SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Dimethyl sulfoxide
CAS number	67-68-5
Synonyms	Methyl sulfoxide; DMSO

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory Chemicals

1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 4)

2.2 GHS Label elements, including precautionary statements

Pictogram	None required.
Signal Word	Warning
Hazard statements	H227 Combustible liquid.
Precautionary statements	P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. P280 Wear protective gloves/ eye protection/ face protection. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. P403 + P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

DMSO readily penetrates skin and may carry other dissolved chemicals into the body.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Dimethyl sulfoxide	Methyl sulfoxide; DMSO	67-68-5	<=100

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice	If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	Remove to fresh air. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
If swallowed	Do NOT induce vomiting. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

4.3 Indicationofanyimmediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

Unsuitable extinguishing media None identified.

5.2 Specific hazards arising from the substance or mixture

Combustible material. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide (CO). Carbon dioxide (CO2). Sulfur oxides. Sulfides. Formaldehyde.

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

5.4 Further information

Flash Point 87 °C / 188.6 °F

Autoignition Temperature 301 °C / 573.8 °F

Explosion limits

Upper 42 vol %
Lower 2.6 vol %

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

NFPA

Health	Flammability	Instability	Physical hazards
2	2	1	N/A

SECTION 6: Accidental release measures

6.1 Personalprecautions,protective equipment andemergencyprocedures

Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges. Ensure adequate ventilation.

6.2 Environmental precautions

Should not be released into theenvironment. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

6.3 Methods and materials for containment and cleaning up

Removeall sourcesofignition.Soakupwithinertabsorbentmaterial. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

Refertoprotectivemeasureslisted in Sections 7 and 8. See section 13 for proper disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wear personal protective equipment/face protection.Ensureadequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation.

Hygienemeasures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame.

Incompatibilities

Strong oxidizing agents. Strong acids. Strong bases. Alkali metals.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

Thisproduct doesnot containanyhazardousmaterialswithoccupationalexposure limits established by the region specific regulatory bodies.

Biologicaloccupationalexposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

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.

Control ofenvironmentalexposure

Should not be released into the environment. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	18.4 °C / 65.1 °F
Boiling Point/Range	189 °C / 372.2 °F
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	42 vol %
Lower	2.6 vol %
Vapor Pressure	0.55 mbar @ 20°C
Vapor Density	2.7
Specific Gravity	1.100

Solubility	Soluble in water
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	301 °C / 573.8 °F
Decomposition Temp	> 190°C
Viscosity	1.98 mPa.s @ 25°C
Molecular Formula	C2 H6 O S
Molecular Weight	78.13
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

None known, based on information available.

10.2 Chemicalstability

Hygroscopic.

10.3 Possibility ofhazardousreactions

Thermal decomposition can take place above 189°C / 372°F.

10.4 Conditions to avoid

Incompatible products. Excess heat. Exposure to moist air or water. Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible materials

Strong oxidizing agents, Strong acids, Strong bases, Alkali metals.

10.6 Hazardousdecompositionproducts

Carbon monoxide (CO), Carbon dioxide (CO2), Sulfur oxides, Sulfides, Formaldehyde.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation

Dimethyl sulfoxide	28300 mg/kg (Rat)	40000 mg/kg (Rat)	>5.33 mg/L (Rat) 4 h

Skin corrosion/irritation
Noinformationavailable.

Serious eye damage/eye irritation
Noinformationavailable.

Respiratory or skin sensitization
Noinformationavailable.

Germ cell mutagenicity
Noinformationavailable.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Dimethyl sulfoxide	67-68-5	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure
None known.

Specific target organ toxicity - repeated exposure
None known.

Reproductive toxicity
Noinformationavailable.

Chronic effects
Noinformationavailable.

11.2 AdditionalInformation
The toxicological properties have not been fully investigated.

SECTION 12: Ecological information

12.1 Toxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea

Dimethyl sulfoxide	EC50 96h 12350 - 25500 mg/L	40 g/L LC50 96 h 33-37 g/L LC50 96 h	16000 mg/L EC50 Pseudomonas putida 16 h 32 g/L EC50 Tetrahymena pyriformis 24 h 77 mg/L EC50 Photobacterium phosphoreum 5 min	EC50 24h 7000 mg/L

12.2 Persistence and degradability

Persistence is unlikely.

12.3Bio accumulative potential

Noinformation available.

12.4Mobility in soil

Willlikelybemobile in the environment due to its water solubility.

12.5Results of PBT and vPvB assessment

Noinformation available.

12.6 Endocrine disrupting properties

Noinformation available.

12.7 Other adverse effects

Noinformation available.

SECTION 13: Disposal considerations

13.1Waste Disposal Methods

Chemical waste generators must determinewhether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN Number	NA1993
Proper Shipping name	Combustible liquid, n.o.s.
Hazard Class	Comb Liq
Packaging Group	III
Technical name	Dimethyl Sulfoxide

IMDG

UN Number	NA1993

Proper Shipping name	Combustible liquid, n.o.s.
Hazard Class	Comb Liq
Packaging Group	III
Technical name	Dimethyl Sulfoxide

IATA

UN Number	NA1993
Proper Shipping name	Combustible liquid, n.o.s.
Hazard Class	Comb Liq
Packaging Group	III
Technical name	Dimethyl Sulfoxide

SECTION 15: Regulatory information

US federal regulations

TSCASection12(b)Export Notification (40 CFR 707, Subpt. D)
Not listed/applicable.

CERCLAHazardousSubstance List (40 CFR 302.4)
Not listed/applicable.

SARA304Emergency release notification
Not listed/applicable.

OSHASpecificallyRegulated Substances (29 CFR 1910.1001-1053)
Not listed/applicable.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA302Extremely hazardous substance
Not listed/applicable.

SARA 311/312 Hazardous
See section 2 for hazard classifications.

SARA313(TRIreporting)
Not listed/applicable.

Other federal regulations

CleanAirAct(CAA)Section 112 Hazardous Air Pollutants (HAPs) List
Not listed/applicable.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not listed/applicable.

Safe Drinking Water Act

Not listed/applicable.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed/applicable.

US state regulations

US. Massachusetts RTK - Substance List

Not listed.

US. New Jersey Worker and Community Right-to-Know Act

Listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

California Proposition 65

Not listed.

SECTION 16: Other information

Date of Issue: 7/16/2025

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.