

**MATERIAL DATA SAFETY SHEET**
**Date of Issue: March 2004**
**Emergency Phone: 703-471-5955**

 Description: **Dimethyl Sulfoxide (DMSO)**

 Catalog #: **25-950**

Identity (As Used on Label and List): Dimethyl Sulfoxide

CAS #: 67-85-5

**Section I Hazardous Ingredients/Identity Information**

General Information	Limit exposure and exercise good laboratory practices.
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CAS NUMBER	CHEMICAL NAME	HAZARDOUS
67-85-5	Dimethyl Sulfoxide	May be absorbed through intact skin. Causes eye and skin irritation and respiratory tract irritation.

**Section II Fire and Explosion Hazard Data**

Flash Point (Method Used)	NA
Flammable Limits	NA
Extinguishing Media	Cool containers with flooding quantities of water until well after fire is out. Use water spray, dry chemical, CO <sub>2</sub> , or appropriate foam.
Special Fire Fighting Procedures	Wear self-contained breathing apparatus. Protect skin and eyes.
Unusual Fire and Explosion Hazards	Vapors may be heavier than air and can spread along the ground and collect in low or confined areas. Containers may explode when heated.

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**Section III Physical/Chemical Characteristics**


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Appearance and Odor	Clear liquid, slight sulfurous/garlic-like odor
Boiling Point:	189°C
Decomposition Temperature	> 200°C
Evaporation Rate	Not available
Freezing Point/Melting Point:	18.4°C
Solubility in Water	Soluble
Specific Gravity/Density (H <sub>2</sub> O=1)	1.1010 g/cm <sup>3</sup>
Vapor Density (Air=1)	2.7
Vapor Pressure (mm Hg)	0.4 mm Hg @ 20
Viscosity	1.1cp @ 27°C
Molecular Formula	C <sub>2</sub> H <sub>6</sub> OS
Molecular Weight	78.13

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**Section IV Reactivity Data**


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Chemical Stability	Stable at room temperature in closed containers under normal storage and handling conditions
Conditions to Avoid	Excess heat
Incompatibility (Materials to Avoid)	Strong oxidizing agents, strong acids and bases
Hazardous Decomposition	Carbon monoxide, oxides of sulfur, carbon dioxide
Hazardous Polymerization	Has not been reported

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**Section V Health Hazard & First Aid Information**


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**POTENTIAL HEALTH EFFECTS AND SYMPTOMS OF EXPOSURE**

EYES	Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. May cause chemical conjunctivitis.
SKIN	May cause irritation with burning pain, itching and redness. Substance is rapidly absorbed through the skin
INGESTION	May cause gastrointestinal irritation with nausea, vomiting, and diarrhea. May cause liver and kidney damage. May cause garlic smell on the breath and body.
INHALATION	May cause respiratory tract irritation. Can produce delayed pulmonary edema.
CHRONIC	Prolonged or repeated skin contact may cause dermatitis. May cause liver and kidney damage. Effects may be delayed.

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## EMERGENCY &amp; FIRST AID PROCEDURES

EYES	Immediately flush eyes with copious amounts of water for at least 15 minutes. Seek medical attention. (Show label whenever possible).
SKIN	Remove contaminated clothing and shoes. Immediately rinse skin with copious amounts of water for at least 15 minutes. Seek medical attention. (Show label whenever possible).
INGESTION	If swallowed, wash out mouth with water providing the victim is conscious. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Seek medical attention. (Show label whenever possible).
INHALATION	If inhaled, remove to fresh air. If not breathing, give artificial respiration. Do NOT use mouth-to-mouth resuscitation If breathing is difficult, give oxygen. Seek medical attention. (Show label whenever possible).
NOTES TO PHYSICIAN	Treat symptomatically and supportively.

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**Section VI    Precautions for Safe Handling and Use**


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## OCCUPATIONAL SPILLS

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.  
Absorb spill with inert material (e.g. vermiculite, sand, or earth), then place in suitable container.  
Do not flush into sewer. Clean up spills immediately, observing precautions.  
Provide ventilation.

## WASTE DISPOSAL METHOD

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

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**Section VII    Guidelines for Safe Handling**


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## RESPIRATORY PROTECTION

NIOSH/MSHA approved

## VENTILATION

Dust mask

## EYE PROTECTION

Safety goggles. As recommended by internal safety committee

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PROTECTIVE CLOTHING OR EQUIPMENT

Chemical resistant gloves. As recommended by internal safety committee.  
Safety shower and eye bath.

GENERAL PRECAUTIONS

Use good laboratory precautions and practices. Wash hands thoroughly after handling.  
Avoid prolonged or repeated exposure. Keep tightly closed.  
Store in a cool dry, well ventilated area.

**Additional Information:** This information is believed to be accurate and represents the best information available to date. We make no warranty or assume liability from its use. Users should make their own investigations to determine the suitability of the information.

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