TCI AMERICA

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	**Combustible material; avoid heat and sources of ignition.** **Irritating to skin, eyes, and the respiratory system.** **Air sensitive material.** **Store under inert gas.**	

Section I. Chemical Product and Company Identification

Chemical Name: **Myrcene**

Catalog Number: M0235

Synonym: 1,6-Octadiene, 7-methyl-3-methylene- (CA INDEX NAME);
7-methyl-3-methylene-1,6-octadiene

Chemical Formula: $C_{10}H_{16}$

CAS Number: 123-35-3

Supplier:
TCI America
9211 N. Harborgate St.
Portland OR
1-800-423-8616

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
Myrcene	123-35-3	Min. 70.0 (GC)	Not available.	Rat LD_{50} (oral) >5000 mg/kg Rabbit LD_{50} (dermal) >5000 mg/kg

Section III. Hazards Identification

Acute Health Effects

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

CARCINOGENIC EFFECTS : Not available.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY: 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: Not available.

Flash Points: 37℃ (98.6℉).

Flammable Limits: Not available.

Combustion Products: These products are toxic carbon oxides (CO, CO_2).

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:
Combustible liquid.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion. Consult with local fire authorities before attempting large scale fire-fighting operations.

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Section VI. Accidental Release Measures

Spill Cleanup Instructions

Combustible material. Irritating material. Air sensitive 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.

Section VII. Handling and Storage

Handling and Storage Information

COMBUSTIBLE. IRRITANT. AIR SENSTIVE. STORE UNDER INERT GAS. Keep away from heat. Mechanical exhaust required. Avoid excessive heat and light. Do not breathe gas/fumes/ vapor/spray.

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 ~ light yellow.)	Solubility	Soluble in alcohol, ether, benzene, glacial acetic acid, chloroform. Insoluble in water.
Specific Gravity	0.81(water=1)		
Molecular Weight	136.23	Partition Coefficient	Log P_{ow}: 4.17
Boiling Point	116°C (240.8°F)	Vapor Pressure	0.27 kPa (@ 25°C)
Melting Point	<-10°C (14°F)	Vapor Density	4.7 (Air = 1)
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 strong oxidizing agents.

Section XI. Toxicological Information

RTECS Number

RG5365000

Routes of Exposure

Eye Contact. Ingestion. Inhalation.

Toxicity Data

Rat LD_{50} (oral) >5000 mg/kg
Rabbit LD_{50} (dermal) >5000 mg/kg

Chronic Toxic Effects

CARCINOGENIC EFFECTS : Not available.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY: Not available.
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Acute Toxic Effects

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.
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Section XII. Ecological Information

Ecotoxicity

Not available.

Environmental Fate

Myrcene's production and use in detergents, perfumes, and flavorings may result in its release to the environment through various waste streams. Myrcene has been detected in water effluent and air emissions from pulp and timber mill processes. Myrcene has been detected as a natural gaseous emission from various plant species and in various fruits and vegetables. If released to air, a vapor pressure of 2.01 mm Hg at 25 deg C indicates myrcene will exist solely in the vapor-phase in the ambient atmosphere. Vapor-phase myrcene will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals, ozone radicals and nitrate; the half-lives for these reactions in air are estimated to be 1.79 hrs, 37 mins, and 1.1 hrs, respectively. If released to soil, myrcene is expected to have low mobility based upon an estimated Koc of 1300. Volatilization from moist soil surfaces is expected to be an important fate process based upon an estimated Henry's Law constant of 0.0643 atm-cu m/mole. Myrcene may potentially volatilize from dry soil surfaces based upon its vapor pressure. However, adsorption to soil is expected to attenuate volatilization. Biodegradation in soil may be an important fate process

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based upon considerable biodegradation in the Japanese MITI test. If released into water, myrcene is expected to adsorb to suspended solids and sediment in the water column based upon the estimated Koc. Myrcene, present at 100 mg/l, reached 82-92% of its theoretical BOD in 2 weeks using an activated sludge inoculum at 30 mg/l and the Japanese MITI test. 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 3.43 and 111 hrs, respectively. However, volatilization from water surfaces is expected to be attenuated by adsorption to suspended solids and sediment in the water column. An estimated BCF of 324 suggests the potential for bioconcentration in aquatic organisms is high. Hydrolysis is not expected to occur due to the lack of hydrolyzable functional groups. Occupational exposure to myrcene may occur through inhalation and dermal contact with this compound at workplaces where myrcene is produced or used. The general population may be exposed to myrcene via inhalation of ambient air, ingestion of food and drinking water and products containing myrcene.

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	DOT Class 3: Flammable liquid.
PIN Number	UN2319
Proper Shipping Name	Terpene hydrocarbons, n.o.s.
Packing Group (PG)	III
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)	204-622-5
EEC Risk Statements	R36/37/38- Irritating to eyes, respiratory system and skin.
Japanese Regulatory Data	ENCS No. 2-2358

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.