

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	Flammable material; avoid heat and sources of ignition. CARCINOGEN. MINIMIZE EXPOSURE. POSSIBLE MUTAGEN. MINIMIZE EXPOSURE. Irritating to skin, eyes, and the respiratory system. Hygroscopic -- keep container tightly sealed.	

Section I. Chemical Product and Company Identification

Chemical Name	Phenolphthalein (0.04% in Ethanol)[for pH Determination]		
Catalog Number	P0702	Supplier	TCI America 9211 N. Harbortgate St. Portland OR 1-800-423-8616
Synonym	Not available.		
Chemical Formula	C ₂₀ H ₁₄ O ₄		
CAS Number	77-09-8 64-17-5 (Ethanol)	In case of Emergency Call	Chemtrec® (800) 424-9300 (U.S.) (703) 527-3887 (International)

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
Phenolphthalein (0.04% in Ethanol)[for pH Determination]	77-09-8 64-17-5 (Ethanol)	0.04% 99.96% (Ethanol)	This chemical is classified as a carcinogen. There is no acceptable exposure limit for a carcinogen. This compound is classified as a possible mutagen. There is no acceptable exposure limit for a mutagen.	(Ethanol) Rat LD ₅₀ (oral) 7060 mg/kg Mouse LD ₅₀ (oral) 3450 mg/kg Rat LD ₅₀ (inhalation) 20000 ppm/10H

Section III. Hazards Identification

Acute Health Effects	Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
Chronic Health Effects	CARCINOGENIC EFFECTS : Carcinogenic by RTECS criteria MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Tumorigenic Effects Rat TDLo (Oral) 364 gm/kg/2 years continuous Toxic Effects: Tumorigenic - Carcinogenic by RTECS criteria Kidney, Ureter, and Bladder - Tumors Endocrine - Adrenal cortex tumors Mouse TDLo (Oral) 288400 mg/kg/103 weeks continuous Toxic Effects: Tumorigenic - Carcinogenic by RTECS criteria Blood - Lymphomas including Hodgkin's disease Mouse TDLo (Oral) 281 gm/kg/2 years continuous Toxic Effects: Tumorigenic - Carcinogenic by RTECS criteria Endocrine - Tumors Skin and Appendages - Tumors (Ethanol) Mouse TDLo (Oral) 320 mg/kg/50 weeks intermittent Toxic Effects: Tumorigenic - Equivocal tumorigenic agent by RTECS criteria Liver - Tumors Blood - Lymphomas including Hodgkin's disease Mouse TDLo (Rectal) 120 mg/kg/18 weeks intermittent Toxic Effects: Tumorigenic - Equivocal tumorigenic agent by RTECS criteria Gastrointestinal - Tumors Liver - Tumors DEVELOPMENTAL TOXICITY: Reproductive Effects Mouse TDLo (Oral) 29.4 mg/kg; male 7 days prior to mating and 21 days prior to pregnancy. Toxic Effects: Maternal Effects - Parturition Effects on Fertility - Other measures of fertility Mouse TDLo (Oral) 840 mg/kg; female multigenerations Toxic Effects: Effects on Newborn - Live birth index Mouse TDLo (Oral) 840 mg/kg; female multigenerations Toxic Effects: Specific Developmental Abnormalities - Urogenital system (Ethanol)

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Emergency phone number (800) 424-9300

(0.04% in Ethanol)[for pH Determination]

Rat TDLo (Intraperitoneal) 600 mg/kg; female 8-15 days of pregnancy
 Toxic Effects:
 Effects on Fertility - Post-implantation mortality
 Effects on Embryo or Fetus - Extra embryonic structures
 Effects on Embryo or Fetus - Fetotoxicity
 Rat TDLo (Oral) 135 mg/kg; female 1 day of pregnancy and 7 days after birth
 Toxic Effects:
 Effects on Newborn - Behavioral
 Effects on Newborn - Physical
 Rat TDLo (Oral) 147 mg/kg; female 1-21 days of pregnancy
 Toxic Effects:
 Specific Developmental Abnormalities - Endocrine system
 Effects on Newborn - Delayed effects
 Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Section IV. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Inhalation	If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.
Ingestion	INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.

Section V. Fire and Explosion Data

Flammability	Flammable.	Auto-Ignition	363 °C (685.4 °F) (Ethanol)
Flash Points	14 °C (57.2 °F). (Ethanol)	Flammable Limits	LOWER: 3.3% UPPER: 19% (Ethanol)
Combustion Products	These products are toxic carbon oxides (CO, CO ₂).		
Fire Hazards	Not available.		
Explosion Hazards	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.		
Fire Fighting Media and Instructions	Flammable liquid. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Consult with local fire authorities before attempting large scale fire-fighting operations.		

Section VI. Accidental Release Measures

Spill Cleanup Instructions	Flammable material. Carcinogenic material. Possibly mutagenic material. Irritating material. Hygroscopic material. Keep away from heat. Mechanical exhaust required. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. DO NOT touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Consult federal, state, and/or local authorities for assistance on disposal.
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Section VII. Handling and Storage

Handling and Storage Information	FLAMMABLE. CARCINOGEN. POSSIBLE MUTAGEN. IRRITANT. HYGROSCOPIC. Keep away from heat. Mechanical exhaust required. Avoid excessive heat and light. Do not breathe gas/fumes/ vapor/spray. Always store away from incompatible compounds such as oxidizing agents, reducing agents, alkalis (bases).
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Section VIII. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash station and safety shower is proximal to the work-station location.
Personal Protection	Splash goggles. Lab coat. Vapor respirator. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. Be sure to use a MSHA/NIOSH approved respirator or equivalent.
Exposure Limits	This chemical is classified as a carcinogen. There is no acceptable exposure limit for a carcinogen. This compound is classified as a possible mutagen. There is no acceptable exposure limit for a mutagen.

**Section IX. Physical and Chemical Properties**

Physical state @ 20°C	Liquid. (Clear. Colorless.)	Solubility	Not available.
Specific Gravity	1.299 (water=1) 0.79 (Ethanol)		
Molecular Weight	318.32 46.07 (Ethanol)	Partition Coefficient	LOG P _{ow} : -0.32 (Ethanol)
Boiling Point	78 to 80 °C (172.4 to 176 °F) (Ethanol)	Vapor Pressure	5.8 kPa (@ 20 °C) (Ethanol)

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(0.04% in Ethanol)[for pH Determination]

Melting Point	258 to 262°C (496.4 to 503.6°F)	Vapor Density	1.6 (Air = 1) (Ethanol)
Refractive Index	Not available.	Volatility	Not available.
Critical Temperature	Not available.	Odor	Not available.
Viscosity	Not available.	Taste	Not available.

Section X. Stability and Reactivity Data

Stability	This material is stable if stored under proper conditions. (See Section VII for instructions)
Conditions of Instability	Avoid excessive heat and light.
Incompatibilities	Reactive with strong oxidizing agents, reducing agents, strong alkalis (bases), acid chlorides, acid anhydrides. (Ethanol) Reactive with peroxides, ammonia, alkali metals.

Section XI. Toxicological Information

RTECS Number	SM8380000 KQ6300000 (Ethanol)
Routes of Exposure	Eye Contact. Ingestion. Inhalation.
Toxicity Data	(Ethanol) Rat LD ₅₀ (oral) 7060 mg/kg Mouse LD ₅₀ (oral) 3450 mg/kg Rat LD ₅₀ (inhalation) 20000 ppm/10H
Chronic Toxic Effects	CARCINOGENIC EFFECTS : Carcinogenic by RTECS criteria MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Tumorigenic Effects Rat TDLo (Oral) 364 gm/kg/2 years continuous Toxic Effects: Tumorigenic - Carcinogenic by RTECS criteria Kidney, Ureter, and Bladder - Tumors Endocrine - Adrenal cortex tumors Mouse TDLo (Oral) 288400 mg/kg/103 weeks continuous Toxic Effects: Tumorigenic - Carcinogenic by RTECS criteria Blood - Lymphomas including Hodgkin's disease Mouse TDLo (Oral) 281 gm/kg/2 years continuous Toxic Effects: Tumorigenic - Carcinogenic by RTECS criteria Endocrine - Tumors Skin and Appendages - Tumors (Ethanol) Mouse TDLo (Oral) 320 mg/kg/50 weeks intermittent Toxic Effects: Tumorigenic - Equivocal tumorigenic agent by RTECS criteria Liver - Tumors Blood - Lymphomas including Hodgkin's disease Mouse TDLo (Rectal) 120 mg/kg/18 weeks intermittent Toxic Effects: Tumorigenic - Equivocal tumorigenic agent by RTECS criteria Gastrointestinal - Tumors Liver - Tumors DEVELOPMENTAL TOXICITY: Reproductive Effects Mouse TDLo (Oral) 29.4 mg/kg; male 7 days prior to mating and 21 days prior to pregnancy. Toxic Effects: Maternal Effects - Parturition Effects on Fertility - Other measures of fertility Mouse TDLo (Oral) 840 mg/kg; female multigenerations Toxic Effects: Effects on Newborn - Live birth index Mouse TDLo (Oral) 840 mg/kg; female multigenerations Toxic Effects: Specific Developmental Abnormalities - Urogenital system (Ethanol) Rat TDLo (Intraperitoneal) 600 mg/kg; female 8-15 days of pregnancy Toxic Effects: Effects on Fertility - Post-implantation mortality Effects on Embryo or Fetus - Extra embryonic structures Effects on Embryo or Fetus - Fetotoxicity Rat TDLo (Oral) 135 mg/kg; female 1 day of pregnancy and 7 days after birth Toxic Effects: Effects on Newborn - Behavioral Effects on Newborn - Physical Rat TDLo (Oral) 147 mg/kg; female 1-21 days of pregnancy Toxic Effects: Specific Developmental Abnormalities - Endocrine system Effects on Newborn - Delayed effects Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

(0.04% in Ethanol)[for pH Determination]

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Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	Not available.

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.
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Section XIV. Transport Information

DOT Classification	DOT CLASS 3: Flammable liquid
PIN Number	UN1170
Proper Shipping Name	Ethanol solution
Packing Group (PG)	III
DOT Pictograms	

Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This compound is ON the EPA Toxic Substances Control Act (TSCA) inventory list.
WHMIS Classification (Canada)	CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). On DSL.
EINECS Number (EEC)	201-004-7 200-578-6 (Ethanol)
EEC Risk Statements	R10- Flammable. R18- In use, may form flammable/explosive vapor-air mixture. R45- May cause cancer. R36/37/38- Irritating to eyes, respiratory system and skin.
Japanese Regulatory Data	ENCS no.: 9-1152 2-202 (Ethanol)

Section XVI. Other Information

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Notice to Reader

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.