



MATERIAL SAFETY DATA SHEET

Section 1. Product and company information

Product Name : Dimethyl sulfate (99.9%)

Synonyms : Sulfuric acid dimethyl ester

Company : FuJian Chuangxin Science and Develops Co.,Ltd.

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Section 2. Composition/information on ingredients

Formula : C₂H₆O₄S

Molecular Weight : 126.13 g/mol

CAS-No. :77-78-1

Section 3. Hazards summarizing

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

Carcinogenicity (Category 1B)

Germ cell mutagenicity (Category 2)

Acute toxicity, Inhalation (Category 2)

Acute toxicity, Oral (Category 3)

Skin corrosion (Category 1B)

Skin sensitization (Category 1)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Causes burns. May cause cancer. Possible risk of irreversible effects. May cause sensitization by skin contact. Very toxic by inhalation. Toxic if swallowed.

Section 4. 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

In case of skin contact

Take off contaminated clothing and shoes immediately. 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.

Section 5. Fire-fighting measures

Suitable extinguishing media

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

Special hazards arising from the substance or mixture

Carbon oxides, Sulphur oxides

Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, 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. Discharge into the environment must be avoided.

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). Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

Section 7. Handling and storage

Precautions for safe handling

Avoid exposure - obtain special instructions before use. 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, 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.

Moisture sensitive.

Specific end use(s)

no data available

Section 8. Exposure controls/personal protection**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**

Tightly fitting safety goggles. Faceshield (8-inch minimum). 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

Complete suit protecting against chemicals, 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 a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of 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).

Section 9. Physical and chemical properties

Appearance

Form: clear, liquid

Colour: white

Safety data

pH value : no data available

Melting point : -32 °C

Boiling point : 188 °C

Flash point : 83 °C - closed cup

Auto-ignition temperature : no data available

Lower explosive limits : no data available

Upper explosive limits no data available

Water solubility : no data available

Vapour pressure : 1,5 hPa at 38 °C

0,9 hPa at 25 °C

Vapour density : 4,35 - (Air = 1.0)

Relative density : 1,333 g/mL at 25 °C

Partition coefficient (noctanol/water) : no data available

Decomposition temperature : no data available

Viscosity : no data available

Explosive properties : no data available

Oxidizing properties : no data available

Section 10. Stability and reactivity

Storage stability

Stable under recommended storage conditions.

Materials to avoid

Strong oxidizing agents, Strong bases, Ammonia, Material generates methanol on contact with water or moisture.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides

Section 11. Toxicological information

Acute toxicity

LC50 Inhalation - rat - 4 h - 45 mg/m³

Remarks: Lungs, Thorax, or Respiration:Dyspnea. Cyanosis Blood: Hemorrhage.

Skin irritation and corrosion

Serious eye damage/eye irritation

Eyes - rabbit - Severe eye irritation - 24 h

Respiratory or skin sensitisation

The preceding data, or interpretation of data, was determined using Quantitative Structure Activity Relationship (QSAR) modeling. Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

May cause sensitization by inhalation.

Germ cell mutagenicity

In vitro tests showed mutagenic effects

Carcinogenicity

This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Possible human carcinogen

IARC: 2A - Group 2A: Probably carcinogenic to humans (Dimethyl sulphate)

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion Toxic if swallowed. Causes burns.

Skin May be harmful if absorbed through skin. Causes skin burns.

Eyes Causes eye burns.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Fever, Headache, Symptoms may be delayed., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated., Cough, Shortness of breath.



Additional Information

RTECS: WS8225000

Section 12. Ecological information

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

no data available

Further information on ecology

no data available

Section 13. Disposal considerations

Waste treatment methods

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

Section 14. Transport information

UN number

ADR/RID: 1595 IMDG: 1595 IATA: 1595

UN proper shipping name

ADR/RID: DIMETHYL SULPHATE

IMDG: DIMETHYL SULPHATE

IATA: Dimethyl sulphate

Passenger Aircraft: Not permitted for transport

Cargo Aircraft: Not permitted for transport

Transport hazard class(es)

ADR/RID: 6.1 (8) IMDG: 6.1 (8) IATA: 6.1 (8)

Packaging group

ADR/RID: I IMDG: I IATA: -

Environmental hazards

ADR/RID: no IMDG Marine Pollutant: no IATA: no

Special precautions for user

no data available



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REGULATORY INFORMATION

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

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

no data available

Chemical Safety Assessment

no data available

Section 15. Regulatory information

Labelling according to EC Directives

Caution - substance not yet tested completely.

Section 16. Other information

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. Fujian Chuangxin Science and Develops Co., Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product.