DIMETHYL DISULPHIDE  
CAS No 624-92-0  

MATERIAL SAFETY DATA SHEET  
SDS/MSDS

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers
Product name: Dimethyl Disulphide
CAS-No.: 624-92-0

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet
Company: Central Drug House (P) Ltd
7/28 Vardaan House
New Delhi -110002
INDIA

Telephone: +91 11 49404040
Email: care@cdhfinechemical.com

1.4 Emergency telephone number
Emergency Phone #: +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
- Flammable liquids (Category 2), H225
- Acute toxicity, Oral (Category 4), H302
- Acute toxicity, Inhalation (Category 3), H331
- Eye irritation (Category 2), H319
- Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
- Chronic aquatic toxicity (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word: Danger

Hazard statement(s)
H225: Highly flammable liquid and vapour.
H302: Harmful if swallowed.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing vapours.
P273 Avoid release to the environment.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P311 Call a POISON CENTER/doctor.

Supplemental Hazard Statements

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. Stench.

SECTION 3: Composition/information on ingredients

3.1 Substances
Synonyms : DMDS
Methyl disulfide

Formula: \( \text{C}_2\text{H}_6\text{S}_2 \)
Molecular weight: 94.20 g/mol
CAS-No. : 624-92-0
EC-No. : 210-871-0

Hazardous ingredients according to Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
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| Dimethyl disulphide| Flam. Liq. 2; Acute Tox. 4;    | \( \leq 100 \% \)
| CAS-No.            | Acute Tox. 3; Eye Irrit. 2;     |               |
|                    | STOT SE 3; Aquatic Chronic 2;   |               |
|                    | H225, H302, H331, H319, H335,   |               |
|                    | H411                           |               |
| EC-No.             |                                |               |

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, Sulphur oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Storage class (TRGS 510): Flammable liquids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
Personal protective equipment

**Eye/face protection**
Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body Protection**
Complete suit protecting against chemicals. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineered protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- a) Appearance
  Form: clear, liquid
  Colour: light yellow

- b) Odour
  Stench.

- c) Odour Threshold
  No data available

- d) pH
  No data available

- e) Melting point/freezing point
  Melting point/range: -85 °C - lit.

- f) Initial boiling point and boiling range
  109 °C - lit.

- g) Flash point
  15 °C - closed cup

- h) Evaporation rate
  No data available

- i) Flammability (solid, gas)
  No data available

- j) Upper/lower explosion limit
  Upper explosion limit: 16 % (V)
  Lower explosion limit: 1.1 % (V)

- k) Vapour pressure
  115 mmHg at 55 °C
  28.6 mmHg at 25 °C
  22 hPa at 20 °C - OECD Test Guideline 104

- l) Vapour density
  3.25 - (Air = 1.0)

- m) Relative density
  1.046 g/cm3 at 25 °C - lit.

- n) Water solubility
  No data available
9.2 Other safety information

Relative vapour density 3.25 - (Air = 1.0)

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
Heat, flames and sparks.

10.5 Incompatible materials
Strong bases, Strong oxidizing agents, Strong reducing agents

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - > 300 mg/kg(Dimethyl disulphide)
LC50 Inhalation - Rat - 4 h - 1167 - 1471 ppm(Dimethyl disulphide)
LD50 Dermal - Rabbit - > 2,000 mg/kg(Dimethyl disulphide)

Skin corrosion/irritation
Skin - Rabbit(Dimethyl disulphide)
Result: Mild skin irritation

Serious eye damage/eye irritation
Eyes - Rabbit(Dimethyl disulphide)
Result: Moderate eye irritation

Respiratory or skin sensitisation
No data available(Dimethyl disulphide)

Germ cell mutagenicity
No data available(Dimethyl disulphide)
Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
No data available(Dimethyl disulphide)

Specific target organ toxicity - single exposure
Inhalation - May cause respiratory irritation.(Dimethyl disulphide)

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available(Dimethyl disulphide)

Additional Information
RTECS: JO1927500

Nausea, Headache, Vomiting, anemia(Dimethyl disulphide)

SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish LC50 - Salmo salar (Atlantic salmon) - 1.75 mg/l (Dimethyl disulphide)
Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 7 mg/l - 48 h(Dimethyl disulphide)

12.2 Persistence and degradability
Biodegradability Result: < 10 % - According to the results of tests of biodegradability this product is not readily biodegradable.
(OECD Test Guideline 301)

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available(Dimethyl disulphide)

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects
Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.
SECTION 14: Transport information

14.1 UN number
ADR/RID: 2381  IMDG: 2381  IATA: 2381

14.2 UN proper shipping name
ADR/RID: Not permitted for transport
IMDG: DIMETHYL DISULPHIDE
IATA: DIMETHYL DISULPHIDE
Passenger Aircraft: Not permitted for transport
Cargo Aircraft: Not permitted for transport

14.3 Transport hazard class(es)
ADR/RID: 3 (6.1)  IMDG: 3 (6.1)  IATA: 3 (6.1)

14.4 Packaging group
ADR/RID: II  IMDG: II  IATA: II

14.5 Environmental hazards
ADR/RID: no  IMDG Marine pollutant: yes  IATA: no

14.6 Special precautions for user
No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.

Further information
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. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.