

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 3.0 Revision Date 04.05.2009

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : Dimethyl sulphate

Product Number : D186309

Brand : Sigma-Aldrich

Company : Sigma-Aldrich Brasil Ltda.
Av. das Nações Unidas, 23.043
04795-100 SÃO PAULO - SP
BRAZIL

Telephone : +551137323100

Fax : +551155229895

Emergency Phone # :

2. HAZARDS IDENTIFICATION

Risk advice to man and the environment

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C₂H₆O₄S

Molecular Weight : 126,13 g/mol

CAS-No.	EC-No.	Index-No.	Classification	Concentration
Dimethyl sulphate				
77-78-1	201-058-1	016-023-00-4	T+, Carc.Cat.2, Mut.Cat.3, R45 - R25 - R26 - R34 - R43 - R68	-

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 Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. 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

Do NOT induce vomiting. 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.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

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

Methods for cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Avoid exposure - obtain special instructions before use. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

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.

Moisture sensitive. Handle and store under inert gas.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

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).

Hand protection

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

Eye protection

Safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	clear, liquid
Colour	white

Safety data

pH	no data available
Melting point	-32 °C
Boiling point	188 °C at 1.013 hPa 75 - 77 °C at 15 hPa
Flash point	83 °C - closed cup
Ignition temperature	495 °C
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	1,5 hPa at 38 °C 0,9 hPa at 25 °C
Density	1,325 g/cm ³
Water solubility	no data available
Relative vapour density	4,35 - (Air = 1.0)

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Avoid moisture.

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

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 205 mg/kg

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

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

Irritation and corrosion

Eyes - rabbit - Severe eye irritation - 24 h

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.

Chronic exposure

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

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

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

Potential Health Effects

Inhalation	May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.
Ingestion	Toxic if swallowed. Causes burns.
Target Organs	Heart, Lungs, Liver, Kidney, Eyes, Brain.,

Additional Information

RTECS: WS8225000

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

Toxicity to fish LC50 - Lepomis macrochirus - 7,5 mg/l - 96 h

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID

UN-Number: 1595 Class: 6.1 (8) Packing group: I
Proper shipping name: DIMETHYL SULPHATE

IMDG

UN-Number: 1595 Class: 6.1 (8) Packing group: I EMS-No: F-A, S-B
Proper shipping name: DIMETHYL SULPHATE
Marine pollutant: No

IATA

UN-Number: 1595 Class: 6.1 (8)
Proper shipping name: Dimethyl sulphate
IATA Passenger: Not permitted for transport
IATA Cargo: Not permitted for transport

15. REGULATORY INFORMATION

Labelling according to EC Directives

EC Label

Hazard symbols

T+ Very toxic

R-phrases(s)

R45 May cause cancer.
R25 Also toxic if swallowed.
R26 Also very toxic by inhalation.
R34 Causes burns.
R43 May cause sensitization by skin contact.
R68 Possible risk of irreversible effects.

S-phrases(s)

S53 Avoid exposure - obtain special instructions before use.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Restricted to professional users.

16. OTHER INFORMATION

Further information

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