



SAFETY DATA SHEET

Revision Date **23-Mar-2012**

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Name DIMETHYL SULFOXIDE

Recommended Use For research use only
Registration Number No information available

1.1 Product Identifier

Catalog Number: 190186

Supplier: MP Biomedicals, LLC
29525 Fountain Parkway
Solon, OH 44139
tel: 440-337-1200

Emergency Telephone Number: CHEMTREC: 1-800-424-9300 (1-703-527-3887)

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

2. HAZARDS IDENTIFICATION

GHS - Classification

Acute Dermal Toxicity Category 1

GHS Label elements, including precautionary statements

Physical Hazards None



Signal Word Danger

Precautionary Statements

P262 - Do not get in eyes, on skin, or on clothing
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P302+ P350 - IF ON SKIN: Gently wash with plenty of soap and water
P310 - Immediately call a POISON CENTRE or doctor/physician
P322 - Specific measures (see .? on this label)
P361 - Remove/Take off immediately all contaminated clothing
P363 - Wash contaminated clothing before reuse
P501 - Dispose of contents/container to an approved waste disposal plant

NFPA rating:

NFPA Health: 2
NFPA Flammability: 2
NFPA Reactivity: 0
NFPA Special Note: -

Precautionary Statements

Prevention

Do not get in eyes, on skin, or on clothing. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.

General advice

Specific measures (see supplemental first aid instructions on this label).

Skin

IF ON SKIN: Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

Storage

Store locked up

Disposal

Dispose of contents of container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms: DMSO; Methyl sulfoxide
Formula: C₂H₆OS
Molecular weight: 78.13

Chemical Name	EC No.	CAS Number	Weight %	Classification (67/548)	Classification (Reg. 1272/2008)	REACH Registration Number
DIMETHYL SULFOXIDE	EEC No. 200-664-3	67-68-5	100	Xi		No data available

For the full text of the R phrases and H statements mentioned in this section, see Section 2

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.

Eye Contact

Do not rub affected area. Get medical attention immediately if irritation persists.

Skin Contact

Immediate medical attention is not required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Inhalation

Move to fresh air in case of accidental inhalation of vapors. Immediate medical attention is required. Toxic by inhalation

Rinse mouth Clean mouth with water and afterwards drink plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician.

Protection of First-aiders Use personal protective equipment.

4.2 Most important symptoms and effects, both acute and delayed

Main Symptoms No information available

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media

Dry chemical. Carbon dioxide (CO₂). Water spray. Alcohol-resistant foam.

In the event of fire, cool tanks with water spray Use spark-proof tools and explosion-proof equipment Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations

Extinguishing media which must not be used for safety reasons

No information available

5.2 Special hazards arising from the substance or mixture

No information available.

5.3 Advice for firefighters

Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Pay attention to flashback. Ensure adequate ventilation.

See Section 12 for additional information.

6.2 Environmental precautions

Refer to protective measures listed in Sections 7 and 8.

6.3 Methods and materials for containment and cleaning up

DO NOT RELEASE UNNEUTRALIZED ACID

6.4 Reference to other sections

See Section 12 for additional information

7. HANDLING AND STORAGE

Storage

ROOM TEMPERATURE

DESICCATE

7.1 Precautions for safe handling

Use only in area provided with appropriate exhaust ventilation. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from heat, sparks and open flame. No smoking. Wear personal protective equipment. Do not breathe vapors or spray mist. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use product only in closed system

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a cool, well-ventilated place
 Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Protect from light. Keep in properly labeled containers.

7.3 Specific end uses

Exposure Scenario
 No information available

Other Guidelines
 No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure Limits

Chemical Name	Italy	Portugal	The Netherlands	Finland	Denmark
DIMETHYL SULFOXIDE				TWA: 50 ppm	TWA: 50 ppm TWA: 160 mg/m ³

Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
DIMETHYL SULFOXIDE	Skin TWA: 50 ppm TWA: 160 mg/m ³	Skin TWA: 50 ppm TWA: 160 mg/m ³ STEL: 100 ppm STEL: 320 mg/m ³			

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available

8.2 Exposure controls

Engineering Measures Ensure adequate ventilation, especially in confined areas..

Personal Protective Equipment

Eye Protection Tightly fitting safety goggles

Skin and Body Protection Long sleeved clothing. Latex gloves (ketone resistant). Preventive skin protection. Thick fabric gloves.

Hand Protection Protective gloves

Respiratory Protection Wear a positive-pressure supplied-air respirator.

Other Protective Equipment Impervious clothing.
Environmental Exposure Controls No information available.

Hygiene Measures Provide regular cleaning of equipment, work area and clothing..

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Physical State Liquid.

Physical Property Data

pH Value	No data available
Flash Point	95°C/203°F°C
Autoignition Temperature	215°C/419°F
Melting/Freezing Point	18.5°C
Boiling Point (°C)	189°C/372°F
Vapor Pressure	0.55 hPa at 20°C
Vapor Density	No information available
Water Solubility	Soluble
Evaporation Rate	No data available.
Flammability (solid, gas)	No data available
Flammability Limits in Air	
upper flammability limit	No data available
lower flammability limit	No data available
Density	1.104 g/cm ³ at 20°C
Specific Gravity	No data available.
Decomposition Temperature	No data available
Viscosity, Kinematic	No data available.
Viscosity, Dynamic	No data available.
Explosive Properties	No information available.
Oxidizing Properties	No information available
VOC Content (%)	No information available

9.2 Other Safety Information

Other Safety Information

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3

Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Not determined

10.5 Incompatible Materials

None in particular

10.6 Hazardous Decomposition Products

None under normal processing.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity	Product does not present an acute toxicity hazard based on known or supplied information
Inhalation	May cause irritation of respiratory tract.
Eye Irritation	May cause eye irritation with susceptible persons.
Skin Irritation	May cause skin irritation and/or dermatitis.
Ingestion	Ingestion may cause irritation to mucous membranes.
Acute toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity	

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
DIMETHYL SULFOXIDE 67-68-5	14500 mg/kg (Rat)	40 g/kg (Rat)	

Mutagenic Effects	Contains no ingredient listed as a mutagen.
Carcinogenic Effects	None known.
Reproductive Toxicity	None known
Developmental Toxicity	None known.
Aspiration hazard	None known

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

Chemical Name	Ecotoxicity - Freshwater Algae - Acute Toxicity Data	Ecotoxicity - Freshwater Fish - Acute Toxicity Data	Ecotoxicity - Water Flea - Acute Toxicity Data
DIMETHYL SULFOXIDE 67-68-5	EC50 (96 h) 12350 - 25500 mg/L (Skeletonea costatum)	LC50 (96 h) 41.7g/L (Cyprinus carpio) LC50 (96 h) 40g/L (Lepomis macrochirus) static LC50 (96 h) 34mg/L (Pimephales promelas) LC50 (96 h) 33 - 37g/L (Oncorhynchus mykiss) static	EC507000mg/L24h

12.2 Persistence and degradability

No data is available on the product itself

12.3 Bioaccumulative potential

No information available

Chemical Name	Log Pow
DIMETHYL SULFOXIDE 67-68-5	-2.03

12.4 Mobility in soil

No information available

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors

13. DISPOSAL CONSIDERATIONS

Waste from Residues/Unused Products Dispose of in accordance with local regulations

Contaminated Packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

IMDG/IMO Not regulated

ICAO Not regulated

ICAO/IATA Not regulated

DOT Not regulated

TDG Not regulated

Canada - WHMIS: Classifications B3

MEX Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	EINECS / ELINCS	DSL / NDSL	PICCS	ENCS	IECSC	AICS	KECL
DIMETHYL SULFOXIDE	Listed	Listed	Listed	Listed	Listed	Listed	Listed	Listed

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances / EU List of Notified Chemical Substances

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
PICCS - Philippine Inventory of Chemicals and Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
AICS - Australian Inventory of Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

16. OTHER INFORMATION

Disclaimer

The information provided on this SDS 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

End of Material Safety Data Sheet

Key literature references and sources for data

www.ChemADVISOR.com/