Methyl sulfoxide DNase RNase Protease free Material Safety Data Sheet, 67-68-5

Name:	**Methyl sulfoxide DNase RNase Protease free Material Safety Data Sheet**
Synonym:	Methyl sulfoxide; DMSO; Sulfinylbis(methane); Dimethyl sulfoxide
CAS:	67-68-5

Section 1 - Chemical Product

MSDS Name: Methyl sulfoxide DNase RNase Protease free

Synonym: Methyl sulfoxide; DMSO; Sulfinylbis(methane); Dimethyl sulfoxide.

Section 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	content	EINECS#
67-68-5	Methyl sulfoxide	99.8	200-664-3

Hazard Symbols: XI

Risk Phrases: 36/37/38

Section 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Irritating to eyes, respiratory system and skin.Hygroscopic (absorbs moisture from the air).

Potential Health Effects

Eye:

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.

Section 4 - FIRST AID MEASURES

Eyes: Immediately 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. Wash clothing before reuse.

Ingestion:

Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or 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. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician:

Treat symptomatically and supportively.

Section 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.

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Containers may explode when heated.

Extinguishing Media:

Cool containers with flooding quantities of water until well after fire is out. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Section 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. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

Section 7 - HANDLING and STORAGE

Handling:

Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation. Wash clothing before reuse.

Storage:

Keep away from heat, sparks, and flame. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits CAS# 67-68-5: Germany: 160 mg/m3 TWA Germany: Skin absorber Netherlands: 50 ppm MAC; 150 mg/m3 MAC Russia: 20 mg/m3 TWA 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:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or

European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Color: Clear
Odor: slight odor - sulfurous odor - garlic-like odor
pH: Not available.
Vapor Pressure: 0.4 mm Hg at 20
Viscosity: 1.1cp @ 27 deg C
Boiling Point: 189 deg C
Freezing/Melting Point: 18.4 deg C
Autoignition Temperature: 215 deg C (419.00 deg F)
Flash Point: 95 deg C (203.00 deg F)
Explosion Limits, lower: 2.6 vol %
Explosion Limits, upper: 42 vol %
Decomposition Temperature: > 200 deg C
Solubility in water: Soluble.
Specific Gravity/Density: 1.1010g/cm3
Molecular Formula: C_2H_6OS
Molecular Weight: 78.13

Section 10 - STABILITY AND REACTIVITY

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

Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:
CAS# 67-68-5: PV6210000 LD50/LC50:

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.

Carcinogenicity:

Methyl sulfoxide - Not listed by ACGIH, IARC, or NTP.

Other:

See actual entry in RTECS for complete information.

Section 12 - ECOLOGICAL INFORMATION

Other For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

Section 13 - DISPOSAL CONSIDERATIONS

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

Section 14 - TRANSPORT INFORMATION

IATA

Not regulated as a hazardous material.

IMO

Not regulated as a hazardous material.

RID/ADR

Not regulated as a hazardous material.

Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39 Wear suitable gloves and eye/face

protection.

WGK (Water Danger/Protection)

CAS# 67-68-5: 1

Canada

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

CAS# 67-68-5 is listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

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

上一篇：DL-Dithiothreitol DNase RNase Protease Free Material S…[03-02]下一篇：N N-Dimethylformamide DNase RNase Protease free Materia…[03-02]

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