

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 17.03.2022

Version number 6 (replaces version 5)

Revision: 17.03.2022

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

1.1 Product identifier

- Trade name: Dimethyl sulfoxide
- Synonyma DMSO



· Article number: 39757

· CAS Number:
67-68-5

· EC number:
200-664-3

· Registration number 01-2119431362-50

· 1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.

· Application of the substance / the mixture: Laboratory chemicals

1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier:
SERVA Electrophoresis GmbH
Carl-Benz-Str. 7
D-69115 Heidelberg
Tel.: +49 6221 13840-0
FAX: +49 6221 13840-10
msds.info@serva.de

· Information department: Product Safety department Tel.: +49 6221 13840-35

1.4 Emergency telephone number:

Medical Emergency Information in case of poisoning:
Poison Information Center Mainz - Phone: +49 (0) 6131 19240
(advisory service in German or English language)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008:
The substance is not classified, according to the CLP regulation.

2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008: Void
· Hazard pictograms: Void
· Signal word: Void
· Hazard statements: Void

2.3 Other hazards

· Results of PBT and vPvB assessment:
· PBT: PBT - assessment not available.
· vPvB: vPvB - assessment not available.

SECTION 3: Composition/information on ingredients

3.1 Substances

· CAS No. Description:
67-68-5 dimethyl sulfoxide
· Identification number(s):
· EC number: 200-664-3
· Description:
· Empirical formula: C_2H_6OS

(Contd. on page 2)

GB

Safety data sheet
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Printing date 17.03.2022

Version number 6 (replaces version 5)

Revision: 17.03.2022

Trade name: Dimethyl sulfoxide· **MW:** 78.1

(Contd. of page 1)

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly. Consult doctor if you feel unwell.
- **After eye contact:**
Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist In case of complaints.
- **After swallowing:** Wash out mouth. Seek medical advice if discomfort occurs.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture:**
Vapours can form flammable and explosive mixtures with air.
In case of fire, the following can be formed, but not limited to:
Sulphur oxides (SO_x)
Carbon monoxide and carbon dioxide
Formaldehyde
Methyl mercaptan
Dimethyl sulfide
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
Avoid contact with the eyes and skin.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up**
Dispose contaminated material as waste according to item 13.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling:** No special measures required.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

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Version number 6 (replaces version 5)

Revision: 17.03.2022

Trade name: *Dimethyl sulfoxide*

(Contd. of page 2)

- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Store away from oxidising agents.
- **Further information about storage conditions:**
Keep receptacle tightly sealed and store in dry conditions.
This product is hygroscopic.
Protect from exposure to the light.
- **7.3 Specific end use(s):** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **DNELs**
workers: long term exposure-systemic effects, dermal: 400 mg/kg/Tag
Worker: Long term exposition - systemic effect, inhalation: 394 mg/m³
- **PNECs**
Freshwater: 17 mg/l
Seawater: 1,7 mg/l
Soil: 3,02 mg/l
Sewage plant: 11,0 mg/l
- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls:** No further data; see item 7.
- **Individual protection measures, such as personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures should be adhered to when handling chemicals.
- **Breathing equipment:**
Short term filter device:
Filter P2.
- **Hand protection:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves:**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material:**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
Chloroprene rubber, CR
Nitrile rubber, NBR
- **Eye/face protection:** Safety glasses
- **Body protection:** Protective work clothing.

GB

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 17.03.2022

Version number 6 (replaces version 5)

Revision: 17.03.2022

Trade name: Dimethyl sulfoxide

(Contd. of page 3)

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information:

| | |
|--|--------------------------|
| · Physical state: | Fluid |
| · Colour: | Colourless |
| · Odour: | Odourless |
| · Odour threshold: | Not determined. |
| · Melting point/freezing point: | 18 °C |
| · Boiling point or initial boiling point and boiling range: | 189 °C |
| · Flammability: | Not applicable. |
| · Lower and upper explosion limit: | |
| · Lower: | 2.6 Vol % |
| · Upper: | 28.5 Vol % |
| · Flash point: | 87 °C |
| · Decomposition temperature: | Not determined. |
| · pH: | 5-7 |
| · Viscosity: | |
| · Kinematic viscosity: | Not determined. |
| · Dynamic viscosity at 20 °C: | 2.14 mPas |
| · Solubility: | |
| · Water: | Fully miscible |
| · Partition coefficient n-octanol/water (log value): | Not determined. |
| · Vapour pressure at 20 °C: | 0.55 hPa |
| · Density and/or relative density: | |
| · Density at 20 °C: | 1.104 g/cm ³ |
| · Relative density: | no information available |

· 9.2 Other information

| | |
|--|-----------------|
| · Appearance: | |
| · Form: | Liquid |
| · Important information on protection of health and environment, and on safety: | |
| · Ignition temperature: | 300 °C |
| · Explosive properties: | Not determined. |

SECTION 10: Stability and reactivity

· **10.1 Reactivity:** No further relevant information available.

· **10.2 Chemical stability:**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **10.3 Possibility of hazardous reactions:**

No further relevant informations available.

Reacts with Bromomethane and sodium hydride

· **10.4 Conditions to avoid:**

high temperatures

exposure to the light

moisture

· **10.5 Incompatible materials:**

Avoid contact with:

Oxidizers

Acids

Halides of organic and inorganic acids

Methyl bromide, sodium hydride

Zinc and steel (in the presence of water)

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 17.03.2022

Version number 6 (replaces version 5)

Revision: 17.03.2022

Trade name: Dimethyl sulfoxide

(Contd. of page 4)

· **10.6 Hazardous decomposition products:** In case of fire: See Section 5

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**

| | | |
|--------|----------|------------------------|
| Oral | LD50 | 14,500 mg/kg (rat) |
| Dermal | LD50 | 40,000 mg/kg (rat) |
| | LC50/96h | 35.2-50.6 mg/l (trout) |

- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation:** 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.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards:**
- **Endocrine disrupting properties:** Substance is not listed.

SECTION 12: Ecological information

- **12.1 Toxicity:**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability:** the product is biodegradable.
- **12.3 Bioaccumulative potential:** No further relevant information available.
- **12.4 Mobility in soil:** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment:**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6 Endocrine disrupting properties:** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects:**
- **Additional ecological information:**
- **General notes:**
- Do not allow product to reach ground water, water course or sewage system.
- Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Disposal must be made according to official regulations.
- **Uncleaned packagings:**
- **Recommendation:**
- Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

GB

(Contd. on page 6)

Safety data sheet
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Trade name: Dimethyl sulfoxide

(Contd. of page 5)

SECTION 14: Transport information

| | |
|---|--|
| · 14.1 UN number or ID number · ADR, ADN, IMDG, IATA | Void |
| · 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA | Void |
| · 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class: | Void |
| · 14.4 Packing group · ADR, IMDG, IATA | Void |
| · 14.5 Environmental hazards | Not applicable. |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Maritime transport in bulk according to IMO instruments | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |
| · UN "Model Regulation": | Void |

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
 - Directive 2012/18/EU
 - Named dangerous substances - ANNEX I Substance is not listed.
 - DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
Substance is not listed.
 - REGULATION (EU) 2019/1148
 - Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))
Substance is not listed.
 - Annex II - REPORTABLE EXPLOSIVES PRECURSORS Substance is not listed.
 - Regulation (EC) No 273/2004 on drug precursors Substance is not listed.
 - Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
Substance is not listed.
 - National regulations:
 - Technical instructions (air):
- | Class | Share in % |
|-------|------------|
| NK | 80-100 |
- Water hazard class: Water hazard class 1 (Assessment by list): slightly hazardous for water.
 - 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: Product safety department
- Contact: +49 6221 13840-35
- Date of previous version: 27.04.2018

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

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Version number 6 (replaces version 5)

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Trade name: Dimethyl sulfoxide

(Contd. of page 6)

· Version number of previous version: 5**· Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

PBT: persistent, bioaccumulative, toxic substance (REACH)

vPvB: very persistent, very bioaccumulative substance (REACH)

REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

CLP: Regulation on classification, labelling and packaging of substances and mixtures

bw: body weight

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

GB