SAFETY DATA SHEET

SECTION 1)IDENTIFICATION

Product ID: 4-X

Product Name: Dimethylsulfoxide (DMSO), 5 x 5.0 mL, Sterile

Revision Date: July 07, 2025
Date Printed: Jan 21, 2021
Version: 2.0
Supersedes Date: Aug 01, 2017

Manufacturer's Name: American Type Culture Collection
Address: 10801 University Blvd., Manassas, VA, US, 20110-2209
Emergency Phone: 703-365-2710 or 800-424-9300 (Chemtrec - transport only)
Information Phone Number: 800-638-6597 or 703-365-2700
Fax: 703-365-2701
Product/Recommended Uses: For lab use only

SECTION 2) HAZARDS IDENTIFICATION

Classification

Eye Irritation - Category 2A

Flammable Liquids - Category 4

Pictograms

Signal Word

Warning

Hazardous Statements - Health

Causes serious eye irritation

Hazardous Statements - Physical

Combustible Liquid

Precautionary Statements - General

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Precautionary Statements - Prevention

Wash thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use appropriate fire suppression methods to extinguish.

Precautionary Statements - Storage

Store in a well-ventilated place.

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local/national/international regulation.

Hazard not otherwise classified (HNOC)

Biosafety Level 1 - Agents not known to consistently cause disease in healthy adults and present minimal potential hazard to laboratory personnel and the environment.

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0000067-68-5	DIMETHYL SULFOXIDE	85% - 100%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell or are concerned.

Eye Contact

Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15- 20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face.

Skin Contact

Take off all contaminated clothing immediately, shoes and leather goods (e.g. watchbands, belts). If skin irritation occurs or rash occurs: Get medical advice/attention. Wash with soap and plenty of water. Wash contaminated clothing before re-use or discard.

Ingestion

Rinse mouth with water. Do not give anything by mouth to an unconscious person. Call a POISON CENTER/doctor if you feel unwell.

Most Important Symptoms/Effects, Acute and Delayed

No known significant effects or critical hazards.

Indication of Immediate Medical Attention and Special Treatment Needed

No data available.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide, water-spray or alcohol-resistant foam. Use caution when applying carbon dioxide in confined spaces.

Specific Hazards arising from substance or mixture

No data available.

Fire-fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Move undamaged containers from immediate hazard area if it can be done safely. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas. Avoid dust/aerosol formation. Isolate hazard area and keep unauthorized personnel away. If

specialized clothing is required, refer to section 8 of this SDS.

Environmental Precautions

Stop spill/release if it can be done safely. Do not allow product to reach ground water, water course or sewage system.

Methods and Materials for Containment and Cleanup

BSL-1 labs require immediate decontamination after spills. Allow aerosols to settle; wearing protective clothing, gently cover spill with paper towel and apply 10% sodium hypochlorite, starting at perimeter and working towards the center; allow sufficient contact time before clean up (30 min). Clean up spills immediately. The use of additional PPE may be necessary for cleaning solutions.

SECTION 7) HANDLING AND STORAGE

Precautions for safe handling

Use aseptic procedures. Hand washing required after working with potentially hazardous materials and before leaving the laboratory. Do not get in eyes, on skin or on clothing. Decontamination of work surfaces daily, after finishing work and following spills. Standard microbiological practices should be followed. Avoid eating, drinking and smoking in work areas. Provide appropriate exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Store in cool, dry, well-ventilated areas away from heat, direct sunlight, strong oxidizers and any incompatible materials. Keep containers securely sealed when not in use.

Specific end use(s)

Apart from the uses mentioned in sec.1, no other uses are stipulated.

SECTION 8) EXPOSURE CONTROLS / PERSONAL PROTECTION

Appropriate Engineering Controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Eye Protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Body Protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiration Protection

Respiratory protection not required.

Control Parameters

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	OSHA Tables (Z1, Z2, Z3)	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)
No applicable chemical	-	-	-	-	-	-	-	-

Chemical Name	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)
No applicable chemical	-	-	-	-	-	-	-	-

Chemical Name	ACGIH Carcinogen	ACGIH TLV Basis	ACGIH Notations
No applicable chemical	-	-	-

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	9.18002 lb/gal
Specific Gravity	1.10001
% Solids By Weight	100.00000%

Appearance	Colorless liquid
Odor Threshold	N/A
Odor Description	Sulphurous
pH	N/A
Water Solubility	Miscible
Flammability	Flash point at or above 200°F/93°C
Flash Point Symbol	N/A
Flash Point	87°C (189°F)-Closed Cup-ASTM D 93
Viscosity	N/A
Lower Explosion Level	3.0-3.5% by volume
Upper Explosion Level	42-63% by volume
Vapor Pressure	0.55 mbar (0.41 mmHg) @ 20°C (68°F)
Vapor Density	2.7
Freezing Point	16-19°C (61-66°F)
Melting Point	16-19°C (61-66°F)
Low Boiling Point	189°C (372°F)
High Boiling Point	N/A
Auto Ignition Temp	300-302°C (572-576°F)
Decomposition Pt	>190 C (>374 F)
Evaporation Rate	N/A
Coefficient Water/Oil	N/A

Other Information

No data available.

SECTION 10) STABILITY AND REACTIVITY

Stability

Stable under recommended handling and storage conditions.

Reactivity

No data available.

Conditions to Avoid

Direct sunlight, extremely high or low temperatures, ignition sources and incompatible materials.

Hazardous Reactions/Polymerization

Hazardous polymerization will not occur.

Incompatible Materials

Strong acids, strong bases, strong oxidizers.

Hazardous Decomposition Products

Thermal decomposition generates: Carbon oxides (CO, CO2), Sodium oxides, Sulfur.

SECTION 11) TOXICOLOGICAL INFORMATION

Acute Toxicity

0000067-68-5 DIMETHYL SULFOXIDE

Inhalation at high concentrations could cause headache, dizziness, lowering of consciousness, and sedation. May accelerate skin absorption of other materials.

Skin Corrosion/Irritation

0000067-68-5 DIMETHYL SULFOXIDE

Substance is irritating to the skin.

Serious Eye Damage/Irritation

Causes serious eye irritation

0000067-68-5 DIMETHYL SULFOXIDE

Substance is irritating to the eyes.

Respiratory/Skin Sensitization

Based on available data, the classification criteria are not met.

Germ Cell Mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive Toxicity

Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Single Exposure

Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Repeated Exposure

0000067-68-5 DIMETHYL SULFOXIDE

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.

Aspiration Hazard

Based on available data, the classification criteria are not met.

Likely Routes of Exposure

Inhalation, Ingestion, Skin contact, Eye contact

0000067-68-5 DIMETHYL SULFOXIDE

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

SECTION 12) ECOLOGICAL INFORMATION

Toxicity

Based on available data, the classification criteria are not met.

Persistence and Degradability

No data available.

Bio-accumulative Potential

0000067-68-5 DIMETHYL SULFOXIDE

No potential for bioaccumulation.

Mobility in Soil

No data available.

Other Adverse Effects

No data available.

Results of the PBT and vPvB assessment

0000067-68-5 DIMETHYL SULFOXIDE

The substance is not PBT / vPvB.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal

It is the responsibility of the user of the product to determine at the time of disposal whether the product meets local criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

SECTION 14) TRANSPORT INFORMATION

	U.S. DOT Information	IMDG Information	IATA Information
UN number:	NA1993	NA1993	NA1993
Proper shipping name:	Combustible liquid, n.o.s. (DIMETHYL SULFOXIDE)	Combustible liquid, n.o.s. (DIMETHYL SULFOXIDE)	Combustible liquid, n.o.s. (DIMETHYL SULFOXIDE)
Hazard class:	None	None	None
Hazardous substance (RQ):	NA	NA	NA
Marine Pollutant:	No	No	No
Note / Special Provision:	No	No	No
Packing group:	NA	NA	NA
Toxic-Inhalation Hazard:	NA	NA	NA

SECTION 15) REGULATORY INFORMATION

Regulatory Information

The following regulations have been evaluated for this product: TSCA, SARA 313 & SARA 312.

CAS	Chemical Name	% By Weight	Regulation List
0000067-68-5	DIMETHYL SULFOXIDE	85% - 100%	SARA312,TSCA

SECTION 16) OTHER INFORMATION

Glossary

ACGIH - American Conference of Governmental Industrial Hygienists
BSC - Biological Safety Cabinet
CAS - Chemical Abstract Service
Chemtrec - Chemical Transportation Emergency Center(US)
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
HEPA - High efficiency particulate air
LC - Lethal Concentration
LD - Lethal Dose
N/A - Not applicable
NIOSH - National Institute for Occupational Safety and Health
OEL - Occupational Exposure Limits
OSHA - Occupational Safety and Health Administration, US Department of Labor
PEL - Permissible Exposure Limit
SARA (Title III)- Superfund Amendments and Reauthorization Act
SARA 313 - Superfund Amendments and Reauthorization Act, Section 313
SCBA - Self Contained Breathing Apparatus
STEL - Short Term Exposure Limit
TLV - Threshold Limit Value
TSCA - Toxic Substances Control Act Public Law94-469

TWA - Time Weighted Average
US DOT - US Department of Transportation

Version 2.0:

Revision Date: Dec 07, 2020

Changes made to Section 1,2,4,5,6,7,8,10,11,12,13,14,15. Please contact manufacturer for more information.

DISCLAIMER