

1. Identification of the substance/preparation and of the company/undertaking

Identification of the product

Dimethyl sulfoxide

Manufacturer/supplier identification

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2. Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Flammable liquids (Category 4)

Label elements

Pictogram None

Signal word Warning

Hazard statement(s)

H227 Combustible liquid.

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 Wear eye protection/ face protection.

P370 + P380 In case of fire: Evacuate area.

P403 + P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard Statements

none

3. Composition/information on ingredients

Synonyms

Dimethyl sulfoxide

CAS-No.: 67-68-5

M: 78.13 g/mol

Molecular formula: (CH₃)₂SO

4. First aid measures

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. 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

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. Fire-fighting measures

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. Accidental release measures

Personal precautions

Use personal protective equipment. 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.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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.

7. Handling and storage

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.

Conditions for safe storage

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.

8. Exposure controls and personal protection

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection

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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. Physical and chemical properties

Form: clear liquid

Colour: colorless

Odour: not available

pH value: not available

Melting point: 18.45°C.

Boiling point: 189°C

Ignition temperature: not available

Flash point: 87°C

Autoignition temperature: not available

Explosion limits

lower: 3.5 %(V)

upper: 42 %(V)

Density :1.10 g/cm³

Bulk density: not available

Solubility in

water (20 °C) : soluble in water

diluted acids (20 °C) : not available

Thermal decomposition: not available

10. Stability and reactivity

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

no data available

Hazardous decomposition products

Other decomposition products - no data available

11. Toxicological information

Acute toxicity

LD50 Oral - Rat - 14,500 mg / kg

LC50 Inhalation - Rat - 4 h - 40250 ppm

LD50 Dermal - Rabbit - > 5,000 mg/kg

Skin corrosion or irritation

no data available

Serious eye damage or eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Reproductive toxicity

no data available

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.

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

12. Ecological information

Toxicity

Toxicity to fish

LC50 - Pimephales promelas - 34,000 mg/l - 96 h

LC50 - Oncorhynchus mykiss - 35,000 mg/l - 96 h

Toxicity to daphnia and
other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 24,600 mg/l - 48 h

Toxicity to algae

EC50 - Pseudokirchneriella subcapitata (green algae) -17,000 mg/l - 72h

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

13. Disposal considerations

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. Transport information

ADR/RID

UN-Number: - Class: - Packing group: -
Proper shipping name: Not dangerous goods

IMDG

UN-Number: - Class: - Packing group: -
Proper shipping name: Not dangerous goods
Marine pollutant: no

IATA

UN-Number: - Class: - Packing group: -
Proper shipping name: Not dangerous goods

15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

16. Other information

GHTECH **Material Safety Data Sheet**

General update.

Regional representation:

This information is given on the authorised Safety Data Sheet for your country.