Phthalic acid, diamyl ester Amyl phthalate Phthalic acid. diamvl ester Di-n-amvl phthalate Phthalic acid, dibutyl ester Dibutyl phthalate Phthalic acid, diethyl ester Diethyl phthalate Phthalic acid, diheptyl ester Diheptyl phthalate Phthalic acid, diisodecyl ester Diisodecyl phthalate Phthalic acid, dinonyl ester Dinonyl phthalate Phthalic acid, dipentyl ester Amyl phthalate Phthalic acid, dipentyl ester Di-n-amyl phthalate =

Phthalic acid, ditridecyl ester = Ditridecyl phthalate
Phthalic acid, diundecyl ester = Diundecyl phthalate
m-Phthalic acid = Isophthalic acid

Phthalic anhydride = Phthalic anhydride Phygon-XL = Dichlone Phygon = Dichlone

Phytar Sodium cacodylate Picfume Chloropicrin Picoline 2-Methylpyridine 2-Picoline 2-Methylpyridine alpha-Picoline 2-Methylpyridine 3-Methylpyridine 3-Picoline m-Picoline 3-Methylpyridine b-Picoline 3-Methylpyridine gamma-Picoline 4-Methylpyridine p-Picoline 4-Methylpyridine

Pigment white 3=Lead sulfatePimelic ketone=Cyclohexanonealpha-Pinene=Pinene2-Pinene=PinenePinene=PinenePiperazidine=Piperazine

1-Piperazine ethanamine = N-Aminoethyl piperazine

Planavin = Nitralin

Plant spray oil = Oils, miscellaneous: spray
Plastic latex = Latex, liquid synthetic
Plasticized DDP = Diisodecyl phthalate
Plumbous arsenate = Lead arsenate
Plumbous chloride = Lead chloride
Plumbous fluoride = Lead fluoride

8-73

Litharge

4-Methylpyridine

# **COMPOUND NAMES**

Lead sulfide

Plumbous sulfide

Pluracol polyol = Polypropylene glycol PNA = 4-Nitroaniline PNP = 4-Nitrophenol

Poly-solv DB = Diethylene glycol monobutyl ether
Poly-solv DE = Diethylene glycol monoethyl ether
Poly-solv DM, = Diethylene glycol monomethyl ether
Poly-solv EB = Ethylene glycol monobutyl ether

Poly-solv EE acetate = 2-Ethoxyethyl acetate

Poly-solv EE acetate = Ethylene glycol monoethyl ether acetate

Poly-solv EE = 2-Ethoxyethanol

Poly-solv EE = Ethylene glycol monoethyl ether Poly-solv EM = Ethylene glycol monomethyl ether

Poly (propylene glycol) methyl ether = Polypropylene glycol methyl ether = Diethylene glycol dimethyl ether

Poly(dimethylsiloxane) = Dimethylpolysiloxane
Poly(ethyleneimine) = Polyethylene polyamines
Poly(oxyethyl) myristyl ether = Ethoxylated tetradecanol
Poly(oxyethyl) tetradecyl ether = Ethoxylated tetradecanol
Poly(oxyethyl) tridecyl ether = Ethoxylated tridecanol
Poly(oxyethyl) tridecyl ether = Ethoxylated tridecanol

Polybutene = Polybutene

Polychlorinated biphenyl Polychlorinated biphenyl = Polychloropolyphenyls Polychlorinated biphenyl Polycizer 962-BPA Ditridecyl phthalate = Polyethylene polyamines Polyethylene polyamines Polyethyleneimine Polyethylene polyamines Polyformaldehyde Paraformaldehyde = Polyisobutylene plastics Polybutene

Polyisobutylene resins = Polybutene Polyisobutylene waxes = Polybutene Polymethylene polyphenyl isocyanate = Polymethylene p

Polymethylene polyphenyl isocyanate
Polyoxpropylene glycol = Polypropylene glycol
Polyoxymethylene glycol = Paraformaldehyde
Polyoxymethylene = Paraformaldehyde

Polyoxypropylene glycol methyl ether = Polypropylene glycol methyl ether

Polyoxypropylene glycol = Polypropylene glycol Polyphosphoric acid = Polyphosphoric acid

Polypropylene glycol methyl ether = Polypropylene glycol methyl ether

Polypropylene glycol = Polypropylene glycol Polypropylene glycol = Polypropylene glycol

Polypropylene glycols P400 to P4000 = Polypropylene glycol
Polypropylene = Polypropylene
Potash nitrate = Potassium nitrate
Potassium acid arsenate = Potassium arsenate

Potassium acid oxalate = Potassium binoxalate

Potassium antimonyl tartrate = Antimony potassium tartrate

Potassium aranata

Potassium arsenate = Potassium arsenate
Potassium arsenite = Potassium arsenite
Potassium bichromate = Potassium dichromate
Potassium binoxalate = Potassium chlorate

# **COMPOUND NAMES**

Potassium chromate (VI) = Potassium chromate
Potassium chromate = Potassium chromate
Potassium cyanide = Potassium cyanide

Potassium dichloro-s-triazinetrione = Potassium dichloro-s-triazinetrione Potassium dichloro-s-triazinetrione = Potassium dichloro-s-triazinetrione

Potassium dichromate = Potassium dichromate
Potassium dihydrogen arsenate = Potassium arsenate

Potassium fluozirconate = Zirconium potassium flouride
Potassium hexaflourozirconate = Zirconium potassium flouride
Potassium hydroxide solution = Caustic potash solution
Potassium hydroxide = Potassium hydroxide
Potassium iodide = Potassium iodide

Potassium notice = Potassium rotice

Potassium metaarsenite = Potassium arsenite

Potassium nitrate = Potassium nitrate

Potassium oleate = Oleic acid, potassium salt Potassium oleate = Potassium oleate

Potassium oxalate monohydrate = Potassium oxalate
Potassium oxalate = Potassium oxalate

Potassium permanganate = Potassium permanganate
Potassium peroxide = Potassium peroxide
Potassium superoxide = Potassium peroxide
Potassium zinc chromate = Zinc potassium chromate
Potassium zirconium fluoride = Zirconium potassium flouride

Potassium = Potassium
Potato spirit oil = Isoamyl alcohol
Potcrate = Potassium chlorate

Preservative oil = Oils, miscellaneous: penetrating

Primagram = Metolachlor
Prime steam lard = Oils, edible: lard
Primextra = Metolachlor
= Metolachlor
o-Isopropyl phenol

Propadiene-methylacetylene mixture = Methyl acetylene, propadiene mixture

Propanal = Propionaldehyde 1-Propanamine, 2-methyl-N-(2-methyl = Diisobutylamine

propyl)-

Propane-1-thiol = n-Propyl mercaptan
Propane-2-carboxylic acid = Isobutyric acid
Propane-2-thiol = Isopropyl mercaptan

Propane-2-thiol = Isopropyl mercaptan Propane-butane-(propylene) = Liquefied petroleum gas

Propane, 1-nitro- = 1-Nitropropane
Propane, 1,2,3-trichloro = 1,2,3-Trichloropropane
Propane, chloro- = n-Propyl chloride

Propane,1,1-dichloroPropane
Propane
Propanecarboxvlic acid
= 1,1-Dichloropropane
= Propane
= n-Butvric acid

Propanedinitrile = Propanedinitrile 1,2-Propanediol-1-acrylate = Hydroxypropyl acrylate 1,2-Propanediol 1-methacrylate = Hydroxypropyl methacrylate 1,3-Propanediol, 2,2-dimethyl = 2,2-Dimethylpropane-1,3-diol

1,2-Propanediol = Propylene glycol Propanenitrile, 2-hyrodxy-2-methyl = Acetone cyanohydrin

Propanenitrile = Propionitrile
2-Propanethiol = Isopropyl mercaptan
1-Propanethiol = n-Propyl mercaptan

# **COMPOUND NAMES**

1,2,3-Propanetriol = Glycerine

n-Butyl propionate Propanoic acid butyl ester Propanoic acid. 2-chloro-2-Chloropropionic acid Propanoic acid, 2,2-di-methyl-Trimethylacetic acid Propanoic acid, ethyl ester Ethyl propionate = Propanoic acid Propionic acid Propanoic anhydride Propionic anhydride = 2-Propanol 1,1',1"-nitrilotri-Triisopropanolamine

2-Propanol 1,1',1"-nitrilotri- = Triisopropanolamin 1-Propanol, 2-amino- = 2-Propanolamine

1-Propanol, 2-amino-2-methyl- = 2-Amino-2-methyl-1-propanol (90% or

less)

Propanol, 3-(3-(3-methoxy = Tripropylene glycol methyl ether

propoxy)propoxy)-

1-Propanol, 3-amino n-Propanolamine 2-Propanol = Isopropyl alcohol 1-Propanol n-Propyl alcohol 2-Propanolamine 2-Propanolamine n-Propanolamine = n-Propanolamine 3-Propanolamine n-Propanolamine = Propanolide beta-Propiolactone

2-Propanone = Acetone
Propargil = Propargite
Propargite = Propargite

Propargyl alcohol = Propargyl alcohol 2-Propen-1-ol = Allyl alcohol

2-Propenal = Acrolein Propenamide (50%) = Acrylamide solution

Propene polymer = Polypropylene 1-Propene, 2-methyl trimer = Triisobutylene

Propene, trimer = Propylene trimer

Propene = Propylene 2-Propenenitrile, 2-methyl = Methacrylo

2-Propenenitrile, 2-methyl = Methacrylonitrile Propeneoxide = Propylene oxide Propenionic acid, 2-Methylene = Methacrylic acid

Propenionic acid, 2-Methylene = Methacrylic acid
2-Propenoic acid, decyl ester = n-Decyl acrylate
Propenoic acid = Acrylic acid
beta-Propiolactone = beta-Propiolactone
Propiolic alcohol = Proparatyl alcohol

Propiolic alcohol = Propargyl alcohol
Propionaldehyde = Propionaldehyde
Propione = Diethyl ketone
Propionic acid butyl ester = n-Butyl propionate
Propionic acid, 2-chloro- = 2-Chloropropionic acid

Propionic acid, 3-chloro- = 3-Chloropropionic acid Propionic acid. 3-ethoxyethyl ester = Ethyl-3-ethoxypropionate

Propionic acid = Propionic acid
Propionic aldehyde = Propionic anhydride
Propionic anhydride = Propionic anhydride

Propionic nitrile = Propionitrile Propionitrile = Propionitrile

beta-Propionolactone = beta-Propiolactone
Propionyl oxide = Propionic anhydride
n-Propoxypropanol = n-Propoxypropanol
N-Propyl-1-propanamine = Di-n-propylamine

# **COMPOUND NAMES**

2-Propyl acetate Isopropyl acetate n-Propyl acetate n-Propyl acetate sec-Propvl alcohol Isopropyl alcohol n-Propyl alcohol n-Propyl alcohol Propyl alcohol n-Propyl alcohol Propyl aldehyde Propionaldehyde n-Propyl chloride n-Propyl chloride = Propyl cyanide Butyronitrile = n-Propyl ether n-Propyl ether = n-Propyl mercaptan n-Propyl mercaptan = n-Propyl nitrate n-Propyl nitrate iso-Propylamine Isopropylamine = 1-Propylamine n-Propylamine = n-Propylamine n-Propylamine = n-Propylbenzene = n-Propylbenzene Propylbromide 1-Bromopropane n-Propylbromide 1-Bromopropane n-Propylcarbinol = n-Butyl alcohol n-Propylcarbinyl chloride Butyl chloride =

Propylene butylene polymer = Propylene butylene polymer Propylene dichloride = 1,2-Dichloropropane

Propylene glycol ethyl ether = Propylene glycol ethyl ether

Propylene glycol methyl ether acetate = Propylene glycol methyl ether acetate

Propylene glycol methyl ether = Propylene glycol methyl ether Propylene glycol monoacrylate = Hydroxypropyl acrylate Propylene glycol monomethacrylate = Hydroxypropyl methacrylate

Propylene glycol = Propylene glycol Propylene oxide = Propylene oxide Propylene tetramer = Dodecene

Propylene tetramer = Propylene tetramer

Propylene trimer = Nonene

Propylene trimer Propylene trimer = Propylene Propvlene Propyleneimine Propyleneimine 1-Pentene Propylethylene = Propylic aldehyde Propionaldehyde Propylidene chloride 1,1-Dichloropropane Propargyl alcohol 2-Propyn-1-ol = 1-Propyne-3-ol Propargyl alcohol = Propynyl alcohol Propargyl alcohol Prussic acid Hydrogen cyanide = Pseudocumene 1,2,4-Trimethylbenzene

Psicumene = 1,2,4-Trimethylbenzene Pyranol 1478 = 1,2,3-Trichlorobenzene

Pyrazine hexahydride = Piperazine

Pseudocumol

Pyrethrins = Pyrethrins
Pyrethrum flowers = Pyrethrins
4-Pyridinamine = 4-Aminopyridine
Pyridine, 3-methyl = 3-Methylpyridine

Pyridine = Pyridine

4-Pyridylamine = 4-Aminopyridine

=

1,2,4-Trimethylbenzene

# **COMPOUND NAMES**

Pvrocatechin Catechol Pyrocatechinic acid Catechol

**Pvrofax** Liquefied petroleum gas

Pyrogallic acid Pyrogallic acid Pyrogallol Pyrogallic acid Pyrogentisic acid Hydroquinone Pyromucic aldehyde **Furfural** Pyroxylic spirit Methyl alcohol Pyroxylin solution Collodion Quakeral Furfural Quicklime Calcium oxide Quicksilver Mercurv Quinol Hydroquinone = Quinoline Quinoline Quinone p-Benzoquinone

R-124 Monochlorotetrafluoroethane R-21 Dichloromonofluoromethane

Racemic lactic acid Lactic acid Range oil Jet fuels: JP-1 Range oil Kerosene Range oil Oils, fuel: no. 1 Raspite Lead tungstate Thallium sulfate Ratox

Raw linseed oil Oils, miscellaneous: linseed

RC plasticizer DBP Dibutyl phthalate = RCRA waste number U152 Methacrylonitrile = Arsenic disulfide Realgar Red arsenic glass Arsenic disulfide Red arsenic sulfide Arsenic disulfide Red oil Oleic acid =

Red orpiment Arsenic disulfide Red oxide of nitrogen Nitrogen tetroxide = Red TR base 4-Chloro-o-toluidine Refrigerant 114 Dichlorotetrafluoroethane

Refrigerant 152A 1.1-Difluoroethane

Refrigerant 21 Dichloromonofluoromethane

Regalon Diguat = Regione Diquat =

Regulox Maleic hydrazide = Reofos 95 Trixylenyl phosphate

Residual asphalt Asphalt blending stocks: straight run

residue

Residual fuel oil Oils, fuel: 4 Residual fuel oil Oils, fuel: 5 Oils. fuel: no. 6 Residual fuel oil

Asphalt blending stocks: roofers flux Residual oil

Resin oil Oils, miscellaneous: rosin

Resorcinol Resorcin Resorcinol Resorcinol Retarder W Salicylic acid

Oils, miscellaneous: resin Retinol Oils, miscellaneous: rosin Retinol = Sodium thiocyanate Rhodanate =

Sodium thiocyanate solution (56% or Rhodanate

# **COMPOUND NAMES**

less)

Road binder Asphalt blending stocks: straight run

residue

Road oil Asphalt blending stocks: roofers flux

Ethylene glycol phenyl ether Rose ether Oils, miscellaneous: resin Rosin oil Rosinol Oils, miscellaneous: resin Rosinol Oils, miscellaneous: rosin

Rubbing alcohol Isopropyl alcohol Ruby arsenic Arsenic disulfide

Saccharose Sucrose Saccharum Sucrose Safflower oil Oils, edible: safflower

Safflower seed oil Oils, edible: safflower Sal acetosella Potassium binoxalate Sal ammoniac Ammonium chloride Sal volatile Ammonium carbonate Salicylal Salicylaldehyde Salicylaldehyde Salicylaldehyde Salicylic acid Salicylic acid Salicylic aldehyde Salicylaldehyde

Salmiac Ammonium chloride Salt of Saturn Lead acetate

Salt of sorrel Potassium binoxalate Saltpeter Potassium nitrate Salufer Sodium silicofluoride Sand acid Fluosilicic acid Santicizer 711 Diundecyl phthalate Santochlor p-Dichlorobenzene Santophen 20 Pentachlorophenol =

Saralex Diazinon

Scheele's green Copper arsenite Scheelite Lead tungstate

Schweinfurth green Copper acetoarsenite 1,2-Dimethylhydrazine **SDMH** =

Asphalt blending stocks: straight run Seal-coating material

residue

Secondary ammonium phosphate Ammonium phosphate =

Selenic anhydride

Selenium trioxide Selenious acid, disodium salt Sodium selenite

Selenious anhydride Selenium dioxide Selenium dioxide Selenium dioxide Selenium oxide Selenium dioxide Selenium trioxide Selenium trioxide Senarmontite Antimony trioxide Sentry Calcium hypochlorite

Sevin Carbaryl =

Sextone B Methylcyclohexane Cyclohexanone Sextone Shell charcoal Charcoal

Signal oil Oils, miscellaneous: mineral seal

Silibond Ethyl silicate = Silicochloroform Trichlorosilane = Silicofluoric acid Fluosilicic acid

Silvex, isooctvl ester

Sodium bifluoride

# **COMPOUND NAMES**

Silicon chloride Silicon tetrachloride Silicon tetrachloride Silicon tetrachloride Silicone fluids Dimethylpolysiloxane Silver acetate Silver acetate Silver carbonate Silver carbonate Silver fluoride Silver fluoride Silver iodate Silver iodate Silver fluoride Silver monofluoride Silver nitrate Silver nitrate Silver oxide Silver oxide Silver sulfate Silver sulfate

Silvex = 2-(2,4,5-Trichlorophenoxy) propanoic

acid

IsooctvI ester

Silvisar 510 = Cacodylic acid

SKDN = White spirit (low (15-20%) aromatic)

Slaked lime = Calcium hydroxide
Slow curing asphalt = Oils, miscellaneous: road
Smithsonite = Zinc carbonate

Smithsonite = Zinc carbonate
Soap = Ammonium stearate
Soda chloric acid, sodium salt = Sodium chlorate solution

Soda niter = Sodium nitrate Sodamide = Sodium amide

Sodium 2-benzothiazolethioate = Sodium 2-mercaptobenzothiazol solution Sodium 2-mercaptobenzothiazol solution = Sodium 2-mercaptobenzothiazol solution

Sodium acid pyrophosphate = Sodium phosphate
Sodium acid sulfite = Sodium bisulfite
Sodium alkyl sulfates = Sodium alkyl sulfates

Sodium alkylbenzenesulfonates = Sodium alkylbenzenesulfonates

Sodium aluminate solution (45% or less) = Sodium aluminate solution (45% or less)

Sodium amide = Sodium amide
Sodium arsenate, dibasic = Sodium arsenate
Sodium arsenate = Sodium arsenate
Sodium arsenite = Sodium arsenite
Sodium azide = Sodium azide
Sodium biborate = Sodium borate
Sodium bichromate = Sodium dichromate

Sodium bisulfide = Sodium hydrosulfide solution

Sodium bisulfite solution = Sodium hydrogen sulfite solution (35% or

less)

Sodium bifluoride

Sodium bisulfite=Sodium bisulfiteSodium borate=Sodium borateSodium borohydride=Sodium borohydrideSodium cacodylate=Sodium cacodylate

Sodium cetyl sulfate solution = Hexadecyl sulfate, sodium salt Sodium chlorate solution = Sodium chlorate solution

Sodium chlorate = Sodium chlorate
Sodium chromate (VI) = Sodium chromate
Sodium chromate = Sodium chromate
Sodium cyanide = Sodium cyanide

Sodium dichloro-s-triazinetrione = Sodium dichloro-s-triazinetrione Sodium dichloroisocyanurate = Sodium dichloro-s-triazinetrione

Sodium dichromate = Sodium dichromate

# **COMPOUND NAMES**

Sodium difluoride Sodium bifluoride Sodium dimethylarsenate Sodium cacodylate

Dodecyl sulfate, sodium salt Sodium dodecvl sulfate

Sodium dodecylbenzene sulfonate Dodecyl benzene sulfonic acid, sodium

salt

less)

Sodium ferrocyanide Sodium ferrocyanide Sodium fluoride Sodium fluoride Sodium fluoroacetate Sodium fluoroacetate Sodium fluosilicate Sodium silicofluoride Sodium hexafluorosilicate Sodium silicofluoride Sodium hydride Sodium hydride Sodium hydrogen alkyl sulfate Sodium alkvl sulfates Sodium bifluoride Sodium hydrogen difluoride Sodium hydrogen fluoride Sodium bifluoride

Sodium hydrogen sulfide Sodium hydrosulfide solution

Sodium hydrogen sulfite solution (35% or Sodium hydrogen sulfite solution (35% or

less)

Sodium hydrosulfide solution Sodium hydrosulfide solution Sodium hydroxide solution Caustic soda solution Sodium hydroxide solution Sodium hydroxide solution Sodium hydroxide Sodium hydroxide

Sodium hypochlorite solution Sodium hypochlorite solution

Sodium hypochlorite Sodium hypochlorite

Sodium lauryl sulfate Dodecyl sulfate, sodium salt

Sodium meta arsenite Sodium arsenite Sodium metabisulfite Sodium bisulfite Sodium methoxide Sodium methylate Sodium methylate Sodium methylate Sodium monofluoroacetate Sodium fluoroacetate Sodium nitrate Sodium nitrate

Sodium nitrite liquor Sodium nitrite solution Sodium nitrite solution Sodium nitrite solution

Sodium nitrite Sodium nitrite

Sodium oleate Oleic acid. sodium salt Sodium ortho arsenite Sodium arsenite Sodium oxalate Sodium oxalate

Sodium pentachlorophenate Sodium pentachlorophenate

Sodium phosphate dibasic Sodium phosphate Sodium phosphate, monobasic Sodium phosphate Sodium phosphate, tribasic Sodium phosphate

Sodium phosphate, tribasic Sodium phosphate, tribasic

Sodium phosphate Sodium phosphate Sodium pyroborate Sodium borate Sodium pyrosulfite Sodium bisulfite Sodium rhodanide Sodium thiocvanate

Sodium rhodanide Sodium thiocyanate solution (56% or

less)

Sodium selenite Sodium selenite Sodium silicate Sodium silicate Sodium silicofluoride Sodium silicofluoride

Sodium sulfhydrate Sodium hydrosulfide solution

Sodium sulfide Sodium sulfide Sodium sulfite Sodium sulfite Sodium sulfocyanate Sodium thiocyanate

# **COMPOUND NAMES**

Sodium sulfocyanate = Sodium thiocyanate solution (56% or less)

Sodium tetraborate, anhydrous = Sodium borate

Sodium thiocyanate solution (56% or less) = Sodium thiocyanate solution (56% or less)

less) anate = Sodium thiocyanate

Sodium thiocyanate = Sodium Sodium = Sodium

Solar nitrogen solutions = Ammonium nitrate-urea solution

Soluble glass = Sodium silicate
Solvarone = Dimethyl phthalate

Sorbit = Sorbitol
Sorbitol = Sorbitol
Sorbol = Sorbitol

Soybean oil = Oils, edible: soya bean

Spectracide = Diazinon
Spirit of ether nitrite = Ethyl nitrite
Spirit of turpentine = Turpentine

Spotting naphtha = Naphtha: stoddard solvent

Staflex DTDP = Ditridecyl phthalate Stannous flouride = Stannous flouride

Steam turbine lube oil = Oils, miscellaneous: turbine Steam turbine oil = Oils, miscellaneous: turbine

Stearic acid, ammonium salt = Ammonium stearate
Stearic acid, lead salt = Lead stearate
Stearic acid = Stearic acid
Stearophanic acid = Stearic acid

Stearyl alcohol, crude = Tallow fatty alcohol

Stearyldimethylbenzylammonium = Benzyldimethyloctadecylammonium

chloride chloride
Steinbuhl yellow = Calcium chromate
Stolzite = Lead tungstate

Straight run gasoline = Distillates: straight run
Strontium chromate = Strontium chromate
Strontium nitrate = Strontium nitrate
Strontium yellow = Strontium chromate

Strychnine = Strychnine

Styrallyl alcohol = a-Methylbenzyl alcohol

Styrene=StyreneStyrol=StyreneStyrolene=StyreneSucrose=SucroseSugar of lead=Lead acetateSugar=Sucrose

Sulfamic acid, cobalt salt = Cobalt sulfamate
Sulfamic acid. monoammonium salt = Ammonium sulfamate

Sulfate of copper = Copper sulfate
Sulfate turpentine = Turpentine

Sulfated neatsfoot oil = Oils, miscellaneous: tanner's

Sulfolane-W = Sulfolane
Sulfolane = Sulfolane

Sulfonated alkylbenzene, sodium salt = Sodium alkylbenzenesulfonates Sulfotep = Tetraethyl dithiopyrophosphate

Sulfur dioxide = Sulfur dioxide
Sulfur monochloride = Sulfur monochloride

Telone

Telone

# **COMPOUND NAMES**

Sulfur Sulfur Sulfuretted hydrogen Hydrogen sulfide Sulfuric acid, chromium (3#I+) salt (3-2) Chromic sulfate Sulfuric acid, diethyl ester Diethyl sulfate Sulfuric acid, spent Sulfuric acid, spent Sulfuric acid, thallium salt Thallium sulfate Sulfuric acid Sulfuric acid Chlorosulfonic acid Sulfuric chlorhydrin Sulfuryl chloride Sulfuryl chloride = Thiocarbamide Sulourea = Sulphuretted hydrogen Hydrogen sulfide Superoxol Hydrogen peroxide = Swedish green Copper arsenite = Sweet birch oil Methyl salicylate Sweet spirit of nitre Ethyl nitrite Synthetic rubber latex Latex, liquid synthetic Systox and isosystox mixture Demeton 2,4,5-T esters = 2,4,5-T esters 2,4,5-T sodium salt 2,4,5-Trichlorophenoxyacetic acid, sodium salt T.E.P. Tetraethyl pyrophosphate T.E.P.P. Tetraethyl pyrophosphate 2,4,5-Trichlorophenoxyacetic acid 2.4.5-T Tall oil fatty oil Tall oil, fatty acid = Tall oil, fatty acid Tall oil, fatty acid = Tallow benzyl dimethyl ammonium Benzyldimethyloctadecylammonium = chloride chloride Tallow fatty alcohol Tallow fatty alcohol Tallow oil Tallow = **Tallow** Tallow = Tannic acid Tannic acid Tannin Tannic acid = Tar acids Cresols Tar camphor Naphthalene Antimony potassium tartrate Tartar emetic 1-Tartaric acid, ammonium salt Ammonium tartrate Tartaric acid, copper salt Copper tartrate = Tartarized antimony Antimony potassium tartrate = Antimony potassium tartrate Tartrated antimony = TBA tert-Butylamine Tributyl phosphate **TBP** = Butyl toluene **TBT** = **TCP** Tricresyl phosphate (<1% ortho isomer) = TDE DDD TDI Toluene 2.4-diisocvanate TEA Triethylaluminum = Teaberry or wintergreen oil Methyl salicylate = Chloroacetophenone Tear gas Teflon monomer Tetrafluoroethylene = **TEG** Triethylene glycol Tetraethyl lead TEL =

=

1,3-Dichloropropene

mixture

Dichloropropene, dichloropropane

Tetrachlorozirconium

# **COMPOUND NAMES**

Zirconium tetrachloride

TEN Triethylamine **TEP** Triethyl phosphate Terephthalic acid, dimethyl ester Dimethyl terephthalate Tergitol nonionic 3-A-6

Ethoxylated tridecanol Tergitol nonionic 45-S-10 Ethoxylated pentadecanol Tergitol nonionic 45-S-10 Ethoxylated tetradecanol Tergitol nonionic TMN Ethoxylated dodecanol =

Terpinene Dipentene = Dipentene delta-1,8-Terpodiene =

Triethylenetetramine **TETA** = Tetranitromethane Tetan

Tetraammine copper sulfate Copper sulfate, ammoniated = 3,6,9,12-Tetraazatetradecane-1,14-Pentaethylenehexamine

diamine Tetrabutyl titanate Tetrabutyl titanate = Tetracap Tetrachloroethylene

Tetrachloroethane Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethane Tetrachloroethylene Tetrachloroethylene Tetrachloromethane Carbon tetrachloride

Tetradecanol Linear alcohols 1-Tetradecanol Tetradecanol Tetradecanol Tetradecanol 1-Tetradecene 1-Tetradecene n-Tetradecyl alcohol Tetradecanol Tetradecylbenzene Tetradecylbenzene

Tetraethyl dithionopyrophosphate Tetraethyl dithiopyrophosphate Tetraethyl dithiopyrophosphate Tetraethyl dithiopyrophosphate =

=

Tetraethyl lead Tetraethyl lead = Tetraethyl orthosilicate Ethyl silicate

Tetraethyl pyrophosphate Tetraethyl pyrophosphate =

Tetraethyl silicate Ethyl silicate

Tetraethylene glycol Tetraethylene glycol Tetraethylenepentamine Tetraethylenepentamine Tetrafluoroethylene Tetrafluoroethylene

Tetrahydro-2h-1, 4-oxazine Morpholine 3a,4,7,7a-Tetrahydro-4,7-Methanoindene Dicyclopentadiene =

Tetrahydro-p-oxazine Morpholine

3a,4,7,7a-Tetrahydrodimethyl-4,7-Methylcyclopentadiene dimer methanoindene

Tetrahydrofuran Tetrahydrofuran

Tetrahydronaphthalene Tetrahydronaphthalene = 1,2,3,4-Tetrahydronaphthalene Tetrahydronaphthalene Tetrahvdrothiophene-1.1-Dioxide Sulfolane

Tetrahydroxymethylmethane Pentaerythritol Tetrahydronaphthalene Tetralin

Tetramethyl lead Tetramethyl lead Tetramethyl thiuram disulfide = Thiram

1,2,3,5-Tetramethylbenzene 1,2,3,5-Tetramethylbenzene Tetramethylene glycol 1,4-Butanediol

Tetramethylene oxide Tetrahydrofuran = Tetramethylene sulfone Sulfolane =

Tetramp Tetrahydronaphthalene

Thiocarbonyl chloride

# **COMPOUND NAMES**

Tetranap = Tetrahydronaphthalene Tetranitromethane = Tetranitromethane

Tetrapropylene = Dodecene

Tetrapropylene = Propylene tetramer

Tetrine acid = Ethylenediamine tetracetic acid

Tetrole = Furan

Tetron = Tetraethyl pyrophosphate

Tetrosin LY Diphenyl = Texanol 1-Isobutyrate = Thallium acetate Thallium (I) acetate = Thallium (I) nitrate Thallium nitrate Thallium acetate Thallium acetate Thallium carbonate Thallium carbonate = Thallium monoacetate = Thallium acetate Thallium mononitrate = Thallium nitrate Thallium nitrate Thallium nitrate Thallium sulfate Thallium sulfate Thallous acetate = Thallium acetate Thallous carbonate Thallium carbonate = Thallous nitrate Thallium nitrate

Thallous sulfate = Thallium sulfate
Thanol PPG = Polypropylene glycol

THF = Tetrahydrofuran
2-Thiapropane = Dimethyl sulfide
Thiobutyl alcohol = n-Butyl mercaptan
Thiocarbamide = Thiocarbamide

Thiocarbonyl tetrachloride = Perchloromethyl mercaptan
Thiocyanic acid, ammonium salt = Ammonium thiocyanate

=

Thiophosgene

Thiodan = Endosulfan
Thiodemeton = Disulfoton
Thioethyl alcohol = Ethyl mercaptan
Thiomethyl alcohol = Methyl mercaptan
Thiophenol = Benzenethiol
Thiophosgene = Thiophosgene

Thiophosphoric anhydride = Phosphorus pentasulfide

Thiosulfuric acid, lead salt = Lead thiosulfate
Thiourea = Thiocarbamide
2-Thiourea = Thiocarbamide

2-Thiourea = Thiocarban
Thiram = Thiram
Thiuram = Thiram

Thorium nitrate tetrahydrate = Thorium nitrate
Thorium nitrate = Thorium nitrate

TIBA = Triisobutylaluminum
Tibal = Triisobutylaluminum
Tin diflouride = Stannous flouride
Titanium butoxide = Tetrabutyl titanate
Titanium tetrabutoxide = Titanium tetrachloride
TMP = Triisobutylaluminum
Tr

TNM = Tetranitromethane
2,4-Tolamine = Toluenediamine

Toluene 2,4-diisocyanate = Toluene 2,4-diisocyanate

m-Toluene diamine = Toluenediamine

4-m-Tolylenediamine

# **COMPOUND NAMES**

Toluene, 2.6-dinitro-2.6-Dinitrotoluene Toluene, 3,4-dinitro-3,4-Dinitrotoluene Toluene, hexahvdro Methylcyclohexane Toluene, o-nitro o-Nitrotoluene Toluene, p-nitrop-Nitrotoluene Butyl toluene Toluene, p-tert-butyl Toluene Toluene

Toluenediamine Toluenediamine = 2.4-Toluenediamine Toluenediamine p-Toluenesulfonic acid p-Toluenesulfonic acid

m-Toluidine m-Toluidine o-Toluidine o-Toluidine p-Toluidine p-Toluidine o-Toluol o-Cresol p-Toluol = p-Cresol Toluol Toluene

meta-Toluylenediamine Toluenediamine m-Tolyl chloride m-Chlorotoluene o-Tolyl chloride o-Chlorotoluene p-Tolyl chloride = p-Chlorotoluene Tolyl epoxypropyl ether Cresyl glycidyl ether

o-Tolyl fluoride 2-Fluorotoluene m-Tolyl fluoride 3-Fluorotoluene p-Tolyl fluoride 4-Fluorotoluene Tolyl glycidyl ether Cresyl glycidyl ether = 2,4-Tolylene diisocyanate Toluene 2,4-diisocyanate =

o-Tolylphosphate phosphoric acid Tricresyl phosphate (>= 1% ortho

=

Toluenediamine

isomer) Tosic acid p-Toluenesulfonic acid =

Toxaphene Toxaphene **Toxichlor** = Chlordane Toxilic acid Maleic acid Toxilic anhydride Maleic anhydride 2,4,5-TP acid esters Isooctyl ester =

2,4,5-TP 2-(2,4,5-Trichlorophenoxy) propanoic

=

Oils, miscellaneous: lubricating Transmission oil =

Oils, miscellaneous: motor Transmission oil Treflan Trifluralin

Trethylene Trichloroethylene Tri-6 gamma-Benzene hexachloride

Tri-iso-propanolamine Triisopropanolamine = Tributyl phosphate Tri-n-butyl phosphate = Tri-n-propylamine Tripropylamine =

Tricresyl phosphate (>= 1% ortho Tri-o-cresyl ester

isomer)

Tri-p-cresyl phosphate Tricresyl phosphate (<1% ortho isomer) Tri-p-tolyl phosphate Tricresyl phosphate (<1% ortho isomer) Tributyl phosphate Tributyl phosphate

Tricalcium arsenate Calcium arsenate Tricalcium ortho arsenate Calcium arsenate = Trichloran Trichloroethylene =

Trichlorfon Trichlorfon

# **COMPOUND NAMES**

Trichlormethyl sulfur chloride 1,1,2-Trichloro-1,2,2-trifluoroethane 1,1,1-Trichloro-2,2-bis(p-chlorophenyl)

ethane

Trichloro-s-triazine-2,4,6-(1h, 3h, 5h)-

trione

Trichloro-s-triazinetrione Trichloroacetaldehyde Trichloroamylsilane V-Trichlorobenzene 1,2,3-Trichlorobenzene Vic-Trichlorobenzene 1,2,4-Trichlorobenzene unsym-Trichlorobenzene 1.2.4-Trichlorobenzol 1,1,2-Trichloroethane 1,1,1-Trichloroethane Trichloroethane Trichloroethyl silane Trichloroethyl silicone Trichloroethylene Trichloroethylene

Trichlorohydrin

Trichlorofluoromethane

Trichloroiminoisocyanuric acid Trichloroisocyanuric acid

Trichloromethane sulfuryl chloride

Trichloromethane

Trichloromethanesulfenyl chloride Trichloromethyl sulfochloride

N-[(Trichloromethyl)thio]-4-cyclohexene-1,2,-dicarbodimide

Trichloromethylsilane Trichloromonosilane Trichloronitromethane Trichlorooxovanadium Trichloropentylsilane

2,4,5-Trichlorophenol Trichlorophenol

2-(2,4,5-Trichlorophenoxy) propanoic acid

2,4,5-Trichlorophenoxyacetic acid, sodium salt

2,4,5-Trichlorophenoxyacetic acid

1.2.3-Trichloropropane

Trichlorosilane

Trichlorotriazinetrione

1.1.2-Trichlorotrifluoroethane

Trichlorovinyl silicane Trichlorovinylsilane Triclene; algylen

Tricresyl phosphate (<1% ortho isomer)

Tricresyl phosphate (>

= Perchloromethyl mercaptan

= 1,1,2-Trichloro-1,2,2-trifluoroethane

= DDT

Trichloro-s-triazinetrione

Trichloro-s-triazinetrione
Trichloroacetaldehyde
n-Amyltrichlorosilane
1,2,3-Trichlorobenzene
1,2,3-Trichlorobenzene
1,2,3-Trichlorobenzene
1,2,4-Trichlorobenzene
1,2,4-Trichlorobenzene
1,2,4-Trichlorobenzene
1,2,4-Trichlorobenzene
1,2,4-Trichlorobenzene
Trichloroethane
Trichloroethane

Trichloroethane
 Ethyltrichlorosilane
 Ethyltrichlorosilane
 Trichloroethylene
 Trichloroethylene
 Trichlorofluoromethane
 1,2,3-Trichloropropane
 Trichloro-s-triazinetrione

Trichloro-s-triazinetrionePerchloromethyl mercaptan

: Chloroform

Perchloromethyl mercaptanPerchloromethyl mercaptan

Captan

MethyltrichlorosilaneTrichlorosilaneChloropicrin

Vanadium oxytrichloride
 n-Amyltrichlorosilane
 Trichlorophenol
 Trichlorophenol

= 2-(2,4,5-Trichlorophenoxy) propanoic acid

= 2,4,5-Trichlorophenoxyacetic acid, sodium salt

= 2,4,5-Trichlorophenoxyacetic acid

= 1.2.3-Trichloropropane

= Trichlorosilane

Trichloro-s-triazinetrione

= 1.1.2-Trichloro-1.2.2-trifluoroethane

VinyltrichlorosilaneVinyltrichlorosilaneTrichloroethylene

Tricresyl phosphate (<1% ortho isomer)</li>1% ortho isomer)=Tricresyl phosphate

(>= 1% ortho isomer)

# **COMPOUND NAMES**

n-Tridecane Tridecane

1-Tridecanol, phthalate

Tridecanol
Tridecanol
1-Tridecanol
1-Tridecene
Tridecylbenzene

Tridimethylphenyl phosphate

Trien

Triethanolamine

dodeceylbenzenesulfonate

Triethanolamine lauryl sulfate

Triethanolamine
Triethyl phosphate
Triethyl phosphite
Triethylaluminum
Triethylamine
Triethylbenzene
1,3,5-Triethylbenzene
sym-Triethylbenzene

Triethylene glycol di-(2-ethylbutyrate)

Triethylene glycol ethyl ether Triethylene glycol methyl ether

Triethylene glycol monoethyl ether Triethylene glycol monoethyl ether

Triethylene glycol monomethyl ether

Triethylene glycol

Triethylenephosphoramide Triethylenetetramine

Triethylolamine

Trifluorochloroethylene
Trifluorochloromethane
Trifluoromethyl chloride
Trifluoromonochloroethylene

Trifluorovinyl chloride

Trifluralin Triglycine

Triglycol dicaproate
Triglycol dihexoate
Triglycol methyl ether

Triglycol monoethyl ether

Triglycol monoethyl ether

Triglycol

1,2,3-Trihydroxybenzene 3,4,5-Trihydroxybenzoic acid 1,2,3-Trihydroxypropane Trihydroxytriethylamine

Triisobutene

Triisobutylaluminum Triisobutylene Triisopropanolamine

Trilene

2,4,4-Trimethyl-1-pentene

TridecaneTridecane

Ditridecyl phthalateLinear alcoholsTridecanolTridecanol

= 1-Tridecene= Tridecylbenzene

Trixylenyl phosphateTriethylenetetramine

 Dodecylbenzenesulfonic acid, triethanolamine salt

Dodecyl sulfate, triethanolamine salt

Triethanolamine
 Triethyl phosphate
 Triethyl phosphite
 Triethylaluminum
 Triethylamine
 Triethylbenzene

TriethylbenzeneTriethylbenzeneTriethylbenzene

Triethylene glycol di-(2-ethylbutyrate)

Triethylene glycol ethyl ether
 Triethylene glycol methyl ether

= Ethoxy triglycol

Triethylene glycol ethyl etherTriethylene glycol methyl ether

Triethylene glycol

Tris(Aziridinyl)phosphine oxide

Triethylenetetramine
 Triethanolamine
 Trifluorochloroethylene
 Monochlorotrifluoromethane
 Monochlorotrifluoromethane
 Trifluorochloroethylene

TrifluorochloroethyleneTrifluralin

Nitrilotriacetic acid and salts

Triethylene glycol di-(2-ethylbutyrate)
 Triethylene glycol di-(2-ethylbutyrate)
 Triethylene glycol methyl ether

Triethylene glycol meEthoxy triglycol

= Triethylene glycol ethyl ether

Triethylene glycolPyrogallic acidGallic acidGlycerine

Glycerine
 Triethanolamine
 Triisobutylene
 Triisobutylaluminum
 Triisobutylene
 Triisopropanolamine
 Trichloroethylene

TrichloroethyleDiisobutylene

# **COMPOUND NAMES**

2.4.6-Trimethyl-1.3.5-trioxane 3,5,5-Trimethyl-2-cyclohexane-1-one 4.7.7-Trimethyl-3-norcarene Carene

Trimethyl ester

Trimethyl hexamethylene diamine

Trimethyl phosphite Trimethylacetic acid Trimethylamine Trimethylaminomethane

Asymmetrical Trimethylbenzene 1,2,4-Trimethylbenzene

Trimethylbenzylammonium chloride 2,6,6-Trimethylbicyclo [3.1.1]hept-2-ene,

3,7,7-Trimethylbicyclo[0, 1, 4]hept-3-ene

Trimethylcarbinol Trimethylchlorosilane Trimethylene chloride Trimethylene dichloride

Trimethylene Trimethylheptanals

Trimethylhexamethylene diisocyanate

Trimethylsilyl chloride 5,8,11-Trioxapentadecane 3,6,9-Trioxaundecan-1, 11-diol

Tripropylamine

Tripropylene glycol methyl ether

Tripropylene glycol Tripropylene Tripropylene

Trisodium nitrilotriacetate Trisodium orthophosphate Trisodium phosphate Trixylenyl phosphate Trixylyl phosphate

p-TSA Tubercuprose Tucum oil Turbine oil **Turpentine** 

Turps Tyranton Ucane alkylate 12

Ucar bisphenol HP

Ucar solvent 2IM

Ucon 11 Ucon 12 Uconn-22 UDMH UF oxylignin UN 1272 (DOT) UN 2057 (DOT) UN 2243 (DOT) UN 2271 (DOTt) Paraldehvde Isophorone

Trimethyl phosphite

Trimethyl hexamethylene diamine

Trimethyl phosphite Trimethylacetic acid = Trimethylamine = tert-Butvlamine

1,2,4-Trimethylbenzene = 1,2,4-Trimethylbenzene

Benzyltrimethylammonium chloride

Pinene

= Carene

tert-Butyl alcohol Trimethylchlorosilane 1.3-Dichloropropane 1,3-Dichloropropane Cyclopropane Isodecaldehyde

Trimethylhexamethylene diisocyanate

Trimethylchlorosilane

Diethylene glycol dibutyl ether =

Tetraethylene glycol = Tripropylamine =

Tripropylene glycol methyl ether =

Tripropylene glycol

Nonene

Propylene trimer =

Nitrilotriacetic acid and salts Sodium phosphate, tribasic = Sodium phosphate, tribasic Trixvlenvl phosphate Trixylenyl phosphate p-Toluenesulfonic acid Copper formate Oils, edible: tucum

Oils, miscellaneous: turbine

Turpentine Turpentine = Diacetone alcohol Dodecylbenzene Bisphenol A

Dipropylene glycol methyl ether

Trichlorofluoromethane Dichlorodifluoromethane Chlorodifluoromethane 1,1-Dimethylhydrazine Vanillan black liquor Oil, misc: pine Propylene trimer = Cyclohexyl acetate = Ethyl amyl ketone

# **COMPOUND NAMES**

UN 2296 (DOT) = Methylcyclohexane
UN 2323 (DOT) = Triethyl phosphite
UN 2324 (DOT) = Triisobutylene
UN 2364 (DOT) = n-Propylbenzene
UN 2708 (DOT) = 3-Methoxybutyl acetate

Un; do; tri; tetra; penta; or Hexa =  $Alkyl(C_{11} C_{17})$ benzenesulfonic acid

benzenesulfonic acid

UN2241 (DOT) Cycloheptane UN2246 (DOT) Cyclopentene UN2313 (DOT) 3-Methylpyridine = UN2313 (DOT) 4-Methylpyridine n-Undecanoic acid Undecanoic acid Undecanoic acid Undecanoic acid Undecanol Undecanol 1-Undecanol Undecanol 1-Undecene 1-Undecene n-Undecoic acid Undecanoic acid Undecyl alcohol Undecanol

Undecyl alcohol = Undecanol
n-Undecylbenzene = n-Undecylbenzene
Undecylethylene = 1-Tridecene
n-Undecylic acid = Undecanoic acid
Unipine = Oil, misc: pine
Unslaked lime = Calcium oxide

Uran, rustica = Urea, ammonium nitrate soln (w/aqua

ammonia)

Uranium acetate dihydrate = Uranyl acetate
Uranium acetate
Uranium nitrate = Uranyl acetate
Uranium oxide (UO#m4) = Uranium peroxide
Uranium oxide peroxide (UO#m2[O#m2]) = Uranium peroxide
Uranium oxyacetate dihydrate = Uranyl acetate

Uranium peroxide = Uranium peroxide
Uranium sulfate trihydrate = Uranyl sulfate
Uranyl acetate dihydrate = Uranyl acetate
Uranyl acetate
Uranyl acetate = Uranyl acetate
Uranyl acetate

Uranyl nitrate = Uranyl nitrate
Uranyl sulfate trihydrate = Uranyl sulfate
Uranyl sulfate = Uranyl sulfate
Uranyl sulfate = Uranyl sulfate
Urea hydrogen peroxide = Urea peroxide
Urea peroxide = Urea peroxide

Urea, ammonium nitrate soln (w/aqua = Urea, ammonium nitrate soln (w/aqua

ammonia) ammonia)
Urea, hydrogen peroxide salt = Urea peroxide

Urea, thio- = Thiocarbamide
Urea = Urea

Urotropin = Hexamethylenetetramine

USAF DO-45 = Acetal

USAF DO-46 = N-Aminoethyl piperazine
USAF ST40 = Methacrylonitrile

Valentinite = Antimony trioxide
Valeral = Valeraldehyde
n-Valeraldehyde = n-Valeraldehyde

Valeraldehyde = Valeraldehyde

# **COMPOUND NAMES**

Valeric acid=Pentanoic acidValeric aldehyde=n-ValeraldehydeValeric aldehyde=ValeraldehydeVAM=Vinyl acetate

Vanadic anhydride = Vanadium pentoxide
Vanadium oxide = Vanadium oxide
Vanadium oxysulfate = Vanadyl sulfate
Vanadium oxytrichloride = Vanadium oxytrichloride

Vanadium oxytrichloride
Vanadium pentoxide
Vanadium pentoxide
Vanadium pentoxide
Vanadium pentoxide
Vanadium pentoxide
Vanadium(V) oxide
Vanadium(V) oxide
Vanadium oxytrichloride
Vanadium oxytrichloride
Vanadium oxytrichloride

Vanadyl sulfate dihydrate = Vanadyl sulfate
Vanadyl sulfate = Vanadyl sulfate

Vanadyl trichloride = Vanadium oxytrichloride

Vanicide = Captan

Vanillan black liquor = Vanillan black liquor

Vapona = Dichlorvos

Vapotone = Tetraethyl pyrophosphate

Vaseline = Petrolatum

VCL = Vinyl chloride

VCM = Vinyl chloride

Vegetable carbon = Charcoal

Velsicol 1068 = Chlordane

Velsicol 1068= ChlordaneVelsicol= HeptachlorVentox= AcrylonitrileVermilion= Mercuric sulfide

Versene acid = Ethylenediamine tetracetic acid Vidden D = Dichloropropene, dichloropropane

mixture

Vienna green = Copper acetoarsenite

Vilrathane 4300 = Diphenylmethane diisocyanate

Vinamar Vinvl ethvl ether Acetic acid Vinegar acid Vinegar naphtha Ethyl acetate 4-Vinyl-1-cyclohexene Vinylcyclohexene Vinyl A monomer Vinyl acetate = Vinyl acetate Vinyl acetate Vinyl C monomer Vinyl chloride Vinyl carbinol Allyl alcohol = Vinyl chloride Vinyl chloride Acrylonitrile Vinyl cyanide

Vinyl ethyl ether = Vinyl ethyl ether
Vinyl fluoride = Vinyl fluoride
Vinyl formic acid = Acrylic acid
Vinyl methyl ether = Vinyl methyl ether
Vinyl neodecanoate
Vinyl toluene = Vinyl toluene

Vinyl trichloride = 1,1,2-Trichloroethane

Vinylbenzene = Styrene

Vinylcyclohexene = Vinylcyclohexene Vinylethylene = Butadiene

Vinylidene chloride = Vinylidene chloride

p-Xylene

# **COMPOUND NAMES**

Vinylsilicon trichloride=VinyltrichlorosilaneVinyltrichlorosilane=VinyltrichlorosilaneVulkacit HX=N-EthylcyclohexylamineVV 10 vinyl monomer=Vinyl neodecanoate

Vyac = Vinyl acetate
W-10 = Ethylene dibromide
W-15 = Ethylene dibromide
W-40 = Ethylene dibromide

Water displacing oil = Oils, miscellaneous: penetrating

Water glass = Sodium silicate
Waxes: carnauba
Waxes: paraffin = Waxes: paraffin
Weisspiessglanz = Antimony trioxide
White arsenic = Arsenic trioxide

White oil = Oils, miscellaneous: mineral

White spirit (low (15-20%) aromatic) = White spirit (low (15-20%) aromatic)

p-Xylene

White vitriol Zinc sulfate Witicizer 300 Dibutyl phthalate Wolfatox Methyl parathion Methyl alcohol Wood alcohol Charcoal Wood charcoal = Dimethyl ether Wood ether Wood spirit Methyl alcohol Wood turpentine **Turpentine** = Xenene Diphenyl = m-Xylene m-Xylene = o-Xylene o-Xylene =

Xylenol, phosphate (3:1) = Trixylenyl phosphate

Xylenol = Xylenol 2,6-Xylenol = Xylenol

o-Xylidine = 2,6-Dimethylaniline 2,6-Xylidine = 2,6-Dimethylaniline

Xylyl phosphate = Trixylenyl phosphate 2,6-Xylylamine = 2,6-Dimethylaniline Yarmor pine oil = Oil, misc: pine Yarmor = Oil, misc: pine Yellow arsenic sulfide = Arsenic trisulfide Yellow petrolatum = Petrolatum

Yellow phosphorus = Phosphorus, white

Zactran = Zectran Zectane = Zectran Zectran = Zectran

Zelio = Thallium sulfate Zextran = Zectran

Zextran = Zectran

Zinc acetate dihydrate = Zinc acetate

Zinc acetate = Zinc acetate

Zinc ammonium chloride = Zinc ammonium chloride

Zinc arsenate = Zinc arsenate
Zinc bichromate = Zinc bichromate
Zinc borate = Zinc borate

# **COMPOUND NAMES**

Zinc acetate

Zinc bromide Zinc bromide Zinc carbonate Zinc carbonate Zinc chloride Zinc chloride Zinc chromate (VI) hydroxide Zinc chromate Zinc chromate Zinc chromate Zinc cyanide Zinc cyanide Zinc diacetate

Zinc dialkyldithiophosphate Zinc dialkyldithiophosphate

Zinc dichromate Zinc bichromate Zinc dicyanide Zinc cyanide = Diethylzinc Zinc diethyl Zinc difluoride Zinc fluoride

Zinc dihexyldithiophosphate Zinc dialkyldithiophosphate Zinc dihexylphosphorodithioate Zinc dialkyldithiophosphate

Zinc dimethyl = Dimethylzinc Zinc dithionite Zinc hydrosulfite Zinc ethyl Diethylzinc

Zinc ethylenediaminetetraacetate Diammonium salt of zinc EDTA

Zinc fluoborate solution Zinc fluoroborate Zinc fluoride Zinc fluoride Zinc fluoroborate Zinc fluoroborate Zinc fluosilicate Zinc silicofluoride Zinc formate Zinc formate Zinc hexafluorosilicate Zinc silicofluoride Zinc hydrosulfite Zinc hydrosulfite Zinc methyl Dimethylzinc

Zinc nitrate hexahydrate Zinc nitrate Zinc nitrate Zinc nitrate

Zinc O,O-di-n-butylphosphorodithioate Zinc dialkyldithiophosphate Zinc p-phenolsulfonate Zinc phenolsulfonate

Zinc phenolsulfonate octahydrate Zinc phenolsulfonate Zinc phenolsulfonate Zinc phenolsulfonate

Zinc phosphide Zinc phosphide

Zinc potassium chromate Zinc potassium chromate

Zinc silicofluoride hexahydrate Zinc silicofluoride Zinc silicofluoride Zinc silicofluoride Zinc suflate heptahydrate Zinc sulfate Zinc sulfate Zinc sulfate =

Zinc sulfocarbolate Zinc phenolsulfonate Zinc sulfophenate Zinc phenolsulfonate

Zinc vitriol Zinc sulfate

Zinc yellow Y-539-D Zinc potassium chromate Zinc yellow Zinc chromate =

Zirconium acetate solution Zirconium acetate Zirconium acetate Zirconium acetate Zirconium chloride Zirconium tetrachloride Zirconium nitrate pentahydrate Zirconium nitrate

Zirconium nitrate Zirconium nitrate Zirconium oxide chloride Zirconium oxychloride Zirconium oxychloride hydrate Zirconium oxychloride Zirconium oxychloride Zirconium oxychloride

Zirconium potassium flouride Zirconium potassium flouride =

Zirconium sulfate tetrahydrate Zirconium sulfate = Zirconium sulfate Zirconium sulfate

# **COMPOUND NAMES**

Zirconium tetrachloride solid (DOT) Zirconium tetrachloride Zirconyl chloride

- Zirconium tetrachlorideZirconium tetrachloride
- = Zirconium oxychloride

# 9. INDEX OF CODES

AAC	Acetic acid	AMH	Ammonium hydroxide (<28% aqueous
AAD	Acetaldehyde		ammonia)
AAM	Acrylamide solution	AMK	n-Amyl methyl ketone
AAN	n-Amyl alcohol	AMM	n-Amyl mercaptan
AAS	sec-Amyl acetate	AMN	Ammonium nitrate
AAT	Ammonium acetate	AMP	Ammonium perchlorate
ABC	Ammonium bicarbonate	AMR	Ammonium stearate
ABF	Ammonium bifluoride	AMS	Ammonium sulfate
ABM	Acetyl bromide	AMT	Ammonium thiocyanate
ABN	Alkyl $(C_{11} - C_{17})$ benzenesulfonic acid	AMY	n-Amyl chloride
ABR	Allyl bromide	ANB	Ammonium bromide
ABZ	Ammonium benzoate	ANI	iso-Amyl nitrite
ACA	Acetic anhydride	ANL	Aniline
ACB	Ammonium carbonate	ANP	Ammonium nitrate-phosphate mixture
ACC	Acetyl chloride	ANS	Ammonium nitrate-sulfate mixture
ACD	Acridine	ANT	n-Amyl nitrate
ACE	Acetylene	ANU	Ammonium nitrate-urea solution
ACF	Allyl chloroformate	AOL	Ammonium oleate
ACH	Ammonium chromate	AOX	Ammonium oxalate
ACI	Ammonium citrate, dibasic	APB	Ammonium pentaborate
ACL	Aluminum chloride	APC	Antimony pentachloride
ACM	Ammonium carbamate	APE	Ammonium persulfate
ACN	Acrylonitrile	APF	Antimony pentafluoride
ACO	Aluminum chloride solution	APH	Aluminum phosphide
ACP	Acetophenone	API	Ammonium picrate, wet
ACR	Acrylic acid	APO	Arsenic pentaoxide
ACT	Acetone	APP	Ammonium phosphate
ACY	Acetone cyanohydrin	APR	2-Amino-2-methyl-1-propanol (90% or
ADA	Adipic acid	ALIX	less)
ADN	Adiponitrile	APS	Acetyl peroxide solution
AEC	Amyl acetate (all isomers)	APT	Antimony potassium tartrate
AEE	Aminoethylethanolamine	APY	4-Aminopyridine
AEL	Acetal	ARD	Arsenic disulfide
AEP	N-Aminoethyl piperazine	ARF	Asphalt blending stocks: roofers flux
AFB	Ammonium fluoborate	ARL	Acrolein
AFM	Ammonium formate	ART	Arsenic trisulfide
AFR	Ammonium fluoride	ARX	Arsenic
AGC		ASA	Arsenic Arsenic acid
	Ammonium gluconate		
AHP AID	Ammonium hypophosphite Ammonium iodide	ASC ASF	Anisoyl chloride Ammonium sulfide
ALA		ASL	Ammonium silicofluoride
	Allyl alcohol	ASL	Ammonium sulfamate
ALC	Allyl chloride	ASIVI	
ALD ALF	Aldrin Aluminum fluoride	ASP	Asphalt blanding stocks: stroight run
ALF		ASK	Asphalt blending stocks: straight run
	Aluminum sulfate	ΛСТ	residue Arsenic trichloride
ALN	Aluminum nitrate	AST	
ALS	Ammonium lauryl sulfate	ASU	Ammonium bisulfite
ALT	Ammonium lactate	ASX	Aluminum sulfate solution
AMA	Ammonia, anhydrous	ATA	Acetylacetone
AMB	Ammonium molybdate	ATB	Antimony tribromide
AMC	Ammonium chloride	ATC	Allyltrichlorosilane
AMD	Ammonium dichromate	ATF	Ammonium thiosulfate
AMF	Ammonium sulfite	ATH	Anthracene

ATL	Amyl phthalate	BNZ	Benzene
ATM	Antimony trichloride	BOC	Bismuth oxychloride
ATN	Acetonitrile	BPA	Bisphenol A
ATO	Arsenic trioxide	BPC	Barium perchlorate
ATR	Ammonium tartrate	BPD	Benzene phosphorus dichloride
ATS		BPE	
	n-Amyltrichlorosilane		2-Bromopentane
ATT	Antimony trifluoride	BPF	Bromine pentafluoride
ATV	Ammonium thiosulfate solution (60% or	BPH	Butyl benzyl phthalate
	less)	BPM	Barium permanganate
ATX	Antimony trioxide	BPN	n-Butyl propionate
ATZ	Atrazine	BPO	Barium peroxide
AYA	tert-Amyl acetate	BPR	1-Bromopropane
AZM	Azinphos methyl	BPT	Benzene phosphorus thiodichloride
BAB	•	BRA	
	Bromoacetyl bromide		n-Butyric acid
BAC	Boric acid	BRC	Barium carbonate
BAD	iso-Butyraldehyde	BRE	Bromoacetone
BAI	iso-Butyl acrylate	BRO	Bromoform
BAL	Benzyl alcohol	BRT	Boron trichloride
BAM	n-Butylamine	BRU	Brucine
BAN	n-Butyl alcohol	BRX	Bromine
BAS	sec-Butyl alcohol	BSC	Benzenesulfonyl chloride
BAT	tert-Butyl alcohol	BTA	sec-Butyl acetate
BBR		BTB	Boron tribromide
	Benzyl bromide		
BBT	2-Bromobutane	BTC	n-butyl acrylate
BBU	1-Bromobutane	BTD	1,4-Butynediol
BBZ	Bromobenzene	BTF	Bromine trifluoride
BCF	Benzyl chloroformate	BTL	sec-Butylamine
BCL	Benzyl chloride	BTM	n-Butyl mercaptan
BCN	n-Butyl acetate	BTN	Butylene
BCP	Boiler compound, liquid	вто	1,2-Butylene oxide
BCR	Barium chlorate	BTP	p-tert-Butylphenol
BCS	Butyltrichlorosilane	BTR	n-Butyraldehyde
BCY		BUA	•
	Barium cyanide		tert-Butylamine
BDE	Bisphenol a diglycidyl ether	BUB	Butyl butyrate
BDI	Butadiene	BUC	Butyryl chloride
BDM	Benzyl dimethylamine	BUD	1,4-Butenediol
BDO	1,4-Butanediol	BUE	Butyl toluene
BEC	Beryllium chloride	BUF	n-Valeraldehyde
BEF	Beryllium fluoride	BUG	Butylene glycol
BEM	Beryllium	BUT	Butane
BEN	Beryllium nitrate	BYA	tert-Butyl acetate
BEO	Beryllium oxide	BYC	Butyl chloride
	•		•
BES	Beryllium sulfate	BZA	Benzoic acid
BFN	n-Butyl formate	BZC	Benzoyl chloride
BFO	n-Butyl chloroformate	BZD	Benzaldehyde
BGE	n-Butyl glycidyl ether	BZE	Benzyl acetate
BHC	gamma Benzene hexachloride	BZI	Benzidine
BHP	tert-Butyl hydroperoxide	BZL	Benzal chloride
BIB	Isobutyl isobutyrate	BZM	Benzylamine
BLE	Butyl lactate	BZN	Benzonitrile
BMA	Benzyltrimethylammonium chloride	BZO	Benzyldimethyloctadecylammonium
BMI	Isobutyl methacrylate	520	chloride
		חלם	
BMN	n-butyl methacrylate	BZP	Benzophenone
BNI	Butyronitrile	BZQ	p-Benzoquinone
BNP	2-Butanone peroxide	BZT	Benzenethiol
BNT	Barium nitrate	CAA	Copper acetoarsenite

CAC	Chloroacetyl chloride	CLP	3-Chloropropionic acid
CAF	Calcium fluoride	CLS	Caprolactam
CAH		CLT	
	Calcium hydroxide		Copper lactate
CAL	Calcium phosphate	CLX	Chlorine
CAM	Calcium	CMA	Chromic anhydride
CAO	Calcium oxide	CMB	Cadmium bromide
CAP	p-Chloroaniline	CMC	Chromyl chloride
	•		
CAR	Carene	CME	Chloromethyl methyl ether
CAS	Calcium arsenite	CMH	Cumene hydroperoxide
CAT	Cadmium acetate	CMN	Cadmium nitrate
CBA	Cobalt acetate	CMO	Carbon monoxide
CBB	Carbon disulfide	CMP	p-Cymene
CBC	Cobalt chloride	CMS	
			Cadmium sulfate
CBD	Copper bromide (ous)	CNE	1-Chloro-1-nitropropane
CBF	Carbofuran	CNI	Copper nitrate
CBN	4-Chlorobutyronitrile	CNN	Copper naphthenate
СВО	Carbolic oil (mixture)	CNO	o-Chloronitrobenzene
CBR	Cyanogen bromide	CNT	Calcium nitrate
CBS	Cobalt sulfate	COB	Cobalt bromide (ous)
CBT	Carbon tetrachloride	COF	Cobalt fluoride
CBY	Carbaryl	COL	Copper oxalate
CCA	Calcium arsenate	COP	Copper acetate
CCB	Calcium carbide	COS	Cobalt sulfamate
CCC		COU	
	Calcium chlorate		Coumaphos
CCH	Cyclohexanone	COX	Cadmium oxide
CCL	Cyanogen chloride	CPA	Copper arsenite
CCN	Calcium cyanide	CPB	Copper bromide
CCO	Cobalt nitrate	CPC	Copper chloride
CCP	Calcium peroxide	CPE	Cyclopentene
CCR	Calcium chromate	CPF	Copper fluoroborate
CCT		CPG	Copper glycinate
	Creosote, coal tar		
CCY	Copper cyanide (ous)	CPH	Camphene
CDA	Cacodylic acid	CPL	Chloropicrin
CDC	Cadmium chloride	CPN	p-Chlorophenol
CDN	Chlordane	CPO	Camphor oil
CDO	Carbon dioxide	CPP	Calcium phosphide
CES	Cupriethylenediamine solution	CPR	Cyclopropane
CFB		CPS	
	Cadmium fluoroborate		Caustic potash solution
CFM	Cobalt formate	CPT	Captan
CGE	Cresyl glycidyl ether	CRA	Chloroacetophenone
CHA	Cyclohexylamine	CRB	Chlorobenzene
CHC	Charcoal	CRC	Chromous chloride
CHD	Chlorohydrins	CRE	Calcium resinate
CHM	Chloroacetic acid (80% or less)	CRF	Chloroform
	,		
CHN	Cyclohexanol	CRH	o-Chlorophenol
CHO	Chloroacetaldehyde	CRL	m-Cresol
CHP	Cyclohexanone peroxide	CRN	p-Chlorotoluene
CHS	Chromic sulfate	CRO	o-Cresol
CHT	Cyclohexenyltrichlorosilane	CRP	Chloroprene
CHX	Cyclohexane	CRS	Cresols
CHY	Calcium hypochlorite	CRT	Chromic acetate
CID	Copper iodide	CSA	Chlorosulfonic acid
CIT	Citric acid	CSC	Cresylate spent caustic solution
CLA	2-Chloropropionic acid	CSF	Copper sulfate
CLC	Calcium chloride	CSN	Copper sulfate, ammoniated
CLD	Collodion	CSO	p-Cresol
	= - <del></del>		1 2.222.

CSS	Caustia cada calution	DCM	Diablaramathana
CST	Capper subsectate	DCM	Dichloromethane Decanoic acid
CSY	Copper subacetate Corn syrup	DCP	2,4-Dichlorophenol
CTA	Crotonaldehyde	DCR	N,N-Dimethylcarbamoyl chloride
CTC	Catechol	DCS	Dodecylbenzenesulfonic acid, calcium salt
CTD	4-Chloro-o-toluidine	DCT	1,1-Dichloro-1-nitroethane
CTF	Chlorine trifluoride	DCV	Dichlorvos
CTM	m-Chlorotoluene	DCY	4,6-Dinitro-o-cyclohexyl phenol
СТО	o-Chlorotoluene	DDB	Dodecylbenzene
CTP	Coal tar pitch	DDC	1-Dodecene
CTT	Copper tartrate	DDD	DDD
CUF	Copper formate	DDI	2,2-Dimethylpropane-1,3-diol
CUM	Cumene	DDM	Dodecylmethacrylate
CWD	Creosote (wood)	DDN	Dodecanol
CXY	Carbon oxyfluoride	DDP	Dodecyl/pentadecyl methacrylate
CYA	Cyanoacetic acid	DDS	Dodecyl sulfate, sodium salt
CYC	Cyclohexyl acetate	DDT	DDT
CYE	Cycloheptane	DDW	Dimethylhexane dihydroperoxide
CYG	Cyanogen	DEA	Diethanolamine
CYP	Cyclopentane	DEB	Diethylbenzene
CYT	1,5,9-Cyclododecatriene	DEC	Diethyl carbonate
DAA	Diacetone alcohol	DED	Dieldrin
DAC	Dimethylacetamide	DEE	2,2-Dichloroethyl ether
DAE	N,N-Diethylethanolamine	DEG	Diethylene glycol
DAI	Dodecylbenzenesulfonic acid,	DEH	Di-(2-ethylhexyl) adipate
5.4.	isopropylamine salt	DEK	Diethyl ketone
DAL	Decaldehyde	DEL	1,2-Dichloroethylene
DAM	Diphenylamine	DEM	Diethylene glycol monobutyl ether acetate
DAN	n-Decyl alcohol	DEN	Diethylamine
DAP	Di-n-amyl phthalate	DEP	Di-(2-ethylhexyl)phosphoric acid
DAR	n-Decyl acrylate	DER DES	Butyl, decyl, cetyl-eicosyl methacrylate
DAS DBA	Dodecyl benzene sulfonic acid, sodium salt	DES	2,4-D esters
DBC	Di-n-butylamine Diisobutylcarbinol	DEZ	Diethylenetriamine Diethylzinc
DBE	Di-n-butyl ether	DFA	Difluorophosphoric acid
DBH	Dibromomethane	DFE	1,1-Difluoroethane
DBK	Di-n-butyl ketone	DFF	Distillates: flashed feed stocks
DBL	Diisobutylene	DFM	Dichloromonofluoromethane
DBM	m-Dichlorobenzene	DGA	Diethylene glycol ethyl ether acetate
DBN	Dibenzyl ether	DGD	Diethylene glycol dimethyl ether
DBO	o-Dichlorobenzene	DGE	Diethylene glycol monoethyl ether
DBP	p-Dichlorobenzene	DGL	Diethylene glycol phthalate
DBR	Decaborane	DGM	Diethylene glycol monomethyl ether
DBS	Dodecylbenzenesulfonic acid,	DGR	Diethylene glycol methyl ether acetate
	triethanolamine salt	DGT	Dimethyl glutarate
DBT	Dibutylphenol	DGY	Dipropylene glycol dibenzoate
DBU	Diisobutylamine	DHA	Di-n-hexyl adipate
DBZ	n-Decylbenzene	DHE	Diethylene glycol n-hexyl ether
DCA	2,4-Dichlorophenoxyacetic acid	DHN	Decahydronaphthalene
DCB	Dichlorobutene	DHP	Diheptyl phthalate
DCC	Decane	DHX	1,6-Dichlorohexane
DCE	1-Decene	DIA	Diisopropylamine
DCF	Dichlorodifluoromethane	DIB	Dichlobenil
DCH	1,1-Dichloroethane	DIC	Dicamba
DCI	2,2'-Dichloroisopropyl ether	DID	Diisodecyl phthalate
DCL	Dichlone	DIE	Di-(2-ethylhexyl)phthalate

DIF DIG DIH DII DIK DIL DIM DIN DIO DIP DIQ	Dinonyl phthalate Diethylene glycol dibutyl ether Diisopropylbenzene hydroperoxide Diisopropyl naphthalene Diisobutyl ketone Diphenyl Dimethyl ether Diisononyl phthalate Diisooctyl phthalate Diisopropanolamine Diquat	DPE DPF DPG DPH DPI DPM DPN DPO DPP DPT DPU	Diphenyl ether 2,3-Dichloropropene Dipropylene glycol Diethyl phthalate Dimethyl hydrogen phosphite Diphenylmethane diisocyanate Dipentene Dibenzoyl peroxide 1,2-Dichloropropane Dicyclopentadiene 1,3-Dichloropropene
DIS DIT DIU	Disulfoton Diisobutyl phthalate Diuron	DPY DSA DSD	Dipropylene glycol methyl ether Dodecylbenzenesulfonic acid Dodecyl sulfate, diethanolamine salt
DIX DLA DLP DLS	Diisopropylbenzene (all isomers) Dimethyl adipate 2,2-Dichloropropanoic acid N,N-Dimethyl acetamide solution (40% or	DSE DSF DSL DSM	Dimethyl succinate Dimethyl sulfate Dimethyl sulfide Dodecyl sulfate, magnesium salt
DMA DMB DMD	less) Dimethylamine Dimethylethanolamine Dimethyldichlorosilane	DSR DSS DST DSU	Distillates: straight run Dioctyl sodium sulfosuccinate Dodecyl sulfate, triethanolamine salt Diethyl sulfate
DME DMF DMH	Diethylene glycol monobutyl ether Dimethylformamide 1,1-Dimethylhydrazine	DSZ DTC DTE	Diammonium salt of zinc edta Dodecyltrichlorosilane Dichlorotetrafluoroethane
DML DMM DMN DMO	1,2-Dimethylhydrazine 2,6-Dimethylaniline 2,6-Diethylaniline 2,2-Dimethyloctanoic acid	DTH DTL DTM	Dowtherm Dimethyl phthalate 4,4'-Dichloro-alpha-trichloromethyl benzhydrol
DMP DMS DMT	Dimethylpolysiloxane Dimethyl sulfoxide Dimethyl terephthalate	DTN DTP DTS DTT	Demeton Ditridecyl phthalate Dextrose solution
DMX DMZ DNA DNB	Dichloropropene, dichloropropane mixture Dimethylzinc Di-n-propylamine m-Dinitrobenzene	DUP DUR DXN	2,4-Dinitrotoluene Diundecyl phthalate Dursban N,n-Dimethylcyclohexylamine
DNC DNE DNH	Dinitrocresol 2,5-Dinitrophenol 2,6-Dinitrophenol	DZN DZP EAA	Diazinon Di-(p-chlorobenzoyl) peroxide Ethyl acetoacetate
DNL DNO DNP DNT	2,6-Dinitrotoluene o-Dinitrobenzene 2,4-Dinitrophenol 2,4-Dinitroaniline	EAC EAD EAI EAK	Ethyl acrylate Ethylaluminum dichloride 2-Ethylhexyl acrylate Ethyl amyl ketone
DNU DNY DNZ	3,4-Dinitrotoluene Diisononyl adipate p-Dinitrobenzene	EAL EAM EAS	Ethyl alcohol Ethylamine Ethylaluminum sesquichloride
DOA DOD DOL DOP	Dioctyl adipate Dodecene Dodecyl phenol Dioctyl phthalate	EBA EBK EBR EBT	N-Ethyl-n-butylamine Ethyl butyl ketone Ethyl butyrate Ethyl butanol
DOS DOX DPA	Dodecyl diphenyl ether disulfonate solution 1,4-Dioxane Dibutyl phthalate	ECA ECC ECF	Ethyl chloroacetate N-Ethylcyclohexylamine Ethyl chloroformate
DPB DPC DPD	1,1-Dichloropropane 1,3-Dichloropropane Diphenyldichlorosilane	ECH ECL ECS	Ethylene chlorohydrin Ethyl chloride Ethyldichlorosilane

ECT ECY EDA EDB EDC EDR EDT EEA EEE	Ethyl chlorothioformate Ethyl cyclohexane Ethylenediamine Ethylene dibromide Ethylene dichloride Endrin Ethylenediamine tetracetic acid 2-Ethoxyethyl acetate Ethylene glycol diethyl ether 2-Ethoxyethanol	ETC ETD ETE ETG ETH ETI ETL ETM ETN	Ethylene cyanohydrin Ethoxylated tridecanol 2-Ethyl toluene Ethoxy triglycol Ethane Ethyleneimine Ethylene Ethyl methacrylate Ethyl nitrite Ethion
EEP EET	Ethyl-3-ethoxypropionate Ethyl ether	ETS EVO	Ethyltrichlorosilane Epoxidized vegetable oils
EFM	Ethyl formate	FAC	Ferric ammonium citrate
EGA	Ethylene glycol monoethyl ether acetate	FAL	Furfuryl alcohol
EGB	Ethylene glycol dibutyl ether	FAM	Formamide
EGD	Ethylene glycol dimethyl ether	FAN	2-Fluoroaniline
EGE	Ethylene glycol monoethyl ether	FAO	Ferric ammonium oxalate
EGI	Ethylene glycol isopropyl ether	FAS	Ferrous ammonium sulfate
EGL	Ethylene glycol	FCL	Ferric chloride
EGM EGO	Ethylene glycol monobutyl ether Ethylene glycol acetate	FCP FEC	Ferric glycerophosphate Ferrous chloride
EGP	Ethylene glycol propyl ether	FFA	Furfural
EGT	Ethylene glycol methyl ether acetate	FFB	Ferrous fluoroborate
EGY	Ethylene glycol diacetate	FFX	Ferric fluoride
EHA	Ethylhexaldehyde	FLA	4-Fluoroaniline
EHC	2-Ethylhexyl acetate	FLB	Fluorobenzene
EHE	Ethyl hexyl phthalate	FLT	2-Fluorotoluene
EHM	2-Ethylhexylamine	FMA	Formic acid
EHO	2-Ethylhexanoic acid	FMS	Formaldehyde solution
EHP EHT	Ethoxydihydropyran	FNT	Ferric nitrate
EHX	Ethyl hexyl tallate 2-Ethyl hexanol	FOX FPS	Ferrous oxalate Ferrophosphorus
ELT	Ethyl lactate	FRS	Ferrous sulfate
EMA	Ethylene glycol monobutyl ether acetate	FSA	Fluosulfonic acid
EMC	Ethyl mercaptan	FSF	Ferric sulfate
EME	Ethylene glycol monomethyl ether	FSL	Fluosilicic acid
EMN	n-Ethyl morpholine	FSN	Ferrosilicon
EMX	Ethylenediamine	FTO	3-Fluorotoluene
ENB	Ethylidene norbornene	FTU	4-Fluorotoluene
ENP	Ethoxylated nonylphenol	FUM	Fumaric acid
EOD	Ethoxylated dodecanol	FUR	Furan
EOP EOT	Ethoxylated pentadecanol Ethoxylated tetradecanol	FXX GAC	Fluorine Glyoxylic acid (50% or less)
EOX	Ethylene oxide	GAK	Gasoline blending stocks: alkylates
EPA	2-Ethyl-3-propylacrolein	GAT	Gasolines: automotive (<4.23g lead/gal)
EPC	Epichlorohydrin	GAV	Gasolines: aviation (< 4.86g lead/gal)
EPD	Ethyl phosphonothioic dichloride	GCM	Glycidyl methacrylate
EPE	Ethylene glycol phenyl ether	GCR	Glycerine
EPL	Ethylphenol	GCS	Gasolines: casinghead
EPP	Ethyl phosphorodichloridate	GLA	Gallic acid
EPR	Ethyl propionate	GOC	Gas oil: cracked
EPS	Ethylphenyldichlorosilane	GOS	Glyoxal
ESC ESF	Ethyl silicate Endosulfan	GPL GRF	Gasolines: polymer
ETA	Ethyl acetate	GSR	Gasoline blending stocks: reformates Gasolines: straight run
ETB	Ethylbenzene	GTA	Glutaraldehyde solution
	=, o	J 17 (	- attained by do do attoin

HAC	Havadaayltrimathylammanium ahlarida	IOC	Isooctaldehyde
	Hexadecyltrimethylammonium chloride		
HAE	Hexyl acetate	IPA	Isopropyl alcohol
HAI	2-Hydroxyethyl acrylate	IPC	Isopropyl percarbonate
HAL	n-Hexaldehyde	IPD	Isophorone diisocyanate
HAS	Hydroxylamine sulfate	IPE	Isopropyl ether
HBA	2-Hydroxy-4-(methylthio)-butanoic acid	IPH	Isophorone
HBR	Hydrogen bromide	IPI	Isophorone diamine
HCB	Hexachlorobutadiene	IPL	Isophthalic acid
HCC	Hexachlorocyclopentadiene	IPM	Isopropyl mercaptan
HCE	Hexachloroethane	IPP	Isopropylamine
HCL	Hydrochloric acid	IPR	Isoprene
HCN	Hydrogen cyanide	IPT	Isopentane
HCP	Hexachlorophene	IPX	•
		ISA	Isopropyl cyclohexane
HCZ	Hexachlorobenzene		Isodecyl alcohol
HDA	Hydroxylamine	ISP	o-Isopropyl phenol
HDC	Hydrogen chloride	IVA	Isovaleraldehyde
HDQ	Hydroquinone	JPF	Jet fuels: JP-4
HDS	Hydrogen sulfide	JPO	Jet fuels: JP-1
HDZ	Hydrazine	JPT	Jet fuels: JP-3
HEP	Heptanoic acid	JPV	Jet fuels: JP-5
HFA	Hydrofluoric acid	KPE	Kepone
HFS	Hydrofluorosilicic acid (25% or less)	KRS	Kerosene
HFX	Hydrogen fluoride	LAC	Lead acetate
HMD	Hexamethylenediamine	LAH	Lithium aluminum hydride
HMI	Hexamethylenimine	LAL	Linear alcohols
HMT	Hexamethylenetetramine	LAR	Lead arsenate
HPA		LBC	Lithium bichromate
	Hydroxypropyl acrylate		
HPE	Heptyl acetate	LCL	Lead chloride
HPM	Hydroxypropyl methacrylate	LCR	Lithium chromate
HPO	Hydrogen peroxide	LFB	Lead fluoroborate
HPT	Heptane	LFR	Lead fluoride
HSS	Hexadecyl sulfate, sodium salt	LHD	Lithium hydride
HTC	Heptachlor	LID	Lead iodide
HTE	1-Heptene	LLS	Latex, liquid synthetic
HTN	Heptanol	LNG	Liquefied natural gas
HXA	n-Hexane	LNI	Lactonitrile solution (80% or less)
HXE	1-Hexene	LNT	Lead nitrate
HXG	Hexylene glycol	LPG	Liquefied petroleum gas
HXN	1-Hexanol	LPO	Lauroyl peroxide
HXO	Hexanoic acid	LRA	Lauric acid
HXX	Hydrogen	LRM	Lauryl mercaptan
IAA	Isoamyl alcohol	LSA	Lead stearate
IAC	Isopropyl acetate	LSF	Lead stearate Lead sulfate
IAI		LSU	Lead sulfide
	Isodecyl acrylate		
IAL	Isobutyl alcohol	LTA	Lactic acid
IAM	Isobutylamine	LTC	Lead thiocyanate
IAT	Isoamylacetate	LTH	Litharge
IBA	Isobutyl acetate	LTM	Lithium
IBL	Isobutylene	LTS	Lead thiosulfate
IBN	Isobutyronitrile	LTT	Lead tetraacetate
IBR	Isobutyric acid	LTU	Lead tungstate
IBT	Isobutane	MAA	Methyl amyl alcohol
IDA	Isodecaldehyde	MAC	Methyl amyl acetate
IGE	Isopropyl glycidyl ether	MAD	Methacrylic acid
İΗΑ	Isohexane	MAE	Methyl acetoacetate
IOA	Isooctyl alcohol	MAK	Methylamyl ketone

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MAL	Methyl alcohol	MLI	Maleic acid
MAM	Methyl acrylate	MLL	Methyl allyl alcohol
MAN	N-methylaniline	MLP	3-Methylpyridine
MAP	Methyl acetylene, propadiene mixture	MLT	Malathion
MAT	Mercuric acetate	MMC	Methyl mercaptan
MBA	a-Methylbenzyl alcohol	MME	Monomethyl ethanolamine
MBE	Methyl tert-butyl ether	MMM	Methyl methacrylate
MBK	Methyl n-butyl ketone	MNA	1-Methylnaphthalene
MBL	Methyl butenol	MNS	Mineral spirits
MBO	3-Methyl-2-butanone	MNT	Mercuric nitrate
MBU	Methyl butyrate	MOA	3-Methoxybutyl acetate
MBY	Methyl butynol	MOC	Methoxychlor
MBZ	Methyl benzoate	MOX	Mercuric oxide
MCA	Chloroacetic acid	MPA	Monoisopropanolamine
MCC	Mercuric ammonium chloride	MPC	Magnesium perchlorate
MCD		MPD	
	Mercaptodimethur		Methyl phosphonothioic dichloride
MCF	Chlorodifluoromethane	MPE	2-Methyl-1-pentene
MCK	Methylcyclopentadiene dimer	MPF	4-Methylpyridine
MCL	Methallyl chloride	MPK	Methyl isopropenyl ketone
MCM	Monochlorotrifluoromethane	MPL	Morpholine
MCN	Mercuric cyanide	MPR	2-Methylpyridine
MCO	Metolachlor	MPT	Methyl parathion
MCP	Methyl cyclopentane	MPY	1-Methylpyrrolidone
MCR	Mercury	MRC	Mercuric chloride
MCS	Methyldichlorosilane	MRE	Myrcene
MCT	Methylcyclopentadienylmanganese	MRN	Mercurous nitrate
	tricarbonyl	MRR	Mercurous chloride
MCX	o-Methylcyclohexanone	MRS	Mercuric sulfate
MCY	Methylcyclohexane	MRT	Mercuric thiocyanate
MDC	Methyl dichloroacetate	MRX	Mirex
MDE	Methyl diethanolamine	MSA	Methanearsonic acid, sodium salt
MEA	Monoethanolamine	MSF	Mercuric sulfide
MED	Methyl chloroacetate	MSO	Mesityl oxide
MEK	Methyl ethyl ketone	MSR	alpha-Methylstyrene
MEN	2-Methyl-6-ethyl aniline	MSZ	Methylamine solution
MEP	Methylethylpyridine	MTA	Methylamine
MES	Methyl salicylate	MTB	Methyl bromide
MET	Methacrylonitrile	MTC	Methyl chloride
MFA	Lead alkyls	MTE	Monochlorotetrafluoroethane
MFM	Methyl formate	MTF	Methyl formal
MGN	Magnesium nitrate	MTH	Methane
MGX	Magnesium	MTN	4-Methyl-1-pentene
MHB	2-Methyl-2-hydroxy-3-butyne	MTO	Molybdic trioxide
MHC	Methyl chloroformate	MTS	Methyltrichlorosilane
MHK	Methyl heptyl ketone	MTT	Methyl acetate
MHX	• • •		•
	2-Methylcyclohexanol	MVK	Methyl vinyl ketone
MHZ	Methylhydrazine	NAA	Nitrilotriacetic acid and salts
MIC	Methyl isobutyl carbinol	NAB	Nabam
MID	Mercuric iodide	NAC	Nitric acid
MIK	Methyl isobutyl ketone	NAE	Nonyl acetate
MIO	Methyl iodide	NAL	4-Nitroaniline
MIS	Methyl isocyanate	NAN	Nonane
MIT	Methyl isothiocyanate	NAO	1-Naphthylamine
MKE	Methyl propyl ketone	NAS	Nickel ammonium sulfate
MLA	Maleic anhydride	NBR	Nickel bromide
MLH	Maleic hydrazide	NCL	Nickel chloride

NCN OET Nickel cyanide Octyl epoxy tallate **NCS** Nicotine sulfate OFR Oils, fuel: 4 **NCT** Naphtha: coal tar **OFS** Oils, edible: fish NEA Neodecanoic acid **OFV** Oils, fuel: 5 NFB Nickel fluoroborate OIL Oils: crude NFM Nickel formate OLA Oleic acid OLB NHX Neohexane Oils, miscellaneous: lubricating NIC **Nicotine** OLD Oils, edible: lard NIE o-Nitrotoluene OLM Oleum NIP 3-Nitrophenol OLS Oils, miscellaneous: linseed NKA Nickel acetate OMN Oils, miscellaneous: mineral **NKC** Nickel carbonyl **OMS** Oils, miscellaneous: mineral seal Oils, miscellaneous: motor **NKH** Nickel hydroxide OMT NKS Nickel sulfate ONF Oils, miscellaneous: neatsfoot NLD Naled OOD Oils, fuel: 1-D NMT Nitromethane OOL Oils, edible: olive NNE 1-Nonene OON Oils, fuel: no. 1 NNN Nonanol OPI Oil, misc: pine NNP Nonylphenol OPM Oils, edible: palm NNT Nickel nitrate OPN Oils, edible: peanut NON Nonene OPT Oils, miscellaneous: penetrating NOX Nitrogen tetroxide ORD Oils, miscellaneous: road NPH 4-Nitrophenol ORG Oils, miscellaneous: range NPN 1-Nitropropane ORN Oils, miscellaneous: rosin NPP 2-Nitropropane ORS Oils, miscellaneous: resin NSS Naphtha: stoddard solvent OSB Oils, edible: soya bean NSV Naphtha: solvent OSD Oils, miscellaneous: spindle NTA 2-Nitroaniline OSF Oils, edible: safflower OSP NTB Nitrobenzene Oils, miscellaneous: sperm NTC Nitrosyl chloride OSX Oils, fuel: no. 6 Oils, miscellaneous: spray NTE OSY Nitroethane NTI Naphthenic acids Octanol OTA NTL Nitralin OTB Oils, miscellaneous: turbine NTM Naphthalene **OTC** Oils, edible: tucum NTO Nitrous oxide OTD Oils, fuel: 2-D NTP 2-Nitrophenol OTE 1-Octene **NTR** m-Nitrotoluene OTF Oils, miscellaneous: transformer NTT p-Nitrotoluene OTL Oils, miscellaneous: tall NTX Nitric oxide OTN Oils, miscellaneous: tanner's NVM Naphtha: VM & P OTW Oils, fuel: 2 NXX Nitrogen **OVG** Oils, edible: vegetable OAA Octanoic acid OXA Oxalic acid OAC Oleic acid, sodium salt OXY Oxygen OAL Octyl aldehydes PAA Peracetic acid OAN PAC Phosphoric acid Octane OAP PAD Oleic acid, potassium salt Propionaldehyde OAS Oils, miscellaneous: absorption PAH Propionic anhydride OCA Oils, edible: castor PAL n-Propyl alcohol OCC Oils, edible: coconut PAM 2-Propanolamine OCF Oils: clarified PAN Phthalic anhydride OCN Oil. misc: cashew nut shell PAS Potassium arsenate OCR PAT Oils, miscellaneous: croton n-Propyl acetate **OCS** Oils, edible: cottonseed **PBO** Potassium binoxalate OCT Oils, miscellaneous: coal tar **PBP** Propylene butylene polymer ODP Octyl decyl phthalate PBR Phosphorus tribromide

PBZ

n-Propylbenzene

**ODS** 

Oils: diesel

PPT **PCB** Polychlorinated biphenyl Phosphorus trichloride PPW **PCE** Pentachloroethane Phosphorus, white PCH Potassium chromate PPZ Piperazine n-Propylamine PCL PRA Perchloric acid Perchloromethyl mercaptan **PRC** n-Propyl chloride PCM PCN **PRD** Propionitrile **Pyridine PCP** Pentachlorophenol PRE n-Propyl ether **PCR** Potassium chlorate **PRG** Propargite **PDC** Pentadecanol **PRO** Propargyl alcohol PDE PRP Propane 1,3-Pentadiene PDH Paraldehyde **PRR Pvrethrins** Phenyldichloroarsine PDL PTA Pentane 1.4-Pentadiene **PDN** PTB Pentaborane PDT Potassium dichloro-s-triazinetrione PTC Potassium cvanide PEB Polyethylene polyamines PTD Potassium dichromate PEN Pentaethylenehexamine PTE 1-Pentene PET Pentaervthritol PTH Potassium hydroxide PFA Paraformaldehyde PTI Potassium iodide **PGA** Pyrogallic acid PTL Petrolatum **PGC** Polypropylene glycol PTM Potassium PGM Polypropylene glycol methyl ether PTN Petroleum naphtha **PGN** Propylene glycol methyl ether acetate PTO Parathion PGY PTP Propylene glycol ethyl ether Potassium permanganate PHD PTR Phosdrin Propylene trimer PHE Phenylhydrazine PTS Potassium oxalate **PHG** Phosgene PTT Propylene tetramer PHH Phenylhydrazine hydrochloride PXE 1-Phenyl-1-xylyl ethane PHN Phenol PXP n-Propoxypropanol PII Propyleneimine QNL Quinoline PIN Pinene **RSC** Resorcinol **PLA** n-Propanolamine SAB Sodium alkylbenzenesulfonates **PLB** Polybutene SAC Sulfuric acid, spent PLP Polypropylene SAL Salicylaldehyde PLT beta-Propiolactone SAM Sodium amide **PMA** Phenylmercuric acetate SAR Sodium arsenite **PME** Propylene glycol methyl ether SAS Sodium alkvl sulfates **PMN** n-Propyl mercaptan SAT Sodium fluoroacetate **PNA** Propionic acid Sodium aluminate solution (45% or less) SAU PNE 2-Pentanone SAZ Sodium azide PNI n-Propyl nitrate SBF Sodium bifluoride **PNR** Potassium nitrate SBH Sodium borohydride POA Potassium arsenite SBS Sodium bisulfite POC Pentanoic acid SBT Sorbitol POE Sodium hydroxide solution Potassium oleate SBX POP Potassium peroxide SCD Sodium cacodylate POX Propylene oxide SCH Sodium chromate PPA Polyphosphoric acid SCL Sulfurvl chloride PPB Phosphorus, black SCM Strontium chromate **PPD** Propanedinitrile SCN Sodium cyanide PPE n-Pentyl propionate SCR Sodium dichromate **PPG** Propylene glycol SCY Sodium thiocyanate PPI Polymethylene polyphenyl isocyanate SDA Sodium arsenate PPL Propylene SDB Sodium borate PPO Phosphorus oxychloride SDC Sodium chlorate PPP Phosphorus pentasulfide SDD Sodium chlorate solution

SDF

Sodium fluoride

**PPR** 

Phosphorus, red

SDH	Sodium hydride	TCB	1,2,4-Trichlorobenzene
SDN	Sodium nitrate	TCE	Trichloroethane
SDS	Sodium sulfide	TCF	Trichlorofluoromethane
SDT	Sodium dichloro-s-triazinetrione	TCH	Trichloroacetaldehyde
SDU	Sodium	TCL	Trichloroethylene
SFA	Sulfuric acid	TCM	1,1,2-Trichloroethane
SFC	Sodium ferrocyanide	TCN	1,2,3-Trichloropropane
SFD	Sulfur dioxide	TCO	Tricresyl phosphate (>= 1% ortho isomer)
SFL	Sulfolane	TCP	Tricresyl phosphate (<1% ortho isomer)
SFM	Sulfur monochloride	TCS	Trichlorosilane
SFR	Sodium silicofluoride	TCT	Trichloro-s-triazinetrione
SHC	Sodium hypochlorite	TDA	Toluenediamine
SHD	Sodium hydroxide	TDB	Tetradecylbenzene
SHP	Sodium hypochlorite solution	TDC	1-Tridecene
SHR	Sodium hydrosulfide solution	TDI	Toluene 2,4-diisocyanate
SHX		TDN	Tridecanol
SHA	Sodium hydrogen sulfite solution (35% or		
CI A	less)	TEA	Triethanolamine
SLA	Salicylic acid	TEB	Triethylbenzene
SLD	Selenium dioxide	TEC	Tetrachloroethane
SMB	Sodium 2-mercaptobenzothiazol solution	TED	Tetraethyl dithiopyrophosphate
SML	Sodium methylate	TEG	Triethylene glycol
SNI	Sodium nitrite solution	TEL	Tetraethyl lead
SNT	Sodium nitrite	TEN	Triethylamine
SOX	Sodium oxalate	TEP	Tetraethyl pyrophosphate
SPC	Sodium pentachlorophenate	TES	2,4,5-T esters
SPH	Sodium phosphate, tribasic	TET	Triethylenetetramine
SPP	Sodium phosphate	TFA	Tallow fatty alcohol
SRA	Stearic acid	TFC	Trifluorochloroethylene
SRS	Sucrose	TFE	Tetrafluoroethylene
SSC	Sodium silicate	TFR	Trifluralin
SSE	Sodium selenite	TGC	Tripropylene glycol
SSF	Sodium sulfite	TGD	Triethylene glycol di-(2-ethylbutyrate)
STC	Silicon tetrachloride	TGE	Triethylene glycol ethyl ether
STF	Stannous flouride	TGM	Tripropylene glycol methyl ether
STN	Strontium nitrate	TGY	Triethylene glycol methyl ether
STO	Selenium trioxide	THA	Trimethyl hexamethylene diamine
STR	Strychnine	THB	Thallium carbonate
STS	Sodium thiocyanate solution (56% or less)	THC	Thiocarbamide
STY	Styrene	THF	Tetrahydrofuran
SVA	Silver acetate	THI	Trimethylhexamethylene diisocyanate
SVC	Silver carbonate	THN	Tetrahydronaphthalene
SVF	Silver fluoride	THR	Thiram
SVI	Silver iodate	TIA	Triisobutylaluminum
SVN	Silver nitrate	TIB	Triisobutylene
SVO	Silver oxide	TIP	Triisopropanolamine
SVS	Silver sulfate	TLA	Thallium acetate
SXX	Sulfur	TLI	o-Toluidine
TAA	Trimethylacetic acid	TLO	Tallow
TAL	Triethylaluminum	TMA	Trimethylamine
TAP	p-Toluenesulfonic acid	TMC	Trimethylchlorosilane
TAS	2,4,5-Trichlorophenoxyacetic acid, sodium	TME	1,2,4-Trimethylbenzene
17.0	salt	TML	Tetramethyl lead
TBP	Tributyl phosphate	TMP	1-Isobutyrate
TBT	Tetrabutyl titanate	TNA	Tannic acid
TBZ	1,2,3-Trichlorobenzene	TNI	Thallium nitrate
TCA	2,4,5-Trichlorophenoxyacetic acid	TNM	Tetranitromethane
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TOD TOF TOI TOF TOI TOP TPG TPH TPO TPP TPS TPT TRD TRN TRP TSU TTF TTG TTN	p-Toluidine Tall oil, fatty acid m-Toluidine Toluene 2-(2,4,5-Trichlorophenoxy) propanoic acid Isooctyl ester Thiophosgene Trichlorophenol Triethyl phosphite Tris(Aziridinyl)phosphine oxide Trimethyl phosphite Triethyl phosphate Triethyl phosphate Tridecylbenzene Trichlorfon Tridecane Tripropylamine Thorium nitrate Trixylenyl phosphate Thallium sulfate 1,2,3,5-Tetramethylbenzene 1-Tetradecene Tetrachloroethylene 1,1,2-Trichloro-1,2,2-trifluoroethane Tetraethylene glycol Tetradecanol	VTS WCA WPF WSL XLM XLO XLP XYL ZAC ZBC ZBR ZCB ZCB ZCR ZCS ZCT ZDP ZEC ZFB ZFM ZFX	Vinyltrichlorosilane Waxes: carnauba Waxes: paraffin White spirit (low (15-20%) aromatic) m-Xylene o-Xylene p-Xylene Xylenol Zinc ammonium chloride Zinc arsenate Zinc bichromate Zinc borate Zinc bromide Zirconium acetate Zinc carbonate Zinc chloride Zinc cyanide Zirconium oxychloride Zinc chromate Zinc chromate Zinc dialkyldithiophosphate Zectran Zinc fluoroborate Zinc fluoride
TTP	Tetraethylenepentamine	ZHS	Zinc hydrosulfite
TTT	Titanium tetrachloride	ZIR	Zirconium nitrate
TXP UAN	Toxaphene Uranyl nitrate	ZNA ZNT	Zinc acetate Zinc nitrate
UAS	Urea, ammonium nitrate soln (w/aqua	ZPC	Zinc potassium chromate
	ammonia)	ZPF	Zirconium potassium flouride
UDA	Undecanoic acid	ZPP	Zinc phosphide
UDB UDC	n-Undecylbenzene 1-Undecene	ZPS ZSF	Zinc phenolsulfonate Zinc sulfate
UND	Undecanol	ZSL	Zinc suitate Zinc silicofluoride
UPO	Urea peroxide	ZOL	Ziric Silicondonae
URA	Uranyl acetate		
URE	Urea		
URP	Uranium peroxide		
URS	Uranyl sulfate		
VAL	Valeraldehyde		
VAM	Vinyl acetate		
VBL	Vanillan black liquor		
VCH	Vinylcyclohexene		
VCI VCM	Vinylidene chloride Vinyl chloride		
VEE	Vinyl ethyl ether		
VFI	Vinyl fluoride		
VME	Vinyl methyl ether		
VND	Vinyl neodecanoate		
VNO	Vanadium oxide		
VNT	Vinyl toluene		
VOT	Vanadium oxytrichloride		
VOX	Vanadium pentoxide		
VSF	Vanadyl sulfate		

# 10. DATA SOURCES

The source of every item of data contained in section 11 is recorded in master data files and is available on request. The principal sources are listed below. Many other sources were consulted, but most of them provided only a few items and are not given here. In a few cases the information given is based on an analogy with that for a closely related chemical; the analogy was drawn by an expert in the field, whose identity appears in the master data files.

Where a source was used for a single category of data, the source is given in Section 3 ("Explanation of Terms") and is not repeated here.

#### **10.1 GENERAL SOURCES**

The following sources contained data for many of the 13 data categories used:

- 1. Manufacturers' Technical Bulletins This is usually the best single source of general information about the chemical. The bulletins contain the most recent data. Bulletins were not available for a few chemicals that are not items of commerce but are intermediates shipped from one manufacturing site to another.
- 2. Material Safety Data Sheets These were provided by the manufacturer using the U.S.Department of Labor Form OSHA-20 or an approved modification.
- 3. Code of Federal Regulations Office of the Federal Register, Archives and Record Service, Washington, D.C.,1972. Titles 46 (Shipping) and 49 (Transportation) were used in the most recent revision available, October 1, 1996.
- 4. Chemical Safety Data Sheets Chemical Manufacturers Association, Washington, D.C.
- 5. Industrial Safety Sheets National Safety Council, Chicago, Illinois.
- 6. International Maritime Dangerous Goods Code International Maritime Organization (IMO), London, January 1, 1990.
- 7. Petroleum Products Handbook V.B. Guthrie (ed.), McGraw-Hill, New York, 1960.
- 8. Glossary of Terms Used in Petroleum Refining 2nd edition, American Petroleum Institute, New York, 1962.
- 9. The Handling and Storage of Liquid Propellants Office of Defense Research and Engineering, U.S. Government Printing Office, Washington, D. C., 1963.
- 10. Industrial Chemicals W.L. Faith, D.B. Keyes, and R.L. Clark, 3rd edition, Wiley, New York, 1965.
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- 13. Organic Solvents J.A. Riddick and W.B. Bunger, 3rd edition, Wiley-Interscience, New York, 1970.
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- 3. Practical Toxicology of Plastics R. Lefaux, CRC Press, Cleveland, Ohio, 1968.
- 4. Industrial Toxicology L.T. Fairhall, Williams and Wilkins, 2nd edition, Baltimore, Maryland, 1957.
- 5. Toxicology of Drugs Chemicals W.B. Deichman and H.W. Girarde, Academic Press, New York, 1969.
- 6. Clinical Toxicology of Commercial Products M.N. Gleason, et al., 4th edition, Williams and Wilkins, Baltimore, Maryland, 1981.
- 7. Handbook of Toxicology: Acute Toxicities of Solids, Liquids and Gases to Laboratory Animals W.S. Spector, Saunders, Philadelphia, Pa., 1956.
- 8. Occupational Diseases: A Guide to their Recognition U.S. Department of Health, Education, and Welfare. Public Health Service Publication No. 1097. Superintendent of Documents, Washington, D.C., 1964.

- 9. First Aid Textbook American National Red Cross, Washington, D.C., 1972.
- 10. Electrical Safety Practice: Odor Warning for Safety Monograph 113 Instrument Society of America (ISA), Pittsburgh, Pa., 1972.
- 11. Toxic Substances Annual List 1971 H.E. Christensen, U.S. Department of Health, Education, and Welfare, Superintendent of Documents, Washington, D.C., 1971.
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