

Section 1. Product and Company Identification

**Product Name** Dimethylthiolenediamine  
**CAS Number** 106264-79-3

**Parchem - fine & specialty chemicals**

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EMERGENCY RESPONSE NUMBER  
CHEMTEL

Toll Free US & Canada: 1 (800) 255-3924

All other Origins: 1 (813) 248-0585

Collect Calls Accepted

Section 2. Hazards Identification

**Classification of the substance or mixture**

**OSHA Regulatory Status:** This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Acute Toxicity - Oral:** Category 4

**Skin Sensitization:** Category 1

**Acute aquatic toxicity:** Category 1

**Chronic aquatic toxicity:** Category 1

**GHS Label Elements**

**Pictograms:**



**Signal word:** WARNING

**Hazard and precautionary statements**

**Hazard Statements:** Harmful if swallowed, May cause an allergic skin reaction, very toxic to aquatic life with long lasting effects

**Prevention:** Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray.

Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. Avoid release to the environment

**Response:** Get medical advice/attention if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse IF INHALED: Move to fresh air. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell Rinse mouth. Collect spillage



**Disposal:** Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

**Other Information:** May be harmful in contact with skin

Section 3. Composition / Information on Ingredients

**Common Name** Dimethylthiitoluenediamine  
**Formula**  $C_9H_{14}N_2S_2$   
**CAS Number** 106264-79-3

COMPONENT	CAS NUMBER	CONCENTRATION
4-methyl-2,6-bis(methylthio)-1,3-benzenediamine	106264-79-3	80%
2-methyl-4,6-bis(methylthio)-1,3-benzenediamine	104983-85-9	20%

Section 4. First Aid Measures

**First aid measures**

**Eye contact:** In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice

**Skin Contact:** After contact with skin, wash immediately with plenty of water. Wash clothing before reuse.

**Inhalation:** Move to fresh air.

**Ingestion:** If swallowed, seek medical advice immediately and show this container or label. Rinse mouth with water.

**Most important symptoms and effects both acute and delayed**

**Symptoms:** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician:** Treat symptomatically.

Section 5. Firefighting Measures

**Extinguishing media**

**Suitable extinguishing media:** Carbon dioxide, dry chemicals, foam, water spray (mist).

**Unsuitable Extinguishing Media:** No information available.

**Specific Hazards Arising from the Chemical**

**Combustion/explosion hazards:** In case of fire and/or explosion do not breathe fumes.

**Hazardous Combustion Products:** Oxides of carbon and nitrogen. Oxides of sulfur.



### Explosion Data

**Sensitivity to mechanical impact:** None.

**Sensitivity to static discharge:** None.

**Protective Equipment and Precautions for Firefighters:** Wear self-contained breathing apparatus for firefighting if necessary.

## Section 6. Accidental Release Measures

### Personal precautions, protective equipment, and emergency procedures

**Personal precautions:** Ventilate the area. Avoid contact with the skin and the eyes.

### Environmental Precautions

**Environmental precautions:** Contain any spill with dikes or absorbents to prevent migration and entry into sewers or streams. May require excavation of contaminated soil.

### Methods and material for containment and cleaning up

**Methods for Containment:** Prevent further leakage or spillage if safe to do so.

**Methods for Cleaning up:** Take up small spills with dry chemical absorbent. Large spills may be taken up with pump or vacuum and finished off with dry chemical absorbent.

## Section 7. Handling and Storage

### Precautions for safe handling

**Handling:** Mechanical ventilation is recommended. Local exhaust is needed at source of vapors.

### Conditions for safe storage including any incompatibilities

**Storage:** Keep under inert gas. Keep away from heat. Keep away from humidity.

**Incompatible Materials:** None known based on information supplied.

## Section 8. Exposure Controls / Personal Protection

### Control parameters

#### Exposure Guidelines

#### Appropriate engineering controls

**Engineering Controls:** Showers. Eyewash stations. Ventilation systems.

### Individual protection measures such as personal protective equipment

**Eye/face Protection:** Chemical goggles or face shield with safety glasses.

### Skin Protection

**DERMAL PROTECTION:** Dermal exposure is considered the primary route of exposure.

**BODY:** A protective apron or suit such as polyethylene tyvek or equivalent should be used to minimize exposure from splashes.

**Respiratory protection:** Approved supplied-air respirator when exposed to vapors from heated material.

**General Hygiene Considerations:** Handle in accordance with good industrial hygiene and safety practice.

Section 9. Physical and Chemical Properties

**Appearance:** Liquid

**Color:** Amber.

**Odor:** Amine.

**Odor Threshold:** No information available

**Molecular Weight:** 214.36

**pH:** Not available

**Melting point/freezing point:** No data available

**Boiling Point/Range:** Decomposes at 353°C

**Flash Point:** 176°C (PMCC)

**Evaporation Rate:** No information available

**Flammability (solid, gas):** No information available

**Flammability Limit in Air**

**Upper flammability limit:** No information available

**Lower flammability limit:** No information available

**Vapor Pressure:** 0.133 Pa 146°C

**Vapor Density:** No information available

**Relative density:** 1.2 (20°C)

**Solubility(ies)**

**Water Solubility:** < 1% (20°C)

**Solubility in other solvents:** No information available

**Partition coefficient:** 2.63 (20°C)

**Autoignition temperature:** No information available

**Decomposition temperature:** 353°C

**Viscosity, kinematic:** 0.00691 m<sup>2</sup>/s (20°C)

**Dynamic viscosity:** No information available

**Explosive Properties:** Not applicable

**Oxidizing Properties:** Not applicable

Section 10. Stability and Reactivity

**Reactivity Hazard:** No data available

**Stability:** Stable



**Hazardous Reactions:** No hazardous reaction expected under normal handling.  
**Hazardous Polymerization:** None under normal processing.  
**Conditions to Avoid:** Keep away from humidity.  
**Materials to avoid:** Strong acids. Strong oxidizing agents.  
**Hazardous decomposition products:** Carbon oxides. Nitrogen oxides (NOx). Sulphur oxides.

Section 11. Toxicological Information

**Information on likely routes of exposure**

**Inhalation:** Not irritating.  
**Eye contact:** Not irritating.  
**Skin Contact:** Irritating to skin.  
**Ingestion:** Harmful if swallowed.

**Potential Health Effects**

**Acute Effects**

**Skin corrosion/irritation:** Irritating to skin.  
**Serious eye damage/eye irritation:** Not irritating.  
**Respiratory irritation:** Not irritating.  
**Sensitization:** Maximization Test. (guinea pig): Not sensitizing.

**Chronic Effects**

**Mutagenic Effects:** Ames Test Positive and negative results obtained. In vitro mutagenicity test Not genotoxic in mammalian cell systems. Mouse micronucleus test negative.

**Carcinogenicity:** There are no known carcinogenic chemicals in this product.

Component	CAS - No	ACGIH Carcinogens	IARC	NTP	OSHA Carcinogens
4-methyl-2, 6-bis(methylthio)-1, 3-benzenediamine	102093-68-5	-	-	-	-
2-methyl-4, 6-bis(methylthio)-1, 3-benzenediamine	104983-85-9	-	-	-	-

**Reproductive Effects:** None known.  
**STOT - single exposure:** No information available.  
**STOT - repeated exposure:** No information available.

**Chronic Effects:** Rats given this product in the diet for up to 90 days showed increased liver metabolic activity. There were kidney effects observed that were unique to male rats. These effects were similar to changes that have been observed in male rats given hydrocarbons. These effects resolved in animals allowed 30 days recovery. Rats treated for 24 months did not have microscopic alterations in any tissues compared to control animals. Tumors seen in control and treated animals



were usual for the age and strain of rats.

**Aspiration hazard:** No information available.

**Numerical measures of toxicity**

**Product Information:** No information available

**The following values are calculated based on chapter 3.1 of the GHS document**

**ATEmix (oral):** 379 mg/kg

**ATEmix (dermal):** 2063 mg/kg

**LD50 Oral:** Rat Oral LOSO: 1515 mg/kg (rat)

**LD50 Dermal:** Rabbit Dermal LOSO: > 2000 mg/kg (rabbit)

**Component Information:** No information available

Section 12. Ecological Information

**Ecotoxicity:** Very toxic to aquatic life with long lasting effects

**LC50/96h/rainbow trout:** 7.3 mg/L

**EC50/48h/Daphnia:** 0.9 mg/L

**EC50/72h/algae:** (*Selenastrum capricornutum*): 7.6 mg/L

**Persistence/Degradability:** Not readily biodegradable. (OECD 301 D).

**Bioaccumulation/Accumulation:** No information available.

**Mobility in Environmental Media:** No information available.

**Other adverse effects:** May cause long-term adverse effects in the aquatic environment

Section 13. Disposal Considerations

**Waste Treatment Methods:** Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

**DOT**

**Proper Shipping Name:** Environmentally hazardous substance liquid, N.O.S.  
(6-Methyl-2,4-bis(methylthio)phenylene-1,3-diamine) NOTE: NOT REGULATED IN NON BULK PACKAGES

**Hazard Class:** 9

**UN No.:** 3082

**Packing Group:** III

**Marine Pollutant:** Yes

**Description:** UN 3082 Environmentally hazardous substance liquid, N.O.S.  
(6-Methyl-2,4-bis(methylthio)phenylene-1,3-diamine), 9, III, NOTE: Not Regulated in Non Bulk Packages



**IMDG/IMO**

**IMO Class:** 9

**Packing Group:** III

**UN-No:** 3082

**IMO Labelling and Marking:** 9 + Marine Pollutant Marking

**Proper Shipping Name:** Environmentally hazardous substance, liquid, n.o.s (6-Methyl-2,4-bis(methylthio)phenylene-1,3-diamine)

**Ems:** F-A, S-F

**Marpol - Annex II:** Not determined

**Marpol - Annex III:** Marine Pollutant

**Transport Description:** UN 3082 Environmentally hazardous substance, liquid, n.o.s (6-Methyl-2,4-bis(methylthio)phenylene-1,3-diamine), 9, III, Marine pollutant

**IATA/ICAO**

**IATA/ICAO Class:** 9

**Packing Group:** III

**UN-No:** 3082

**IATA/ICAO Labelling/Marking:** 9 + 'Environmentally hazardous substance' mark

**Passenger Aircraft:** Maximum net quantity per package: 450 L

**Cargo aircraft only:** Maximum net quantity per package: 450 L

**Proper shipping name:** Environmentally hazardous substance, liquid, n.o.s (6-Methyl-2,4-bis(methylthio)phenylene-1,3-diamine)

**Transport Description:** UN 3082 Environmentally hazardous substance, liquid, n.o.s (6-Methyl-2,4-bis(methylthio)phenylene-1,3-diamine). 9, III

Section 15. Regulatory Information

**International Inventories**

**TSCA:** Listed

**DSL:** Not listed

**NDSL:** Listed

**AICS:** Listed

**EINECS:** Not listed

**ELINCS:** Listed

**ENCS:** Not listed

**KECL:** Not listed

**PICCS:** Not listed

**IECSC:** Listed

**NZIoC:** Listed

**SARA 313:** Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.



**SARA 311/312 Hazardous Categorization**

**Acute Health Hazard:** Yes

**Chronic Health Hazard:** Yes

**Fire Hazard:** No

**Sudden Release of Pressure Hazard:** No

**Reactive Hazard:** No

**Reportable and Threshold Planning Quantities:** This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**State Right-to-Know:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazards**

**D1B:** Toxic materials

**NFPA**

**Health:** 2

**Flammability:** 1

**Instability:** 0

**HMIS**

**Health:** 2

**Flammability:** 1

**Physical Hazards:** 0

Section 16. Other Information

**Disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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