

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

Printing date: 10.02.2022

Version No: 1.02 (replaces version 1.01)

Revision: 10.02.2022

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

· 1.1 Product identifier

· Trade name: DMSO EVOL™

· CAS Number:

67-68-5

· EC number:

200-664-3

· Registration number: 01-2119431362-50-0001

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

· Application of the substance / the preparation:

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

PC19 Intermediate

PC0 Other

· Uses advised against: No further relevant information available.

· 1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

Gaylord Chemical Company, L.L.C.

1880 Fairlawn Rd

Tuscaloosa, AL 35401

United States

Tel: +1 (205) 561-5045

Email: ehs@gaylordchem.com

· 1.4 Emergency telephone number:

EMERGENCY HEALTH, SAFETY & ENVIRONMENTAL INFORMATION CALL:

Gaylord Chemical Company, LLC

Tel: +1 (985) 649-5464 (8:00 am - 5:00 pm CST)

+1 (205) 342-0650 (Nights and Weekends)

EMERGENCY TRANSPORTATION INFORMATION, CALL:

CHEMTREC

DOMESTIC NORTH AMERICA: (800) 424-9300

INTERNATIONAL: +1 (703) 741-5500

OTHER INFORMATION, CALL:

Gaylord Chemical Company, LLC

Tel: +1 (985) 649-5464

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: No

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· vPvB: No

SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description**
CAS: 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:**
No special measures required.
If symptoms persist consult doctor.
- **After inhalation:** Supply fresh air.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
Remove contact lenses, if present and easy to do. Continue rinsing.
- **After swallowing:** Rinse mouth.
- **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, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **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
Carbon dioxide
Sulphur oxides (SO_x)
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
Wear protective clothing.
- **6.2 Environmental precautions:**
Dilute with plenty of water.
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).

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Dispose of the material collected according to regulations.

· **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** Prevent formation of aerosols.

· **Information about fire and explosion protection:** No special measures required.

· **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 container tightly sealed.

Store in dry conditions.

Storage temperature: > 20 °C (to prevent crystallization)

· **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:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **DNELs**

Oral	DNEL(long/systemic)	60 mg/kg bw/day (Consumer)
Dermal	DNEL(long/systemic)	100 mg/kg bw/day (Consumer) 200 mg/kg bw/day (Workers (Industrial/Professional))
Inhalative	DNEL(long/local)	47 mg/m3 (Consumer) 265 mg/m3 (Workers (Industrial/Professional))
	DNEL(long/systemic)	120 mg/m3 (Consumer) 484 mg/m3 (Workers (Industrial/Professional))

· **PNECs**

PNEC(aqua)	17 mg/L (freshwater)
	1.7 mg/L (marine water)
PNEC(STP)	11 mg/L (sewage treatment plant)
PNEC(sediment)	13.4 mg/kg sedi. dw (sediment)
PNEC(soil)	11 mg/kg soil dw (sewage treatment plant)
PNEC(oral)	700 mg/kg food (food)
PNEC(soil)	3.02 mg/kg soil ww (soil)

· **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:**

Do not eat, drink, smoke or sniff while working.

Keep away from foodstuffs, beverages and feed.

The usual precautionary measures are to be adhered to when handling chemicals.

· **Respiratory protection:** Not necessary if room is well-ventilated.

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· **Hand protection**

Protective gloves and protective skin cream

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.

· **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.

· **Eye/face protection**



Tightly sealed goggles

· **Body protection:** Protective work clothing

· **Environmental exposure controls** No further relevant information available.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Fluid

· **Form:**

Fluid

· **Colour:**

Clear

· **Odour:**

Fruit-like

· **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 (ASTM D93)

· **Ignition temperature:**

300 - 302 °C

· **Decomposition temperature:**

190 °C

· **pH**

Not determined.

· **Viscosity:**

· **Kinematic viscosity**

Not determined.

· **Dynamic at 20 °C:**

2.14 mPas

· **Solubility**

· **water at 25 °C:**

1000 g/L (calc)

· **Partition coefficient n-octanol/water (log value)**

-1.35 logPow (20 °C, pH 7)

· **Vapour pressure at 20 °C:**

0.56 hPa (EU Method A.4)

· **Density and/or relative density**

· **Density at 20 °C:**

1.1 g/cm³ (EU Method A.3)

· **Relative density**

Not determined.

· **Vapour density**

Not determined.

· **Relative gas density**

Not determined.

· **9.2 Other information**

· **Explosive properties:**

Product does not present an explosion hazard.

· **Oxidising properties**

No

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· **Evaporation rate**

Not determined.

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SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** No decomposition if used and stored according to specifications.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **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 dangerous decomposition products known.

* 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:**

Oral	LD50	28300 mg/kg (Rat) (OECD Guideline 401)
Dermal	LD50	40000 mg/kg (Rat)
Inhalative	LC0	5.33 mg/L (Rat) (OECD Guideline 403, inhalation:vapour) 4h

- **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:**

LC50 (96h) (static)	> 25000 mg/L (Fish) (OECD Guideline 203, Danio rerio) nominal
ErC50 (72h)	17000 mg/L (Algae) (OECD Guideline 201, Pseudokirchneriella subcapitata) nominal
EC50 (48h) (static)	24600 mg/L (Daphnia) (OECD Guideline 202, Daphnia magna)
EC50 (0,5h) (static)	10 - 100 mg/L (Bacteria) (ISO 8192, activated sludge)

· **12.2 Persistence and degradability**

Not readily biodegradable
31 % (28 d, OECD Guideline 301D)

· **12.3 Bioaccumulative potential**

Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
3.16 BCF (QSAR)

· **12.4 Mobility in soil** 0.64 log Koc (QSAR)

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· 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

· 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

· 12.7 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods**· Recommendation:** Must be specially treated adhering to official regulations.**· Uncleaned packaging****· Recommendation:** Disposal must be made according to official regulations.**· Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN number or ID number**· ADR/RID/ADN, IMDG, IATA** Void**· 14.2 UN proper shipping name****· ADR/RID/ADN, IMDG, IATA** Void**· 14.3 Transport hazard class(es)****· ADR/RID/ADN, IMDG, IATA** Void**· Class** Void**· 14.4 Packing group****· ADR/RID/ADN, 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.

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.

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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:**

Chemservice GmbH
Herrnsheimer Hauptstrasse 1b
D-67550 Worms
Tel.: +49 (0)6241-95480-0
Fax: +49 (0)6241-95480-25
Email: sds@chemservice-group.com

· **Date of previous version:** 03.12.2021

· **Version number of previous version:** 1.01

· **Abbreviations and acronyms:**

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
MARPOL: (from Marine Pollutant) International Convention for the Prevention of Marine Pollution from Ships
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
UN: United Nations (also UNO: United Nations Organization)
NOEC: No Observed Effect Concentration
OECD: Organisation for Economic Co-operation and Development
ASTM: American Society for Testing and Materials
WAF: Water Accommodated Fraction
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

· * **Data compared to the previous version altered.**