

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

Page 1/7

Printing date 01.07.2021

Revision: 01.07.2021

Version number 10.03 (replaces version 10.02)

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

· **1.1 Product identifier**

· **Trade name:** Dimethyl Sulfoxide

· **Article number:** 1954

· **CAS Number:**

67-68-5

· **EC number:**

200-664-3

· **Application of the substance / the mixture**

Solvents

Chemicals for synthesis

Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

PANREAC QUIMICA S.L.U.

C/Garraf 2

Polígono Pla de la Bruguera

E-08211 Castellar del Vallès (Barcelona)

Tel. (+34) 937 489 400

Fax. (+34) 937 489 401

e-mail: product.safety@panreac.com

· **Further information obtainable from:** email: product.safety@panreac.com

· **1.4 Emergency telephone number:**

Single telephone number for emergency calls: 112 (EU)

Tel.: (+34) 937 489 499

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:** Not applicable.

· **vPvB:** Not applicable.

GB

(Contd. on page 2)

Trade name: Dimethyl Sulfoxide

(Contd. of page 1)

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

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Rinse out mouth.
make victim drink water (maximum of 2 drinking glasses)
Laxative: Sodium sulfate (1 tablespoon/ 1/4 L water)
If symptoms persist consult doctor.
- **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:** Water, CO₂, foam, powder.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
Sulphur oxides (SO_x)
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Contain escaping vapours with water.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Keep ignition sources away - Do not smoke.
Do not inhale steams/aerosols.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Clean up affected area.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

(Contd. on page 3)

Trade name: Dimethyl Sulfoxide

See Section 13 for disposal information.

(Contd. of page 2)

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Fumes can combine with air to form an explosive mixture.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container sealed.
- **Recommended storage temperature:** Room Temperature
- **Storage class:** 10
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.

· DNELs

Oral	Long-term - systemic effects, general population	60 mg/kg
Dermal	Long-term - systemic effects, worker	200 mg/kg
	Long term - systemic effects, general population	100 mg/kg
Inhalative	Long-term - systemic effects, worker	484 mg/m ³
	Long-term - local effects, worker	265 mg/m ³
	Long-term - systemic effects, general population	120 mg/m ³
	Long-term - local effects, general population	47 mg/m ³

· PNECs

Aquatic compartment - freshwater	17 mg/L
Aquatic compartment - marine water	1.7 mg/L
Aquatic compartment - sediment in freshwater	13.4 mg/kg
Sewage treatment plant	11 mg/L
Oral secondary poisoning	700 mg/kg food
Ground	3.02 mg/kg

- **Additional information:** The lists valid during the making 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:**
Immediately remove all soiled and contaminated clothing
- **Respiratory protection:**
Filter A
Use suitable respiratory protective device only when aerosol or mist is formed.
- **Hand protection**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
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.

(Contd. on page 4)

Trade name: Dimethyl Sulfoxide

(Contd. of page 3)

- **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 gloves made of the following materials are suitable:**
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.75 mm
Value for the permeation: Level ≥ 480 min
- **As protection from splashes gloves made of the following materials are suitable:**
Natural rubber, NR
Recommended thickness of the material: ≥ 0.75 mm
Value for the permeation: Level ≥ 240 min
- **Eye/face protection** Safety glasses
- **Body protection:**
Protective work clothing
Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Fluid
- **Colour:** Colourless
- **Odour:** Sulfurous
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** 18.5 °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
- **Auto-ignition temperature:** Not determined.
- **Decomposition temperature:** >190 °C
- **pH** Not determined.
- **Viscosity:**
- **Kinematic viscosity** Not determined.
- **Dynamic at 20 °C:** 2.14 mPas
- **Solubility**
- **water at 20 °C:** >1000 g/l
- **Partition coefficient n-octanol/water (log value)** -1.34998
- **Vapour pressure at 20 °C:** 0.556 hPa
- **Density and/or relative density**
- **Density at 20 °C:** 1.104 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not determined.

- **9.2 Other information**
- **Appearance:**
- **Form:** Fluid
- **Important information on protection of health and environment, and on safety.**
- **Ignition temperature:** 300-302 °C
- **Explosive properties:** Product does not present an explosion hazard.
- **Solvent content:**
- **VOC (EC)** 100 %

(Contd. on page 5)

Trade name: Dimethyl Sulfoxide

(Contd. of page 4)

- **Change in condition**
- **Evaporation rate** Not determined.

- **Information with regard to physical hazard classes**

- **Explosives** Void
- **Flammable gases** Void
- **Aerosols** Void
- **Oxidising gases** Void
- **Gases under pressure** Void
- **Flammable liquids** Void
- **Flammable solids** Void
- **Self-reactive substances and mixtures** Void
- **Pyrophoric liquids** Void
- **Pyrophoric solids** Void
- **Self-heating substances and mixtures** Void
- **Substances and mixtures, which emit flammable gases in contact with water** Void
- **Oxidising liquids** Void
- **Oxidising solids** Void
- **Organic peroxides** Void
- **Corrosive to metals** Void
- **Desensitised explosives** Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
Warming. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** Keep away from open flames, hot surfaces and sources of ignition.
- **10.5 Incompatible materials:**
alkali metals
strong oxidants
strong acids
- **10.6 Hazardous decomposition products:** In the event of fire: See chapter 5
- **Additional information:** strongly hygroscopic

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 relevant for classification:**
Quantitative data on the toxicological effect of this product are not available.

· Components	Type	Value	Species
--------------	------	-------	---------

- | | | | |
|--------|------|--------------|-------|
| Oral | LD50 | 28,300 mg/kg | (rat) |
| Dermal | LD50 | 40,000 mg/kg | (rat) |

- **Skin corrosion/irritation** Slight irritations.
- **Serious eye damage/irritation** Slight irritation.
- **After inhalation:** No irritant effect.
- **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.

(Contd. on page 6)

Trade name: Dimethyl Sulfoxide

(Contd. of page 5)

- **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.

Type of test	Effective concentration	Method	Assessment
EC50/72 h	12,000-17,000 mg/l	(Algae)	
EC50/48 h	24,600 mg/l	(daphnia magna)	
LC50/96 h	>25,000 mg/l	(fish)	

- **12.2 Persistence and degradability** Not easily biodegradable
- **12.3 Bioaccumulative potential**
Non significant accumulation in organisms
-1.35 log Pow
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **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**
Chemicals must be disposed of in compliance with the respective national regulations.
- **Uncleaned packaging:**
- **Recommendation:**
Disposal must be made according to official regulations.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

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

(Contd. on page 7)

Trade name: Dimethyl Sulfoxide

(Contd. of page 6)

· 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.
 - **National regulations:**
 - **Other regulations, limitations and prohibitive regulations**
 - **Substances of very high concern (SVHC) according to REACH, Article 57** Substance is not listed.
- **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.

- **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)
 - 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)
 - VOC: Volatile Organic Compounds (USA, EU)
 - 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
 - SVHC: Substances of Very High Concern
 - vPvB: very Persistent and very Bioaccumulative
- *** Data compared to the previous version altered.**