

# Safety Data Sheet

According to Hazardous Products Regulation (SOR/2015-17)

Revision date: 12.07.2023

Version: 6.4

Print date: 12.07.2023

## SECTION 1: Identification

### Product identifier

Trade name/designation:	Dimethylsulfoxide
Product No.:	BDH1115
Synonyms:	none
CAS No.:	67-68-5
Other means of identification:	

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

Recommended use:	For Further Manufacturing Use Only
Uses advised against:	Not for Human or Animal Drug Use

### Details of the supplier of the safety data sheet

#### Supplier

##### **VWR International**

Street	2360 Argentia Road
Postal code/City	Mississauga, Ontario
	Canada L5N 5Z7
Telephone	+1-800-932-5000 toll-free within US/Canada
Telefax	+1-610-728-2103

### Emergency phone number

Telephone +1-613-996-6666 (Canutec, 24 hrs/day, 7 days/week, Canada)

### Preparation Information

VWR International - Product Information Compliance

E-mail SDS@avantorsciences.com

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

#### Classification according to Hazardous Products Regulation (SOR/2015-17)

Hazard classes and hazard categories	Hazard statements
Flammable liquid, category 4	H227

### 2.2 Label elements

#### Labelling in accordance with (SOR/2015-17)

#### Hazard pictograms

none

**Signal word:** Warning

Hazard statements	
H227	Combustible liquid

Precautionary statements	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243	Take precautionary measures against static discharge.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P403+P235	Store in a well-ventilated place. Keep cool.

#### Hazard(s) not otherwise classified (HNOC)

none

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Substance name	Dimethyl Sulfoxide
Molecular formula	(CH <sub>3</sub> ) <sub>2</sub> SO
Molecular weight	78.14 g/mol
CAS No.	67-68-5

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information

When in doubt or if symptoms are observed, get medical advice. Change contaminated, saturated clothing. Wash contaminated clothing before reuse. Do not leave affected person unattended.

#### In case of inhalation

Remove casualty to fresh air and keep warm and at rest. Obtain medical attention if symptoms appear.

#### In case of skin contact

Gently wash with plenty of soap and water. In case of skin reactions, consult a physician.

#### After eye contact:

Rinse immediately carefully and thoroughly with eye-bath or water. Obtain medical attention if symptoms appear.

#### In case of ingestion

Rinse mouth thoroughly with water. Call a doctor if you feel unwell.

#### Self-protection of the first aider

First aider: Pay attention to self-protection!

### 4.2 Most important symptoms/effects, acute and delayed

No known symptoms to date.

### 4.3 Indication of any immediate medical attention and special treatment needed

No special information on medical attention and special treatment available.

## SECTION 5: Fire fighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Water.

Foam.

Dry extinguishing powder.

#### Extinguishing media which must not be used for safety reasons

Full water jet.

### 5.2 Specific hazards arising from the chemical

In case of fire may be liberated:

Carbon monoxide

Carbon dioxide (CO<sub>2</sub>).

Sulphur oxides

### 5.3 Advice for firefighters

Do not inhale explosion and combustion gases.

Wear a self-contained breathing apparatus and chemical protective clothing.

Fight fire with normal precautions from a reasonable distance.

Use water spray/stream to protect personnel and to cool endangered containers.

In case of fire: Evacuate area.

Do not allow run-off from fire-fighting to enter drains or water courses.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Remove victim out of the danger area. First Aid, decontamination, treatment of symptoms.

### 6.2 Environmental precautions

No special environmental measures are necessary.

### 6.3 Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal. Dispose according to legislation.

### 6.4 Reference to other sections

Personal protection equipment (PPE): see section 8 Disposal information: see section 13

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advices on safe handling

No special measures are necessary.

Measures to prevent fire, aerosol and dust generation

No special measures are necessary.

Measures required to protect the environment

No special measures are necessary.

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

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

Recommended storage temperature: Ambient temperature

Storage: Store in a dry place. Store in a closed container. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Packaging materials: Glass High density polyethylene (HDPE) Unsuitable materials and coatings of containers/equipment: No further relevant information available.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Does not contain substances above concentration limits fixing an occupational exposure limit.

### 8.2 Engineering controls

#### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

### **Personal protection equipment (PPE)**

Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

#### *Eye/face protection*

Eye glasses with side protection

#### *Skin protection*

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

#### By short-term hand contact

Suitable material:	CR (polychloroprene, chloroprene rubber)
Thickness of the glove material:	0,13 mm
Breakthrough time	10 min

#### By long-term hand contact

Suitable material:	CR (polychloroprene, chloroprene rubber)
Thickness of the glove material:	-
Breakthrough time	> 480 min

#### *Respiratory protection*

Usually no personal respirative protection necessary.

#### *Additional information*

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

#### *Environmental exposure controls*

no data available

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance	
Physical state:	liquid
Color:	colorless
Odor:	no data available

#### Safety relevant basic data

pH:	no data available
Melting point/freezing point:	18.5 °C
Initial boiling point and boiling range:	189 °C (1013 hPa)
Flash point:	87 °C
Flammability:	Combustible liquid
Lower and upper explosion limit	
Lower explosion limit:	1.8 % (v/v)
Upper explosion limit:	63 % (v/v)
Vapor pressure:	0.6 hPa (20 °C)
Relative vapour density:	2.7 (20 °C)
Density and/or relative density	
Density:	1.101 g/cm <sup>3</sup> (20 °C)
Solubility(ies)	
Water solubility:	1,000 g/l (20 °C)
Partition coefficient: n-octanol/water:	-2.03 (20 °C)
Auto-ignition temperature:	300-302 °C
Decomposition temperature:	not applicable
Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	2.14 mPa*s (20 °C)
Particle characteristics:	does not apply to liquids

### 9.2 Other information

Evaporation rate:	no data available
Explosive properties:	no data available
Oxidising properties:	not applicable
Bulk density:	no data available
Refraction index:	1.4783 (589 nm; 20 °C)
Dissociation constant:	no data available
Surface tension:	no data available
Henry's Law Constant:	no data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is non-reactive under normal conditions.

## 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

## 10.3 Possibility of hazardous reactions

No further relevant information available.

## 10.4 Conditions to avoid

No further relevant information available.

## 10.5 Incompatible materials:

No further relevant information available.

## 10.6 Hazardous decomposition products

No known hazardous decomposition products.

Decomposition products in case of fire: see section 5.

# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

### Acute effects

*Acute oral toxicity:*

LD50: > 14500 mg/kg - Rat - (RTECS)

*Acute dermal toxicity:*

LD50: > 40000 mg/kg - Rat - (RTECS)

*Acute inhalation toxicity:*

no data available

### Irritant and corrosive effects:

*Primary irritation to the skin:*

not applicable

*Irritation to eyes:*

not applicable

*Irritation to respiratory tract:*

not applicable

### Respiratory or skin sensitization

In case of skin contact: not sensitizing

In case of inhalation: not sensitizing

### STOT-single exposure

not applicable

### STOT-repeated exposure

not applicable

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

**Carcinogenicity**

No indication of human carcinogenicity.

**Germ cell mutagenicity**

No indications of human germ cell mutagenicity exist.

**Reproductive toxicity**

No indications of human reproductive toxicity exist.

**Aspiration hazard**

not applicable

**Other adverse effects**

no data available

**Additional information**

no data available

## SECTION 12: Ecological information

### 12.1 Toxicity

**Fish toxicity:**

LC50: 36200 mg/l (96 h) - Geiger, D.L., L.T. Brooke, and D.J. Call 1990. Acute Toxicities of Organic Chemicals to Fathead Minnows (*Pimephales promelas*), Volume 5

**Daphnia toxicity:**

LC50: 25000 mg/l (48 h) - Goto, T., and J. Hiromi 2003. Toxicity of 17alpha-Ethinylestradiol and Norethindrone, Constituents of an Oral Contraceptive Pill to the Swimming and Reproduction of Cladoceran *Daphnia magna*, with Special Reference to Their Synergetic Effect

**Algae toxicity:**

no data available

**Bacteria toxicity:**

no data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water: -2.03 (20 °C)

### 12.4 Mobility in soil:

no data available

### 12.5 Results of PBT/vPvB assessment

not applicable



## 12.6 Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to the environment.

## 12.7 Other adverse effects

no data available

# SECTION 13: Disposal considerations

## 13.1 Waste treatment methods

### Appropriate disposal / Product

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal. Waste requires monitoring.

Waste code product: 160508

### Appropriate disposal / Package

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

### Additional information

Directive 2008/98/EC (Waste Framework Directive)

No further relevant information available.

# SECTION 14: Transport information

## Land transport (TDG)

No dangerous good in sense of this transport regulation.

## Sea transport (IMDG)

No dangerous good in sense of this transport regulation.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code not relevant

## Air transport (ICAO-TI / IATA-DGR)

No dangerous good in sense of this transport regulation.

# SECTION 15: Regulatory information

## Safety, health and environmental regulations/legislation specific for the substance or mixture

Domestic Substance List:

## SECTION 16: Other information

### Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists  
DOT - Department of Transportation  
IARC - International Agency for Research on Cancer  
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations  
ICAO-TI - International Civil Aviation Organization-Technical Instructions  
IMDG - International Maritime Code for Dangerous Goods  
LTV - Long Term Value  
NIOSH - National Institute for Occupational Safety and Health  
NTP - National Toxicology Program  
OSHA - Occupational Safety & Health Administration  
PBT - Persistent, Bioaccumulative and Toxic  
PEL - Permissible Exposure Limit  
STV - Short Term Value  
SVHC - Substances of Very High Concern  
TDG - Transport of Dangerous Goods  
TLV - Threshold Limit Value  
vPvB - very Persistent, very Bioaccumulative

### Key literature references and sources for data

This Safety Data Sheet has been prepared based on information available for public as TOXNET information, European Chemicals Agency (ECHA) substance dossier, papers from international cancer research institutes (IARC Monographs), U.S. National Toxicology Program data, U.S. Agency for Toxic Substances and Disease Control (ATSDR), PubChem websites and SDS from our raw material manufacturers.

Revision date	Version	Print date
12.07.2023	6.4	12.07.2023

### Additional information

Indication of changes                      Review and revision of Sections 4, 5, 6, 7 and 10.  
  
If you need an explanation of the change, contact the supplier (SDS@avantorsciences.com).

*The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guidance. The information in this document is based on the present state knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International and his Affiliates shall not be held liable for any damage resulting from handling.*