

# DIMETHYL SULPHOXIDE

0459

October 2000

CAS No: 67-68-5  
RTECS No: PV6210000

Methyl sulphoxide  
DMSO  
 $C_2H_6OS$  /  $(CH_3)_2SO$   
Molecular mass: 78.1

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
<b>FIRE</b>	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames.	Water spray, foam, powder, carbon dioxide.
<b>EXPLOSION</b>	Above 87/C explosive vapour/air mixtures may be formed.	Above 87/C use a closed system, ventilation, and explosion-proof electrical equipment.	In case of fire: keep drums, etc., cool by spraying with water.

EXPOSURE		PREVENT GENERATION OF MISTS! STRICT HYGIENE!	
<b>Inhalation</b>	Headache. Nausea.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest.
<b>Skin</b>	MAY BE ABSORBED! Dry skin.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention.
<b>Eyes</b>	Redness. Blurred vision.	Safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
<b>Ingestion</b>	Nausea. Vomiting. Drowsiness.	Do not eat, drink, or smoke during work.	Do NOT induce vomiting. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Special attention to avoid skin absorption. Personal protection: filter respirator for organic gases and vapours.	

EMERGENCY RESPONSE	SAFE STORAGE
NFPA Code: H1; F1; R0	Separated from strong oxidants. Cool. Keep in the dark. Keep in a well-ventilated room.

**IPCS**

International  
Programme on  
Chemical Safety



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SEE IMPORTANT INFORMATION ON THE BACK.

## IMPORTANT DATA

**Physical State; Appearance**

COLOURLESS, HYGROSCOPIC LIQUID

**Physical dangers**

The vapour is heavier than air and may travel along the ground; distant ignition possible.

**Chemical dangers**

The substance decomposes on heating or on burning producing toxic fumes including sulfur oxides. Reacts violently with strong oxidants such as perchlorates.

**Occupational exposure limits**

TLV not established.

MAK: IIb (not established but data is available); skin absorption (H); (DFG 2004).

**Routes of exposure**

The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

**Inhalation risk**

No indication can be given about the rate in which a harmful concentration in the air is reached on evaporation of this substance at 20/C.

**Effects of short-term exposure**

The substance is irritating to the eyes and the skin. Exposure to high concentrations of the substance could cause lowering of consciousness. May accelerate skin absorption of other materials (see Notes).

**Effects of long-term or repeated exposure**

Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the liver and blood, resulting in impaired functions and lesions of blood cells.

## PHYSICAL PROPERTIES

Boiling point: 189/C  
Melting point: 18.5/C  
Relative density (water = 1): 1.1  
Solubility in water: miscible  
Vapour pressure, Pa at 20/C: 59.4

Relative vapour density (air = 1): 2.7  
Flash point: 87/C c.c.  
Auto-ignition temperature: 215/C  
Explosive limits, vol% in air: 2.6-42.0  
Octanol/water partition coefficient as log Pow: -1.35 (calculated)

## ENVIRONMENTAL DATA

## NOTES

Special attention needed when toxic materials present in Dimethyl sulphoxide because of enhanced skin absorption. Card has been partly updated in October 2005. See section Occupational Exposure Limits.

## ADDITIONAL INFORMATION

## LEGAL NOTICE

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible for the use which might be made of this information