

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
    	<p>Flammable material; avoid heat and sources of ignition. Environmental hazard. This material is toxic to aquatic organisms and may cause long term adverse effects to the aquatic environment. Toxic compound, do not ingest or inhale. Avoid all contact with this material. Irritating to skin, eyes, and the respiratory system. CARCINOGEN. MINIMIZE EXPOSURE. Refrigerate.</p>	   

Section I. Chemical Product and Company Identification

Chemical Name	Trimethylsilyldiazomethane (ca. 10% in Hexane, ca. 0.60mol/L)		
Catalog Number	T1146	Supplier	TCI America 9211 N. Harborage St. Portland OR 1-800-423-8616
Synonym	TMS-Diazomethane		
Chemical Formula	C ₄ H ₁₀ N ₂ Si		
CAS Number	18107-18-1 110-54-3 (Hexane)	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
Trimethylsilyldiazomethane <small>(ca. 10% in Hexane, ca. 0.60mol/L)</small>	18107-18-1 110-54-3 (Hexane)	ca. 10% ca. 90% (Hexane)	This chemical is classified as a carcinogen. There is no acceptable exposure limit for a carcinogen.	(Hexane) Rat LD ₅₀ (oral) 25 gm/kg Rat LD ₅₀ (inhalation) 48000 ppm/4H Rat LD ₅₀ (inhalation) 627000 mg/m ³ /3M

Section III. Hazards Identification

Acute Health Effects	<p>Toxic if ingested or inhaled. Avoid prolonged contact with this material. Overexposure may result in serious illness 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>CARCINOGENIC EFFECTS : Carcinogenic by RTECS criteria. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Tumorigenic Effects. (Hexane) Rat TClO Inhalation 1000 ppm/4 hours/59 weeks intermittent TOXIC Effects: Tumorigenic - Carcinogenic by RTECS criteria Tumorigenic Effects - Testicular tumors Mouse TClO Inhalation 9018 ppm/6 hours/2 years intermittent TOXIC Effects: Tumorigenic - Neoplastic by RTECS criteria Liver - Tumors DEVELOPMENTAL TOXICITY: Reproductive Effects. (Hexane) Rat TClO Inhalation 5000 ppm, female 6-19 days of pregnancy TOXIC Effects: Specific Developmental Abnormalities - Musculoskeletal system Specific Developmental Abnormalities - Urogenital system Rat TClO Inhalation 5000 ppm/20 hours, female 6-9 days of pregnancy TOXIC Effect: Effects on Embryo or Fetus - Fetotoxicity Mouse TClO Inhalation 200 ppm, female 6-17 days of pregnancy TOXIC Effects: Effects on Fertility - Post-implantation mortality</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.

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Emergency phone number (800) 424-9300

(ca. 10% in Hexane, ca. 0.60mol/L)

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	223 °C (433.4 °F) (Hexane)
Flash Points	-23 °C (-9.4 °F). (Hexane)	Flammable Limits	(Hexane) LOWER: 1.1% UPPER: 7.5 %
Combustion Products	These products are toxic carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂). Silicates.		
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. Environmentally hazardous material. Toxic material. Irritating material. Carcinogenic 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. ENVIRONMENTAL HAZARD. TOXIC. IRRITANT. CARCINOGEN. REFRIGERATE. 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.
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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.

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Liquid. (Yellow clear.)	Solubility	Not available.
Specific Gravity	0.66 (Hexane)		
Molecular Weight	114.22	Partition Coefficient	Not available.
Boiling Point	68 °C (154.4 °F) (Hexane)	Vapor Pressure	~132 mmHg (@ 20 °C) (Hexane)
Melting Point	-94 °C (-137.2 °F) (Freezing Point)(Hexane)	Vapor Density	2.97 (Air = 1) (Hexane)
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 oxidizing agents.

Section XI. Toxicological Information

RTECS Number	MN9275000 (Hexane)
Routes of Exposure	Eye Contact. Ingestion. Inhalation.
Toxicity Data	(Hexane) Rat LD ₅₀ (oral) 25 gm/kg Rat LD ₅₀ (inhalation) 48000 ppm/4H Rat LD ₅₀ (inhalation) 627000 mg/m ³ /3M
Chronic Toxic Effects	CARCINOGENIC EFFECTS : Carcinogenic by RTECS criteria. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Tumorigenic Effects. (Hexane) Rat TCl _o Inhalation 1000 ppm/4 hours/59 weeks intermittent TOXIC Effects: Tumorigenic - Carcinogenic by RTECS criteria Tumorigenic Effects - Testicular tumors Mouse TCl _o Inhalation 9018 ppm/6 hours/2 years intermittent TOXIC Effects: Tumorigenic - Neoplastic by RTECS criteria Liver - Tumors DEVELOPMENTAL TOXICITY : Reproductive Effects. (Hexane) Rat TCl _o Inhalation 5000 ppm, female 6-19 days of pregnancy TOXIC Effects: Specific Developmental Abnormalities - Musculoskeletal system Specific Developmental Abnormalities - Urogenital system Rat TCl _o Inhalation 5000 ppm/20 hours, female 6-9 days of pregnancy TOXIC Effect: Effects on Embryo or Fetus - Fetotoxicity Mouse TCl _o Inhalation 200 ppm, female 6-17 days of pregnancy TOXIC Effects: Effects on Fertility - Post-implantation mortality
Acute Toxic Effects	Toxic if ingested or inhaled. Avoid prolonged contact with this material. Overexposure may result in serious illness 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	(Hexane) n-Hexane's production and use as a pure or commercial grade solvent, as a raw material in the synthesis of polyolefins, elastomers and pharmaceuticals, in the formulation of glues, stains, varnishes and other industrial chemicals may result in its release to the environment through various waste streams. n-Hexane is also a component of natural gas and crude oil. The vast majority of n-hexane is released to the environment through the manufacture, use, and disposal of many products associated with the petroleum industry and the combustion of gasoline. If released to air, a vapor pressure of 153 mm Hg at 25 deg C indicates n-hexane will exist solely as a vapor in the ambient atmosphere. Vapor-phase n-hexane will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 3 days. If released to soil, n-hexane is expected to have high mobility based upon an estimated Koc of 150. Volatilization from moist soil surfaces is expected to be an important fate process based upon an estimated Henry's Law constant of 1.83 atm-cu m/mole. n-Hexane may volatilize from dry soil surfaces based upon its vapor pressure. Screening studies suggest that n-hexane will undergo biodegradation in soil and water surfaces, but volatilization is expected to be the predominant fate process in the environment. If released into water, n-hexane is not expected to adsorb to suspended solids and sediment based upon the estimated Koc. Volatilization from water surfaces is expected to be an important fate process based upon this compound's estimated Henry's Law constant. Estimated volatilization half-lives for a model river and model lake are 1 hour and 3 days, respectively. An estimated BCF of 200 suggests the potential for bioconcentration in aquatic organisms is high. Hydrolysis is not expected to be an important environmental fate process since this compound lacks functional groups that hydrolyze under environmental conditions. Occupational exposure to n-hexane may occur through inhalation and dermal contact with this compound at workplaces where n-hexane is produced or used. Monitoring data indicate that the general population may be exposed to n-hexane via inhalation of ambient air, particularly at urban areas with heavy vehicular traffic or gasoline filling stations.

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. DOT CLASS 6.1: Poisonous material.
PIN Number	UN1992
Proper Shipping Name	Flammable liquid, toxic, n.o.s.
Packing Group (PG)	II

(ca. 10% in Hexane, ca. 0.60mol/L)

DOT Pictograms

**Section XV. Other Regulatory Information and Pictograms**

TSCA Chemical Inventory (EPA)	This product is NOT on the EPA Toxic Substances Control Act (TSCA) inventory. The following notices are required by 40 CFR 720.36 (C) for those products not on the inventory list: (i) These products are supplied solely for use in research and development by or under the supervision of a technically qualified individual as defined in 40 CFR 720.0 et sec. (ii) The health risks of these products have not been fully determined. Any information that is or becomes available will be supplied on an MSDS sheet. (Hexane) 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). CLASS D-2B: Material causing other toxic effects (TOXIC). On DSL (Hexane)
EINECS Number (EEC)	203-777-6 (Hexane)
EEC Risk Statements	R10- Flammable. R18- In use, may form flammable/explosive vapor-air mixture. R20/21/22- Harmful by inhalation, in contact with skin and if swallowed. 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. R45- May cause cancer.
Japanese Regulatory Data	ENCS no. 2-6 (Hexane)

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.