

DIMETHYL SULFOXIDE



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

1.1. Product identifier

Product name: Dimethyl Sulfoxide
CAS Number: 67-68-5
EC Number: 200-664-3

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product use: Laboratory chemicals, Industrial & for professional use only

1.3 Details of the supplier of the safety data sheet

Company name: East Harbour Group Ltd
20 Clough Road, Severalls Industrial Park
Colchester, Essex, CO4 9QS
United Kingdom

Telephone: +44 (0) 333 242 0100
Email: info@eastharbourgroup.com

1.4 Emergency telephone number

Emergency telephone: 0800 246 1274

Section 2: Hazardous identification

2.1 Classification of the substance or mixture

OSHA Haz Com: CFR 1910.1200

Acute Toxicity - Oral [Category 4]
Skin Corrosion/Irritation [Category 2]
Eye Damage/Irritation [Category 2A]

2.2 Label elements

Pictogram



Signal word

Warning

Hazard Statement(s)

Causes serious eye irritation
Causes skin irritation
Harmful if swallowed



DIMETHYL SULFOXIDE

Precautionary Statement(s)

[Prevention]

Do not eat, drink or smoke when using this product. Wash hands and face thoroughly after handling. Wear protective gloves. Wear eye and face protection.

[Response]

If swallowed: Immediately call a poison center or doctor. Rinse mouth. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

[Storage]

None

[Disposal]

Dispose of contents and container in accordance with US EPA guidelines for the classification and determination of hazardous waste listed in 40 CFR 261.3. (See Section 13)

Section 3: Composition/information on ingredients

Substance/Mixture	Substance
Components	Dimethyl sulfoxide
Percent	>98%
CAS Number	67-68-5
Molecular Weight	78.13 g/mol
Chemical Formula	C ₂ H ₆ OS

Section 4: First aid measures

Inhalation

Call a poison center or doctor if you feel unwell. Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Skin contact

Call a poison center or doctor if you feel unwell. Remove and wash contaminated clothing before re-use. Remove and isolate contaminated clothing and shoes. In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Eye contact

IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Contact with material may irritate or burn eyes. Call emergency medical service. Move victim to fresh air. Check for and remove any contact lenses. Keep victim warm and quiet. Treat symptomatically and supportively. Effects of exposure to substance may be delayed. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Ingestion

Harmful if swallowed. Do not induce vomiting without medical advice. If swallowed, seek medical advice



DIMETHYL SULFOXIDE

immediately and show the container or label. Do not use mouth-to-mouth method if victim ingested the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Loosen tight clothing such as a collar, tie, belt or waistband. If a person vomits place them in the recovery position so that vomit will not re-enter the mouth and throat. Rinse mouth. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Symptoms/effects

Acute

Redness.

Delayed

No data available

Immediate medical attention

WARNING: It might be hazardous to the person providing aid to give mouth-to-mouth respiration, because the inhaled material is harmful. If breathing has stopped, perform artificial respiration. Use first aid treatment according to the nature of the injury. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Section 5: Fire-fighting measures

Suitable extinguishing media

Dry chemical, CO₂, sand, earth, water spray or regular foam Consult with local fire authorities before attempting large scale firefighting operations.

Specific hazards arising from the chemical.

Hazardous combustion products

These products include: Carbon oxides Nitrogen oxides Sulfur oxides Halogenated compounds

Other specific hazards

WARNING: Highly toxic HCl gas is produced during combustion.

Special precautions for fire-fighters

Use water spray or fog; do not use straight streams. Dike fire-control water for later disposal; do not scatter the material. Containers may explode when heated. Move containers from fire area if you can do it without risk.

Special protective equipment for fire-fighter

Wear positive pressure self-contained breathing apparatus (SCBA). Structural fire fighters' protective clothing provides limited protection in fire situations ONLY; it may not be effective in spill situations. Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.

Section 6: Accidental release measures

Personal precautions

Avoid contact with skin, eyes, and clothing. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (Section 8). Warn unnecessary personnel to move away. Stop leak if you can do it without risk. Ensure adequate ventilation. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.



DIMETHYL SULFOXIDE

Personal protective equipment

Wear eye protection (splash goggles) and face protection (full length face shield). Lab coat. Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear protective gloves (nitrile).

Emergency procedures

Prevent dust cloud. In case of a spill and/or a leak, always shut off any sources of ignition, ventilate the area, and exercise caution. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Warn personnel to move away. Prevent entry into sewers, basements or confined areas; dike if needed.

Methods and materials for containment and cleaning up

ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if without risk. Ventilate the area. Absorb with an inert material and put the spilled material in an appropriate waste disposal container. Use clean non-sparking tools to collect absorbed material.

Environmental precautions

Keep away from living quarters. Prevent further leakage or spillage if safe to do so. Water runoff can cause environmental damage. Prevent entry into sewers, basements or confined areas; dike if needed.

Section 7: Handling and storage

Precautions for safe handling

Avoid inhalation of vapor or mist. Do not ingest. Avoid contact with skin and eyes. Good general ventilation should be sufficient to control airborne levels. Keep container dry. Handle and open container with care. Wear suitable protective clothing, gloves and eye/face protection. When using do not eat, drink, or smoke. Keep away from sources of ignition.

Conditions for safe storage

Keep only in the original container in a cool well-ventilated place. Keep away from incompatibles. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Avoid prolonged storage periods. Store under inert gas (e.g. Argon). Hygroscopic material, store in a tightly sealed container. Store in refrigerator.

Storage incompatibilities

Store away from oxidizing agents.

Section 8: Exposure controls/personal protection

Exposure limits

No data available

Appropriate engineering controls

Good general ventilation should be sufficient to control airborne levels. Ventilation is normally required when handling or using this product. Eyewash fountains should be provided in areas where there is any possibility that workers could be exposed to the substance. Follow safe industrial engineering/laboratory practices when handling any chemical.

Personal protective equipment

Respiratory protection

Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent.



DIMETHYL SULFOXIDE

Hand protection

Nitrile gloves.

Eye protection

Safety glasses.

Skin and body protection

Lab coat.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Clear, Liquid
Melting point	16 - 19 °C
Boiling point	189 °C
Flash point	87 °C - closed cup - ASTM D 93
Relative density	No data available
Kinematic Viscosity	No data available
Partition coefficient	log Pow: -1.35 at 20 °C - Bioaccumulation is not expected.
Flammability (solid, gas)	No data available

Section 10: Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical Stability

The product is chemically stable under standard ambient conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Various plastics, Metals

10.6 Hazardous decomposition products

In the event of fire: see section 5.

Section 11: Toxicological Information

Acute Toxicity

No data available

Skin corrosion/irritation

No data available



DIMETHYL SULFOXIDE

Serious eye damage/irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

IARC

No data available

NTP

No data available

OSHA

No data available

Reproductive toxicity

No data available

Routes of Exposure

Inhalation, Eye contact, Ingestion, Skin contact.

Symptoms related to exposure

Overexposure may result in serious illness or death. Skin contact may result in inflammation; characterized by itching, scaling, reddening, or occasionally blistering. Skin contact may result in redness, pain or dry skin. Eye contact may result in redness or pain.

Potential Health Effects

Skin and eye contact may result in irritation.

Target organ(s)

No data available

Section 12: Ecological Information

Ecotoxicity

Fish

No data available

Crustacea

No data available

Algae

No data available



DIMETHYL SULFOXIDE

Persistence and degradability

No data available

Bioaccumulative potential (BCF)

No data available

Mobility in soil

No data available

Partition coefficient n-octanol/water (log Pow)

No data available

Soil adsorption (Koc)

No data available

Henry's Law constant (PaM³/mol)

No data available

Section 13: Disposal considerations

Disposal of product

Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local rules and regulations. 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. This section is intended to provide assistance but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environment, drains, water ways, or the soil.

Disposal of container

Dispose of as unused product. Do not re-use empty containers.

Other considerations

Observe all federal, state and local regulations when disposing of the substance.

Section 14: Transport Information

DOT(US)	Non-hazardous for transportation.
IMDG	Non-hazardous for transportation.
IATA	Non-hazardous for transportation.

Section 15: Regulatory Information

Toxic Substance Control Act (TSCA 8b.)

This product is ON the EPA Toxic Substances Control Act (TSCA) inventory.

US Federal Regulations**CERCLA Hazardous substance and Reportable Quantity**



DIMETHYL SULFOXIDE

SARA 313 Not Listed
SARA 302 Not Listed

State Regulations
State Right-to-Know

Massachusetts Not Listed
New Jersey Listed
Pennsylvania Not Listed
California Proposition 65 Not Listed

Section 16: Other Information

NFPA Rating

Health 1
Flammability 2
Instability 0

HMIS Classification

Health 1
Flammability 2
Physical 0

International Inventories

WHMIS hazard class

D1B Materials causing immediate and serious toxic effects. (Toxic)
D2B Materials causing other toxic effects. (Toxic)