



# SAFETY DATA SHEET

Revision Date **23-Mar-2012**

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

**Product Name** DIMETHYL SULFOXIDE, BIO GRADE

**Recommended Use** For research use only  
**Registration Number** No information available

### 1.1 Product Identifier

**Catalog Number:** 300068

**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

### Risk Combination Phrases

R36/37/38 - Irritating to eyes, respiratory system and skin.

### S-phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S25 - Avoid contact with eyes.

S20 - When using do not eat or drink.

### Safety Combination Phrases:

S37/39 - Wear suitable gloves and eye/face protection.



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).  
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: C<sub>2</sub>H<sub>6</sub>OS  
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

<b>General Advice</b>	If symptoms persist, call a physician.
<b>Eye Contact</b>	Do not rub affected area. Get medical attention immediately if irritation persists.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
<b>Inhalation</b>	Move to fresh air in case of accidental inhalation of vapors. Immediate medical attention is required. Toxic by inhalation
<b>Rinse mouth</b>	Clean mouth with water and afterwards drink plenty of water.

#### **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**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### **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  
STORE UNDER NITROGEN

### 7.1 Precautions for safe handling

Ensure adequate ventilation.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a cool, well-ventilated place

### 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 <sup>3</sup>

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

**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

**Hand Protection** Protective gloves

**Respiratory Protection** No special protective equipment required.

**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 <sup>3</sup> 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

None in particular

### 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** No information available.

**Eye Irritation** No information available.

**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 (Skeletonema 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	EC50 7000mg/L 24h

### 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/NDSL** - 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

## 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/](http://www.ChemADVISOR.com/)