Dimethyl sulfoxide

34869-1L

Version 1.7 Revision Date 06.11.2025

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

1.1. Product identifier

Product name	:	Dimethyl sulfoxide
SDS-number	:	000000020242
Type of product	:	Substance
Remarks	:	Document according to Art. 32 of Regulation (EC) 1907/2006. In accordance to the Article 14 (1) of the REACh Regulation (EC) No 1907/2006, exposure estimation and risk characterisation is not required.
Chemical name	:	Dimethyl sulfoxide
CAS-No.	:	67-68-5

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

Use of the Substance/Mixture	:	Laboratory chemicals
Uses advised against	:	none

1.3. Details of the supplier of the safety data sheet

Company	:	Honeywell Specialty Chemicals Seelze GmbH Wunstorfer Straße 40 30926 Seelze Germany	Solstice Advanced Materials US, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
Telephone	:	(49) 5137-999 0	
For further information, please contact:	:	SafetyDataSheet@solstice.com	

1.4. Emergency telephone number

Emergency telephone number	:	+1-703-527-3887 (ChemTrec-Transport) +1 303-739-1378 (Medical)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Not a hazardous substance or mixture.

2.2. Label elements

REGULATION (EC) No 1272/2008

Not a hazardous substance or mixture.

2.3. Other hazards

Can be absorbed through skin. Results of PBT and vPvB assessment, see chapter 12.5.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical name	CAS-No. Index-No. EC-No.	Classification 1272/2008	Concentration	Remarks
Dimethyl sulfoxide	67-68-5 200-664-3		100 %	N.C.*

N.C.* - Non-hazardous substance - for information only

3.2. Mixtures

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:
First aider needs to protect himself. Move out of dangerous area. Take off immediately all contaminated clothing.

Inhalation:
If breathed in, move person into fresh air. If symptoms persist, call a physician.

Skin contact:
After contact with skin, wash immediately with plenty of soap and water. If symptoms persist, call a physician.

Eye contact:
Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. If eye irritation persists, consult a physician.

Ingestion:
Rinse mouth with water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

4.2. Most important symptoms and effects, both acute and delayed

No data available

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

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms. :

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Water spray
Foam
Carbon dioxide (CO2)
Dry powder

Extinguishing media which shall not be used for safety reasons:
High volume water jet

5.2. Special hazards arising from the substance or mixture

In case of fire hazardous decomposition products may be produced such as:
carbon oxides (CO, CO2).
Sulphur oxides

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material.
Pick for disposal in tightly closed containers

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:
Keep container tightly closed. Exhaust ventilation at the object is necessary.

Advice on protection against fire and explosion:
The product is flammable but not readily ignited. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Keep away from heat and sources of ignition.

Hygiene measures:
Take off all contaminated clothing immediately. Wash hands before breaks and at the end of workday. Recommended preventive skin protection

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions:
Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep under nitrogen.

Advice on common storage:
Do not store together with: Strong oxidizing agents Strong acids

7.3. Specific end use(s)

no additional data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks

Dimethyl sulfoxide	Workers / Long-term systemic effects		484 mg/m3	Inhalation	
Dimethyl sulfoxide	Workers / Long-term local effects		265 mg/m3	Inhalation	
Dimethyl sulfoxide	Workers / Long-term systemic effects		200mg/kg bw/d	Skin contact	
Dimethyl sulfoxide	Consumers / Long-term systemic effects		120 mg/m3	Inhalation	
Dimethyl sulfoxide	Consumers / Long-term local effects		47 mg/m3	Inhalation	
Dimethyl sulfoxide	Consumers / Long-term systemic effects		100mg/kg bw/d	Skin contact	
Dimethyl sulfoxide	Consumers / Long-term systemic effects		60mg/kg bw/d	Ingestion	

Component	Environmental compartment / Value	Remarks
Dimethyl sulfoxide	Fresh water: 17 mg/l	Assessment factor: 1000
Dimethyl sulfoxide	Marine water: 1,7 mg/l	Assessment factor: 10000
Dimethyl sulfoxide	Sewage treatment plant: 11 mg/l	
Dimethyl sulfoxide	Fresh water sediment: 13,4 mg/kg dw	
Dimethyl sulfoxide	Soil: 3,02 mg/kg dw	

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.
Do not breathe vapours/dust.

Personal protective equipment
Respiratory protection:
In the case of vapour formation use a respirator with an approved filter.
Recommended Filter type:
Organic vapour type

Hand protection:
Glove material: Natural Latex
Break through time: > 480 min
Glove thickness: 1 mm
Combi-Latex 395
Gloves must be inspected prior to use.
Replace when worn.
Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.
Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.
Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer reccomends to use the chemical protective glove in practice not longer than 50% of the recomended permeation time.
Manufacturer´s directions for use should be observed because of great diversity of types .
Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:
Safety glasses with side-shields

Skin and body protection:
Protective suit

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

(a) Physical state	:	liquid
(b) Colour	:	colourless
(c) Odour	:	characteristic
(d) Melting point/freezing point	:	18,5 °C
(e) Boiling point/boiling range	:	189 °C
(g) Lower and upper explosion limit	:	Lower explosion limit 2,6 %(V)
	:	Upper explosion limit 28,5 %(V)
(h) Flash point	:	87 °C Method: closed cup
(i) Auto-ignition temperature	:	ca.300 °C ca. 300 °C
(j) Decomposition temperature	:	> 190 °C Slow decomposition possible. Stable under normal conditions.
(k) pH	:	Not applicable
(l) Viscosity, kinematic	:	No data available
(m) Solubility(ies)	:	Water solubility: completely soluble

		Solubility in other solvents: Soluble in most organic solvents
(n) Partition coefficient: n-octanol/water	:	log Pow -1,35
(o) Vapour pressure	:	0,56 hPa at 20 °C 4 hPa at 50 °C 20 hPa at 80 °C 49 hPa at 100 °C
(p) Density and / or relative density	:	1,104 g/cm3 at 20 °C
(q) Relative vapour density	:	2,7
(r) Particle characteristics	:	No data available

9.2 Other Information

Polymer characteristics	:	No data available
The product is hygroscopic. Evaporation rate	:	No data available
Viscosity, dynamic	:	2,14 mPa.s at 20 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

> 190 °C
Slow decomposition possible.
Stable under normal conditions.

10.3. Possibility of hazardous reactions

Vapours may form explosive mixture with air.

10.4. Conditions to avoid

Protect from frost, heat and sunlight.
Protect from moisture.

10.5. Incompatible materials

Strong acids and oxidizing agents
Halogenated compounds

10.6. Hazardous decomposition products

Sulphur oxides
Carbon oxides
Formaldehyde

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

(a) Acute toxicity

Acute oral toxicity:
Species: Rat
Value: 28.500 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity:
LD50
Species: Rat
Value: 40.000 mg/kg
Method: No information available.

Acute inhalation toxicity:
LC0
Species: Rat
Value: > 5,33 mg/l
Exposure time: 4 h
Method: OECD Test Guideline 403

Acute toxicity (other routes of administration):
No data available

(b) Skin corrosion/irritation:
Species: Rabbit
Result: Mild skin irritation
Method: OECD Test Guideline 404

(c) Serious eye damage/eye irritation:
Species: Rabbit
Result: Mild eye irritation
Method: OECD Test Guideline 405

(d) Respiratory or skin sensitisation:
Species: Guinea pig
Result: Does not cause skin sensitisation.
Method: OECD Test Guideline 406

(e) Germ cell mutagenicity:
Test Method: reverse mutation assay
Cell type: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative
Method: OECD Test Guideline 471

(h) STOT-single exposure:
No data available

(i) STOT - repeated exposure:
No data available

(j) Aspiration hazard:
No data available

11.2. Information on other hazards

Endocrine disrupting properties
No data available

Other information:
Experience in use: irritates eyes, skin and respiratory tract

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:
LC50
Species: Danio rerio (zebra fish)
Value: > 25.000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to aquatic plants:
EC50
Species: Pseudokirchneriella subcapitata (green algae)
Value: 17.000 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to Microorganisms:
EC50
Species: activated sludge
Value: 10 - 100 mg/l
Exposure time: 30 min
Method: ISO 8192

Toxicity to aquatic invertebrates:
EC50
Species: Daphnia magna (Water flea)
Value: 24.600 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

12.2. Persistence and degradability

Biodegradability:

Biodegradation: 31 %
Exposure time: 28 d
Result: Not readily biodegradable.
Method: OECD 301 D

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:
Dispose according to legal requirements.

Packaging:
Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:
Provisions relating to waste:
EC Directive 2006/12/EC; 2008/98/EEC
Regulation No. 1013/2006
For personal protection see section 8.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID:Not dangerous goods IMDG:Not dangerous goods IATA:Not dangerous goods

14.2 UN proper shipping name
ADR/RID:Not dangerous goods
IMDG:Not dangerous goods
IATA:Not dangerous goods

14.3 Transport hazard class(es)
No data available

14.4 Packaging group
No data available

14.5 Environmental hazards
ADR/RID:no Marine pollutant: no

14.6 Special precautions for user
No data available

14.7 Maritime transport in bulk according to IMO instruments
No data available

SECTION 15: Regulatory information

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

Basis	Value	Remarks
Directive 2012/18/EC		Not applicable
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of ≥ 0.1 % (w/w).

Other inventory information

USA. List of Active Substances on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory, as amended
All substances listed as active on the TSCA inventory

Australian Inventory of Industrial Chemicals
All components are listed on the inventory, regulatory obligations/restrictions apply

Canada. Domestic Substances List (DSL), as amended
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)
On the inventory, or in compliance with the inventory

Thailand. Existing Chemicals Inventory from FDA (TECI List)
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)
On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Further information

All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:
EC European Community
CAS Chemical Abstracts Service
DNEL Derived no effect level

PNEC Predicted no effect level
vPvB Very persistent and very biaccumulative substance
PBT Persistent, bioaccmulative und toxic substance

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