

MATERIAL SAFETY DATA SHEET

DIMETHYL SULPHOXIDE

1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: Dimethyl sulphoxide
Synonyms: Methyl sulfoxide; DMSO
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2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name:	%	EINECS#
67-68-5	Methyl sulfoxide	99.7%	200-664-3

3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Not available

Potential Health Effects

Eye: May cause eye irritation.
Skin: May cause skin irritation. Substance is rapidly absorbed through the skin.
Ingestion: Ingestion of large amounts may cause gastrointestinal irritation.
Inhalation: May cause respiratory tract irritation.
Chronic: Prolonged or repeated skin contact may cause dermatitis.

4 - FIRST AID MEASURES

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion: Get medical aid. Wash mouth out with water.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

5 - FIRE FIGHTING MEASURES

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Will burn if involved in a fire. Combustible liquid.
Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Do not flush into a sewer. Remove all sources of ignition.

7 - HANDLING AND STORAGE

Handling: Use with adequate ventilation. Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.
Storage: Keep away from heat, sparks, and flame. Store in a cool, dry place. Store in a tightly closed container. Keep under a nitrogen blanket.

Section 8 - Exposure C 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.
Exposure Limits CAS# 67-68-5:
Germany: 160 mg/m³ TWA Germany: skin notation
Netherlands: 50 ppm MAC; 150 mg/m³ MAC
Personal Protective Equipment
Eyes: Wear chemical splash goggles.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Boiling Point: 189-192 deg C
Specific Gravity/Density: 1.099-1.101
Molecular Formula: C₂H₆OS
Molecular Weight: 78.13

10 - STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures. Hygroscopic: absorbs moisture or water from the air.
Conditions to Avoid: Incompatible materials, exposure to moist air or water.
Incompatibilities with Other Materials Strong oxidizing agents, perchloric acid.
Hazardous Decomposition Products Carbon monoxide, oxides of sulfur, carbon dioxide, formaldehyde.
Hazardous Polymerization Will not occur.

11 - TOXICOLOGICAL INFORMATION

RTECS#: CAS# 67-68-5: PV6210000
LD50/LC50: RTECS:
CAS# 67-68-5: Draize test, rabbit, eye: 100 mg;
Draize test, rabbit, eye: 500 mg/24H Mild;
Draize test, rabbit, skin: 500 mg/24H Mild;
Oral, mouse: LD50 = 7920 mg/kg;
Oral, rat: LD50 = 14500 mg/kg;
Skin, rat: LD50 = 40 gm/kg;
Other: Skin, rabbit: 10 mg/24H open mild Eye, rabbit: 100 mg
Carcinogenicity: Methyl sulfoxide - Not listed as a carcinogen by ACGIH, IARC, NTP,
or CA Prop 65.
Other: See actual entry in RTECS for complete information. The
toxicological properties have not been fully investigated.

12 - ECOLOGICAL INFORMATION

Ecotoxicity: Fish: LC50: 35200-50600 mg/L; 96H;
Daphnia: EC50: 16,25 g/L; 24H;
Bacteria: Pseudomonas putida: EC10: 7100 mg/L; 16H
Algae: IC50: 3900-40200 mg/L; 10-14d;

13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

14 - TRANSPORT INFORMATION

	IATA	IMO	RID/ADR
Shipping Name:	Not regulated.	Not regulated.	Not regulated.
Hazard Class:			
UN Number:			
Packing Group:			

15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available

Risk Phrases:

Safety Phrases: S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)CAS# 67-68-5: 1

Canada CAS# 67-68-5 is listed on Canada's DSL List

US Federal

TSCA CAS# 67-68-5 is listed on the TSCA Inventory.

16 - ADDITIONAL INFORMATION

SISCO RESEARCH LABORATORIES provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.