

# Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	<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>This compound is a skin sensitizer.</b>	

## Section I. Chemical Product and Company Identification

Chemical Name	<b>1-Octanol</b> [for Determining Partition Coefficients]		
Catalog Number	O0212	Supplier	TCI America 9211 N. Harborgate St. Portland OR 1-800-423-8616
Synonym	n-Capryl Alcohol		
Chemical Formula	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>7</sub> OH		
CAS Number	111-87-5	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
1-Octanol <small>(for Determining Partition Coefficients)</small>	111-87-5	Min. 99.5 (GC)	Not available.	Mouse LD <sub>50</sub> (oral) 1790 mg/kg Mouse LD <sub>50</sub> (intravenous) 69 mg/kg Rat LD <sub>50</sub> (inhalation) 5600 mg/m <sup>3</sup> 74H

## Section III. Hazards Identification

Acute Health Effects	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. Skin contact may result in sensitization. Always cover all exposed skin with an impermeable layer and use proper eye protection. A OSHA/MSHA approved dust and vapor respirator is required when working with this material. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
Chronic Health Effects	<b>CARCINOGENIC EFFECTS</b> : Not available. <b>MUTAGENIC EFFECTS</b> : Not available. <b>TERATOGENIC EFFECTS</b> : Not available. <b>DEVELOPMENTAL TOXICITY</b> Not available. There is no known effect from chronic exposure to this product. 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. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Flush eyes with running water for a minimum of 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention. Treat symptomatically and supportively.
Skin Contact	After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used. Cover the irritated skin with an emollient. Seek medical attention. Treat symptomatically and supportively. Wash any contaminated clothing before reusing.
Inhalation	If the victim is not breathing, perform artificial respiration. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention. Treat symptomatically and supportively.
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, administer artificial respiration. 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. Seek immediate medical attention and, if possible, show the chemical label. Treat symptomatically and supportively.

## Section V. Fire and Explosion Data

Flammability	Combustible.	Auto-Ignition	272°C (521.6°F)
Flash Points	81°C (177.8°F).	Flammable Limits	Not available.
Combustion Products	These products are toxic carbon oxides (CO, CO <sub>2</sub> ).		
Fire Hazards	Slightly flammable to flammable in presence of open flames and sparks, of shocks, of heat.		

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Emergency phone number (800) 424-9300

**[for Determining Partition Coefficients]**

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. No additional information is available regarding the risks of explosion.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemicals, CO <sub>2</sub> , water spray or foam. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.

**Section VI. Accidental Release Measures**

Spill Cleanup Instructions	Combustible material. Harmful material. Irritating material. Keep away from heat and sources of ignition. Mechanical exhaust required. Stop leak if without risk. Finish cleaning the spill by rinsing any contaminated surfaces with copious amounts of water. 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. SKIN SENSITIZER. Keep away from heat and sources of ignition. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. DO NOT ingest. Do not breathe gas, fumes, vapor or spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Treat symptomatically and supportively. Avoid contact with skin and eyes. 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. A MSHA/NIOSH approved respirator must be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	Not available.

**Section IX. Physical and Chemical Properties**

Physical state @ 20°C	Viscous, colorless liquid.	Solubility	Soluble in water. Soluble in all proportions in alcohol, ether, chloroform. Miscible with mineral oil.
Specific Gravity	0.827	Partition Coefficient	Not available.
Molecular Weight	130.23	Vapor Pressure	0.14 mm of Hg (@ 25°C)
Boiling Point	196°C (384.8°F)	Vapor Density	4.5 (Air = 1)
Melting Point	-15°C (5°F)	Volatility	Not available.
Refractive Index	1.430	Odor	Not available.
Critical Temperature	Not available.	Taste	Not available.
Viscosity	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, acid chlorides.

**Section XI. Toxicological Information**

RTECS Number	RH6550000
Routes of Exposure	Eye contact. Inhalation. Ingestion. Skin contact.
Toxicity Data	Mouse LD <sub>50</sub> (oral) 1790 mg/kg Mouse LD <sub>50</sub> (intravenous) 69 mg/kg Rat LD <sub>50</sub> (inhalation) 5600 mg/m <sup>3</sup> /4H
Chronic Toxic Effects	<b>CARCINOGENIC EFFECTS</b> : Not available. <b>MUTAGENIC EFFECTS</b> : Not available. <b>TERATOGENIC EFFECTS</b> : Not available. <b>DEVELOPMENTAL TOXICITY</b> : Not available. There is no known effect from chronic exposure to this product. Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

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Emergency phone number (800) 424-9300

**[for Determining Partition Coefficients]**

Acute Toxic Effects	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. Skin contact may result in sensitization. Always cover all exposed skin with an impermeable layer and use proper eye protection. A OSHA/MSHA approved dust and vapor respirator is required when working with this material. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
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**Section XII. Ecological Information**

Ecotoxicity	Not available.
Environmental Fate	1-Octanol is released to the environment as a natural constituent of plants and microbes. It may also be released to the environment through effluents at sites where it is produced or used in perfumery, cosmetics, organic synthesis, solvent manufacture of high boiling esters, antifoaming agents and in food flavoring. Photolysis or hydrolysis of 1-octanol is not expected to be environmentally important. 1-Octanol should biodegrade rapidly in soil and water. Differing estimates of Koc indicate a wide range of adsorption characteristics for 1-octanol and the mobility class in soil may range from low to high; it may partition from the water column to organic matter in sediments and suspended solids. The potential for bioconcentration of 1-octanol in aquatic organisms is low. The volatilization half-lives from a model river and a model pond, the latter considers the effect of adsorption, have been estimated to be about 1.8 and 82 days, respectively. 1-Octanol is expected to exist entirely in the vapor phase in ambient air. Vapor-phase reactions with photochemically produced hydroxyl radicals in the atmosphere may be important (estimated half-life of 1.3 days). Physical removal from air via precipitation has been shown to occur. The most probable human exposure to 1-octanol would be occupational exposure, which may occur through dermal contact or inhalation at places where it is produced or used. Common non-occupational exposures would include the ingestion of foods containing it. (HSDB)

**Section XIII. Disposal Considerations**

Waste Disposal	Recycle to process, if possible. Consult your local or 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 this substance.
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**Section XIV. Transport Information**

DOT Classification	Not a DOT controlled material (United States).
PIN Number	Not applicable.
Proper Shipping Name	Not applicable.
Packing Group (PG)	Not applicable.
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)	WHMIS CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). WHMIS CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
EINECS Number (EEC)	203-917-6
EEC Risk Statements	R43- May cause sensitization by skin contact. R36/37/38- Irritating to eyes, respiratory system and skin. R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.
Japanese Regulatory Data	Not available.

**Section XVI. Other Information**

**Version 1.0**  
**Validated on 10/1/1997.**  
**Printed 2/24/2005.**

**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.