



# Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	Combustible material; avoid heat and sources of ignition. Harmful compound, minimize exposure. Irritating to skin, eyes, and the respiratory system.	

## Section I. Chemical Product and Company Identification

Chemical Name	<b>1-Octanol</b>		
Catalog Number	O0036	Supplier	TCI America 9211 N. Harbortgate St. Portland OR 1-800-423-8616
Synonym	n-Octyl 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	111-87-5	Min. 98.0 (GC)	Not available.	Rat LD <sub>50</sub> (oral) >3200 mg/kg Mouse LD <sub>50</sub> (oral) 1790 mg/kg Guinea Pig LD <sub>50</sub> (dermal) >1 gm/kg Mouse LD <sub>50</sub> (intravenous) 69 mg/kg

## 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. 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. 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	Combustible.	Auto-Ignition	253°C (487.4°F)
Flash Points	83°C (181.4°F).	Flammable Limits	LOWER: 0.2% UPPER: 30%
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			

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Emergency phone number (800) 424-9300

Combustible liquid.  
 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. Keep away from heat. 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.

## Section VII. Handling and Storage

Handling and Storage Information: COMBUSTIBLE. HARMFUL. IRRITANT. 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.

## 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	Miscible with alcohol, chloroform, ether. Insoluble in water.
Specific Gravity	0.83 (water=1)		
Molecular Weight	130.23	Partition Coefficient	Log K <sub>ow</sub> : 2.8 - 3.150
Boiling Point	194 °C (381.2 °F)	Vapor Pressure	20 Pa (@ 8.7 °C)
Melting Point	-16 °C (3.2 °F)	Vapor Density	4.5 (Air = 1)
Refractive Index	1.428 - 1.431	Volatility	Not available.
Critical Temperature	Not available.	Odor	Aromatic.
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, acid chlorides.

## Section XI. Toxicological Information

RTECS Number	RH6550000
Routes of Exposure	Eye Contact. Ingestion. Inhalation.
Toxicity Data	Rat LD <sub>50</sub> (oral) >3200 mg/kg Mouse LD <sub>50</sub> (oral) 1790 mg/kg Guinea Pig LD <sub>50</sub> (dermal) >1 gm/kg Mouse LD <sub>50</sub> (intravenous) 69 mg/kg
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. Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.
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. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

**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.

**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.

**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 **ON** 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) 203-917-6

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.

Japanese Regulatory Data ENCS No. 2-217

**Section XVI. Other Information**

**Version 1.0**  
**Validated on 6/1/2007.**  
**Printed 6/1/2007.**

**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.