

# Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	<p><b>Combustible material; avoid heat and sources of ignition.</b>  <b>Harmful compound, minimize exposure.</b>  <b>Irritating to skin, eyes, and the respiratory system.</b>  <b>Environmental hazard.</b>  <b>This material is harmful to aquatic organisms and may cause long term adverse effects to the aquatic environment.</b></p>	

## Section I. Chemical Product and Company Identification

Chemical Name	<b>2-Ethyl-1-hexanol</b>		
Catalog Number	E0122	Supplier	TCI America 9211 N. Harborgate St. Portland OR 1-800-423-8616
Synonym	2-Ethylhexyl Alcohol; Octanol; Octyl Alcohol		
Chemical Formula	C <sub>8</sub> H <sub>18</sub> O		
CAS Number	104-76-7	In case of Emergency Call	<b>Chemtrec®</b> <b>(800) 424-9300 (U.S.)</b> <b>(703) 527-3887 (International)</b>

## Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
2-Ethyl-1-hexanol	104-76-7	Min. 99.0 (GC)	Not available.	Rat LD <sub>50</sub> (oral) 3730 mg/kg Rabbit LD <sub>50</sub> (dermal) 1970 mg/kg Rat LD <sub>50</sub> (intraperitoneal) 500 mg/kg

## Section III. Hazards Identification

Acute Health Effects	<p>Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. 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.</p> <p>Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.</p>
Chronic Health Effects	<p><b>CARCINOGENIC EFFECTS</b> : Not available.  <b>MUTAGENIC EFFECTS</b> : Not available.  <b>TERATOGENIC EFFECTS</b> : Not available.  <b>DEVELOPMENTAL TOXICITY</b>: Reproductive Effects.                      Rat TDLo Oral 1628 mg/kg, female 12 days of pregnancy  <b>TOXIC EFFECTS</b>:                      Specific Developmental Abnormalities - Musculoskeletal system                      Specific Developmental Abnormalities - Urogenital system                      Mouse TDLo Oral 12 gm/kg, female 7-14 days of pregnancy  <b>TOXIC EFFECTS</b>:                      Effects on Newborn - Live birth index                      Effects on Newborn - Viability index                      Effects on Newborn - Growth statistics                      Mouse TDLo Oral 12200 mg/kg, female 6-13 days of pregnancy  <b>TOXIC EFFECTS</b>:                      Effects on Fertility - Litter size                      Effects on Newborn - Live birth index                      Effects on Newborn - Growth statistics                      Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.</p>

## 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	Combustible.	Auto-Ignition	288 °C (550.4 °F)
Flash Points	78 °C (172.4 °F)	Flammable Limits	LOWER: 0.9% UPPER: 9.7%
Combustion Products	These products are toxic carbon oxides (CO, CO <sub>2</sub> ).		
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	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet. Consult with local fire authorities before attempting large scale fire-fighting operations.		

**Section VI. Accidental Release Measures**

Spill Cleanup Instructions	Combustible material. Harmful material. Irritating material. Environmentally hazardous material. Keep away from heat. Mechanical exhaust required. Stop leak if without risk. Consult federal, state, and/or local authorities for assistance on disposal.
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**Section VII. Handling and Storage**

Handling and Storage Information	COMBUSTIBLE. HARMFUL. IRRITANT. ENVIRONMENTAL HAZARD. 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, acids.
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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	Not available.

**Section IX. Physical and Chemical Properties**

Physical state @ 20°C	Liquid. (Clear, colorless.)	Solubility	Soluble in alcohol, ether. Very slightly soluble in water.
Specific Gravity	0.83 (water=1)		
Molecular Weight	130.23	Partition Coefficient	Not available.
Boiling Point	187 °C (368.6 °F)	Vapor Pressure	48 Pa (@ 20 °C)
Melting Point	-76 °C (-104.8 °F)	Vapor Density	4.5 (Air = 1)
Refractive Index	1.43	Volatility	Not available.
Critical Temperature	Not available.	Odor	Characteristic.
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 oxidizing agents, acids.

**Section XI. Toxicological Information**

RTECS Number	MP0350000
Routes of Exposure	Eye Contact. Ingestion. Inhalation.
Toxicity Data	Rat LD <sub>50</sub> (oral) 3730 mg/kg Rabbit LD <sub>50</sub> (dermal) 1970 mg/kg Rat LD <sub>50</sub> (intraperitoneal) 500 mg/kg

Chronic Toxic Effects	<p><b>CARCINOGENIC EFFECTS</b> : Not available.  <b>MUTAGENIC EFFECTS</b> : Not available.  <b>TERATOGENIC EFFECTS</b> : Not available.  <b>DEVELOPMENTAL TOXICITY</b>: Reproductive Effects.  Rat TDLo Oral 1628 mg/kg, female 12 days of pregnancy  <b>TOXIC EFFECTS</b>:  Specific Developmental Abnormalities - Musculoskeletal system  Specific Developmental Abnormalities - Urogenital system  Mouse TDLo Oral 12 gm/kg, female 7-14 days of pregnancy  <b>TOXIC EFFECTS</b>:  Effects on Newborn - Live birth index  Effects on Newborn - Viability index  Effects on Newborn - Growth statistics  Mouse TDLo Oral 12200 mg/kg, female 6-13 days of pregnancy  <b>TOXIC EFFECTS</b>:  Effects on Fertility - Litter size  Effects on Newborn - Live birth index  Effects on Newborn - Growth statistics  Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.</p>
Acute Toxic Effects	<p>Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. 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.</p>

### Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	<p>2-Ethylhexanol may be released to the environment as emission or in wastewater as a result of its manufacture, transport, storage, disposal and use as a chemical intermediate in the manufacture of plasticizers and other chemicals. It is also a plant volatile and may be released naturally into air. If released in soil, it would be expected to leach and readily biodegrade after some acclimation. Some volatilization may occur from both moist and dry soil. If released in water, 2-ethylhexanol will volatilize; the estimated half-life in a model river is 1.7 days. It is readily biodegradable in screening tests and one river die-away test and should biodegrade. Adsorption to sediment and bioconcentration in fish is not expected to be important. In the atmosphere, 2-ethylhexanol will occur as a vapor and react with photochemically produced hydroxyl radicals. Its estimated half-life in the atmosphere is 1.2 days. Since it is moderately water soluble, it may also be washed out of the atmosphere by rain. Occupational exposure to 2-ethylhexanol may occur via inhalation and dermal contact. The general population may be exposed to 2-ethylhexanol by ingesting some fruits, in which it occurs naturally, and drinking water and also from indoor air.</p>

### Section XIII. Disposal Considerations

Waste Disposal	<p>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.</p>
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### Section XIV. Transport Information

DOT Classification	Not a DOT controlled material (United States).
PIN Number	Not available.
Proper Shipping Name	Not available.
Packing Group (PG)	Not available.
DOT Pictograms	

### Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This compound is <b>ON</b> the EPA Toxic Substances Control Act (TSCA) inventory list.
WHMIS Classification (Canada)	CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). On DSL.
EINECS Number (EEC)	203-234-3
EEC Risk Statements	R20/21/22- Harmful by inhalation, in contact with skin and if swallowed. R36/37/38- Irritating to eyes, respiratory system and skin. R52- Harmful to aquatic organisms. R53- May cause long-term adverse effects in the aquatic environment.
Japanese Regulatory Data	ENCS No. 2-217

**Section XVI. Other Information**

**Version 1.0**  
**Validated on 8/9/2010.**  
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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, household, 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.

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