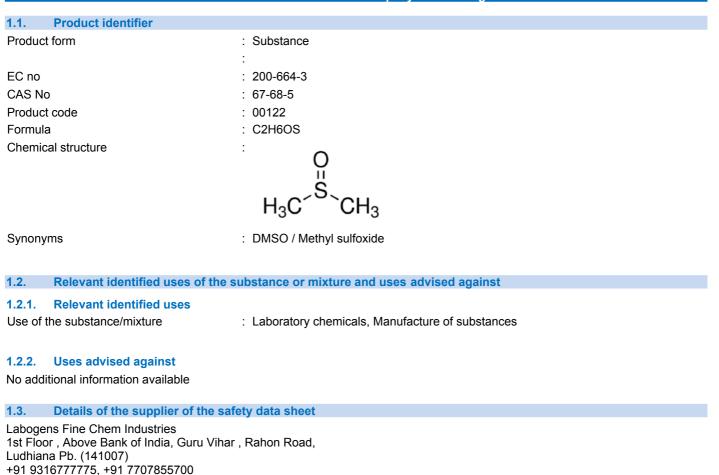


CAS No: 67-68-5 MSDS

MATERIAL SAFETY DATA SHEET (MSDS)

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



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1.4. Emergency telephone number

Emergency number : +91 7707855700 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP] Not classified

Classification according to Directive 67/548/EEC or 1999/45/EC Not classified Safety Data Sheet

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] No labelling applicable

2.3. Other hazards

No additional information available

| SECTION 3: Composition/information on ingredients | | | | |
|---|-----------|---|--|--|
| 3.1. | Substance | | | |
| Name | | : DIMETHYL SULPHOXIDE MOLECULAR BIOLOGY GRADE | | |
| CAS No | 0 | : 67-68-5 | | |
| EC no | | : 200-664-3 | | |

Full text of R- and H-phrases: see section 16

| SECTION 4: First aid measures | | | | |
|--|--|--|--|--|
| | | | | |
| 4.1. Description of first aid measures | | | | |
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice. | | | |
| First-aid measures after skin contact | : Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. | | | |
| First-aid measures after eye contact | : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention. | | | |
| First-aid measures after ingestion | : Rinse mouth out with water. If you feel unwell, seek medical advice. | | | |
| 4.2. Most important symptoms and ef | fects, both acute and delayed | | | |
| No additional information available | | | | |

| 4.3. | Indication of any immediate med | dical attention and special treatment needed | | |
|----------------------------------|---------------------------------|--|--|--|
| Treat symptomatically. | | | | |
| SECTION 5: Firefighting measures | | | | |
| | | | | |
| 5.1. | Extinguishing media | | | |
| Suitable | e extinguishing media | : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2). | | |

: Do not use a heavy water stream.

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Unsuitable extinguishing media

Safety Data Sheet

| 5.2. Speci | 5.2. Special hazards arising from the substance or mixture | | | |
|--|--|--|--|--|
| No additional information available | | | | |
| | | | | |
| | e for firefighters | | | |
| Protection during | ng firefighting | : Do not attempt to take action without suitable protective equipment. | | |
| SECTION 6: A | ccidental release measures | S | | |
| 6.1. Perso | nal procautions, protective | e equipment and emergency procedures | | |
| | | equipment and emergency procedures | | |
| | on-emergency personnel | | | |
| Emergency pro | ocedures | : Evacuate unnecessary personnel. | | |
| 6.1.2. For er | nergency responders | | | |
| Protective equi | pment | : Use personal protective equipment as required. | | |
| Emergency pro | ocedures | : Stop release. | | |
| C O Envir | | | | |
| | onmental precautions | | | |
| Avoid release to | o the environment. | | | |
| 6.3. Metho | ds and material for contain | nment and cleaning up | | |
| Methods for cle | aning up | : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. | | |
| 6.4. Refere | ence to other sections | | | |
| No additional in | formation available | | | |
| SECTION 7: Handling and storage | | | | |
| 7.1. Preca | utions for safe handling | | | |
| Precautions for | | : Do not get in eyes, on skin, or on clothing. | | |
| Hygiene measu | • | : Wash hands and other exposed areas with mild soap and water before eating, | | |
| | | drinking or smoking and when leaving work. | | |
| 7.2. Condi | tions for safe storage, incl | uding any incompatibilities | | |
| Storage conditi | ons | : Store in original container. Keep container tightly closed. Store in a dry place. Protect from moisture. | | |
| | | Fiblect from moisture. | | |
| 7.3. Speci | fic end use(s) | | | |
| No additional information available | | | | |
| SECTION 8: Exposure controls/personal protection | | | | |
| | | | | |
| 8.1. Contro | ol parameters | | | |

No additional information available

Safety Data Sheet

| 8.2. Exposure controls | | |
|--|--|---|
| Hand protection | : protective gloves | |
| Eye protection | : Chemical goggles or safety glasses | |
| Skin and body protection Respiratory protection | : Wear suitable protective clothing : Wear respiratory protection | |
| SECTION 9: Physical and chemical prop | | |
| 9.1. Information on basic physical a | | |
| Physical state | : Liquid | |
| Colour | : Clear Colorless. | |
| Odour | : garlic-like odor. | |
| Odour threshold | : No data available | |
| рН | : No data available | |
| Relative evaporation rate (butylacetate=1) | : 4.3 | |
| Melting point | : 16 - 19 | |
| Freezing point | : No data available | |
| Boiling point | : 189 °C | |
| Flash point | : 87 °C | |
| Auto-ignition temperature | : 2150 °C | |
| Decomposition temperature | : No data available | |
| Flammability (solid, gas) | : No data available | |
| Vapour pressure | : 0.55 hPa at 20 °C | |
| Relative vapour density at 20 °C | : 2.7 | |
| Relative density | : No data available | |
| Density Solubility | : 1.1 g/cm³ : Water: Completely miscible | |
| Log Pow | : -2.03 | |
| Viscosity, kinematic | : No data available | |
| Viscosity, dynamic | : No data available | |
| Explosive properties | : No data available | |
| Oxidising properties | : No data available | |
| Explosive limits | : 0.035 - 0.42 vol % | |
| 9.2. Other information No additional information available | | |
| SECTION 10: Stability and reactivity | | |
| 10.1. Reactivity | | |
| No additional information available | | |
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| 10.2. | Chemical stability | | |
|-----------------------------------|--|------------------|--|
| Stable ι | under normal conditions. | | |
| 10.3. | Possibility of hazardous reactio | ns | |
| No addi | itional information available | | |
| 10.4. | Conditions to avoid | | |
| Direct s | unlight. Overheating. Open flame. H | leat. Sparks. | |
| 10.5. | Incompatible materials | | |
| No addi | itional information available | | |
| 10.6. | Hazardous decomposition prod | ucts | |
| No addi | itional information available | | |
| SECTIO | ON 11: Toxicological information | | |
| 11.1. | Information on toxicological effe | ects | |
| Acute to | - | : Not classified | |
| Skin co | rrosion/irritation | : Not classified | |
| Serious | eye damage/irritation | : Not classified | |
| Respiratory or skin sensitisation | | : Not classified | |
| Germ cell mutagenicity | | : Not classified | |
| Carcino | ogenicity | : Not classified | |
| Reprod | uctive toxicity | : Not classified | |
| Specific exposu | c target organ toxicity (single re) | : Not classified | |
| Specific exposu | c target organ toxicity (repeated re) | : Not classified | |
| Aspirati | ion hazard | : Not classified | |
| | | | |

SECTION 12: Ecological information

12.1. Toxicity No additional information available

12.2. Persistence and degradability

No additional information available

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| 12.3. Bioaccumulative potential | |
|---|--------------------------------------|
| DIMETHYL SULPHOXIDE MOLECUL | AR BIOLOGY GRADE (67-68-5) |
| Log Pow | -2.03 |
| | |
| 12.4. Mobility in soil | |
| No additional information available | |
| | |
| 12.5. Results of PBT and vPvB ass | essment |
| No additional information available | |
| | |
| | |
| 12.6. Other adverse effects | |
| No additional information available | |
| SECTION 13: Disposal considerations | |
| | |
| 13.1. Waste treatment methods | |
| No additional information available | |
| SECTION 14: Transport information | |
| In accordance with ADR / RID / IMDG / I | ATA / ADN |
| | |
| | |
| 14.1. UN number | |
| UN-No. (ADR) | : Not applicable |
| UN-No. (IMDG) UN-No.(IATA) | : Not applicable : Not applicable |
| UN-No.(ADN) | : Not applicable |
| UN-No. (RID) | : Not applicable |
| | |
| 14.2. UN proper shipping name | |
| Proper Shipping Name (ADR) | : Not applicable |
| Proper Shipping Name (IMDG) | : Not applicable |
| Proper Shipping Name (IATA) | : Not applicable |
| Proper Shipping Name (ADN) | : Not applicable |
| Proper Shipping Name (RID) | : Not applicable |
| 14.3. Transport hazard class(es) | |
| ADR | |
| Transport hazard class(es) (ADR) | : Not applicable |
| | |
| IMDG | |
| Transport hazard class(es) (IMDG) | : Not applicable |
| | |
| ΙΑΤΑ | |
| Transport hazard class(es) (IATA) | : Not applicable |
| | |
| ADN | |
| Transport hazard class(es) (ADN) | : Not applicable |
| | |
| | . Natawilasha |
| Transport hazard class(es) (RID) | : Not applicable |
| | |

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| 14.4. Packing group | |
|-------------------------------|--|
| Packing group (ADR) | : Not applicable |
| Packing group (IMDG) | : Not applicable |
| Packing group (IATA) | : Not applicable |
| Packing group (ADN) | : Not applicable |
| Packing group (RID) | : Not applicable |
| 14.5. Environmental hazards | |
| Dangerous for the environment | : No |
| Marine pollutant | : No |
| Other information | : No supplementary information available |

14.6. Special precautions for user

- Overland transport

No data available

- Transport by sea

No data available

- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

DIMETHYL SULPHOXIDE MOLECULAR BIOLOGY GRADE is not on the REACH Candidate List DIMETHYL SULPHOXIDE MOLECULAR BIOLOGY GRADE is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

| AwSV/VwVwS Annex reference | : Water hazard class (WGK) 1, slightly hazardous to water (Classification according to VwVwS, Annex 3; WGK No 5050) |
|---|---|
| 12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV | : Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance) |

Denmark

Safety Data Sheet

| Class for fire hazard | : Class III-1 |
|------------------------|--|
| Store unit | : 50 liter |
| Classification remarks | : Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed |

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product