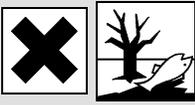


# Material Safety Data Sheet

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>Photosensitizer.</b> <b>This material is toxic to aquatic organisms and may cause long term adverse effects to the aquatic environment.</b>	

## Section I. Chemical Product and Company Identification

Chemical Name	<b>1-Methylnaphthalene (alpha-)</b>		
Catalog Number	M0371	Supplier	TCl America 9211 N. Harborgate St. Portland OR 1-800-423-8616
Synonym	Not available.		
Chemical Formula	CH <sub>3</sub> C <sub>10</sub> H <sub>7</sub>		
CAS Number	90-12-0	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-Methylnaphthalene (alpha-)	90-12-0	Min. 96.0 (GC)	Not available.	Rat LD <sub>50</sub> (oral) 1840 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. Causes photosensitivity. Exposure to light can result in allergic reactions resulting in dermatologic lesions, which can vary from sunburnlike responses to edematous, vesiculated lesions or bullae. 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. 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	529°C (984.2°F)
Flash Points	82°C (179.6°F).	Flammable Limits	Not available.
Combustion Products	These products are toxic carbon oxides (CO, CO <sub>2</sub> ).		
Fire Hazards	No specific information is available regarding the flammability of this compound in the presence of various materials.		

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Emergency phone number (800) 424-9300

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. 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. Photosensitizing material. Environmental hazard. Keep away from heat and sources of ignition. Mechanical exhaust required. Stop leak if without risk. 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	COMBUSTIBLE. HARMFUL. IRRITANT. PHOTSENSITIZER. ENVIRONMENTAL HAZARD. 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.
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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	Colorless to pale-yellow liquid.	Solubility	Soluble in methanol, diethyl ether. Very slightly soluble in cold water, hot water (25.8 ppm).
Specific Gravity	1.001 (water=1)		
Molecular Weight	142.2	Partition Coefficient	Not available.
Boiling Point	240 to 243°C (464 to 469.4°F)	Vapor Pressure	0.0054 mm of Hg (@ 25°C)
Melting Point	-22°C (-7.6°F)	Vapor Density	Not available.
Refractive Index	1.6170	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 oxidizing agents.

### Section XI. Toxicological Information

RTECS Number	QJ9630000
Routes of Exposure	Ingestion. Inhalation. Eye contact. Skin contact.
Toxicity Data	Rat LD <sub>50</sub> (oral) 1840 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. 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.

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. Causes photosensitivity. Exposure to light can result in allergic reactions resulting in dermatologic lesions, which can vary from sunburnlike responses to edematous, vesiculated lesions or bullae. 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-Methylnaphthalene is a component of crude oil and a product of combustion which is produced and released to the environment during natural fires. Emissions from petroleum refining, coal tar distillation, and gasoline and diesel fueled engines are major contributors of 1-methylnaphthalene to the environment. 1-Methylnaphthalene is also used as a chemical intermediate and a general solvent. Consequently, 1-methylnaphthalene is released to the environment via manufacturing effluents and the disposal of waste byproducts. Because of the widespread use of 1-methylnaphthalene in a variety of products, 1-methylnaphthalene is also released to the environment through landfills, municipal waste water treatment facilities and waste incinerators. 1-Methylnaphthalene should biodegrade rapidly in the environment where micro-organisms have acclimated to PAHs and at a moderate rate in unacclimated soils and aquatic systems. Hydrolysis and bioconcentration of 1-methylnaphthalene should not be important fate processes in the environment. The direct photolysis half-life for 1-methylnaphthalene in sunlit waters at midday, midsummer and 40 deg N latitude was predicted to be 22 hr. Photolysis is also likely to occur in air and on sunlit soil surfaces. A calculated Koc range of 730 to 3035 indicates a low to slight mobility class for 1-methylnaphthalene in soil. In aquatic systems, 1-methylnaphthalene may partition from the water column to organic matter contained in sediments and suspended solids. A Henry's Law constant of 2.60X10 <sup>-4</sup> atm-cu m/mole at 25 deg C suggests volatilization of 1-methylnaphthalene from environmental waters may be important. The volatilization half-lives from a model river and a model pond, the latter considers the effect of adsorption, have been estimated to be 7.5 hr and 11.8 days, respectively. 1-Methylnaphthalene is expected to exist entirely in the vapor phase in ambient air. Reactions with photochemically produced hydroxyl radicals (half-life of 7.3 hr) and ozone (half-life of 88.2 days) in the atmosphere are likely to be important fate processes. Nighttime reactions with dinitrogen pentoxide (half-life of 12.2 days) may contribute to the atmospheric transformation of 1-methylnaphthalene. The most probable human exposure would be occupational exposure, which may occur through dermal contact or inhalation at places where 1-methylnaphthalene is produced or used. Atmospheric workplace exposures have been documented. Non-occupational exposures would most likely occur via urban atmospheres, contaminated drinking water supplies and recreational activities at contaminated waterways. (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	CLASS 9: Miscellaneous hazardous material.
PIN Number	UN3082
Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s.
Packing Group (PG)	III
DOT Pictograms	

## Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This product is <b>ON</b> the EPA Toxic Substances Control Act (TSCA) inventory.
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-2B: Material causing other toxic effects (TOXIC).
EINECS Number (EEC)	201-966-8
EEC Risk Statements	R22- Harmful if ingested. R41- Risk of serious damage to eyes. R36/37/38- Irritating to eyes, respiratory system and skin. R51- Toxic to aquatic organisms. R53- May cause long-term adverse effects in the aquatic environment.
Japanese Regulatory Data	Not available.

**Section XVI. Other Information****Version 1.0****Validated on 10/20/1997.****Printed 3/1/2005.****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.

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