

SAFETY DATA SHEET

DMSO, anhydrous

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

<i>Trade name:</i>	DMSO, anhydrous
<i>Product no.:</i>	20-0002-01
<i>REACH registration number:</i>	01-2119431362-50-XXXX
<i>Other means of identification:</i>	EC No.: 200-664-3 CAS No.: 67-68-5

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

<i>Relevant identified uses of the substance or mixture:</i>	Laboratory use Restricted to professional users.
<i>Uses advised against :</i>	None known.

1.3. Details of the supplier of the safety data sheet

<i>Company and address:</i>	Cavidi AB Virdings Allé 2 SE-754 50 Uppsala Sweden +46 707380729
<i>Contact person:</i>	Cavidi AB
<i>E-mail:</i>	support@cavidi.se
<i>Revision:</i>	11/17/2023
<i>SDS Version:</i>	1.0

1.4. Emergency telephone number

In urgent situations: Call 112 and request the poison information centre. (24h service)
In less severe situations: Call 010-456 6700 (24h service)
See also section 4 "First aid measures".

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Not classified according to Regulation (EC) No. 1272/2008 (CLP).

2.2. Label elements

<i>Hazard pictogram(s):</i>	Not applicable.
<i>Signal word:</i>	Not applicable.
<i>Hazard statement(s):</i>	Not applicable.
<i>Precautionary statement(s):</i>	
<i>General:</i>	-

<i>Prevention:</i>	-
<i>Response:</i>	-
<i>Storage:</i>	-
<i>Disposal:</i>	-
<i>Hazardous substances:</i>	None known.
<i>Additional labelling:</i>	EUH210, Safety data sheet available on request.

2.3. Other hazards

<i>Additional warnings:</i>	This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification. This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.
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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Product/substance	Identifiers	% w/w	Classification	Note
Dimethyl sulfoxide (DMSO)	CAS No.: 67-68-5 EC No.: 200-664-3 REACH: 01-2119431362-50-XXXX Index No.:	95-100%		

3.2. Mixtures

Not applicable. This product is a substance.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

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SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

<i>General information:</i>	In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.
<i>Inhalation:</i>	In case of discomfort: bring the person into fresh air.
<i>Skin contact:</i>	Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.
<i>Eye contact:</i>	If in eyes: Flush eyes with plenty of water or salt water (20-

30 °C) and continue until irritation stops. Remove contact lenses.

Ingestion:

Rinse and flush mouth thoroughly and consume large quantities of water. In case of continued discomfort: seek medical assistance and bring this safety data sheet.

Burns:

Not applicable.

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

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

Treat symptomatically.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.
 Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Sulphur oxides

Carbon oxides (CO / CO₂)

5.3. Advice for firefighters

Fire fighters should wear appropriate personal protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation, especially in confined areas.
 Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.
 Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid contact during pregnancy and while nursing.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Recommended storage material: Keep only in original packaging.

Storage temperature: Dry, cool and well ventilated

Incompatible materials: Strong acids
Strong oxidizing agents

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Dimethyl sulfoxide (DMSO)

Short term exposure limit (15 minutes) (ppm): 150

Short term exposure limit (15 minutes) (mg/m³): 500

Long term exposure limit (8 hours) (ppm): 50

Long term exposure limit (8 hours) (mg/m³): 150

Annotations:

H = The substance is easily absorbed through the skin.

V = Indicative short term limit.

Occupational exposure limits (AFS 2018:1) and later amendment AFS 2020:6 and AFS 2021:3.

DNEL

Dimethyl sulfoxide (DMSO)

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	178 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	356 mg/kg bw/day
Long term – Local effects - General population	Inhalation	3.13 mg/m ³
Long term – Local effects - Workers	Inhalation	17.67 mg/m ³
Long term – Systemic effects - General population	Inhalation	56 mg/m ³
Long term – Systemic effects - Workers	Inhalation	75 mg/m ³
Long term – Systemic effects - General population	Oral	1.67 mg/kg bw/day

PNEC

Dimethyl sulfoxide (DMSO)

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		17 mg/L
Freshwater sediment		61.4 mg/kg
Marine water		1.7 mg/L
Marine water sediment		6.14 mg/kg
Predators		700 mg/kg
Sewage treatment plant		11 mg/L
Soil		2.32 mg/kg

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations:

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios:

There are no exposure scenarios implemented for this product.

Exposure limits:

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures:

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked. Apply standard precautions during use of the product. Avoid inhalation of vapours.

Hygiene measures:

Wash hands after use.

Measures to avoid environmental exposure:

No specific requirements.

Individual protection measures, such as personal protective equipment


Generally:

Use only CE marked protective equipment.


Respiratory Equipment:

No specific requirements


Skin protection:

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	

Hand protection:

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Nitrile	0,2	> 480	EN374-2, EN374-3, EN388	

Eye protection:

Type	Standards	
Safety glasses with side shields.	EN166	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<i>Physical state:</i>	Liquid
<i>Colour:</i>	Clear
<i>Odour / Odour threshold:</i>	Testing not relevant or not possible due to the nature of the product.
<i>pH:</i>	6-8
<i>Density (g/cm³):</i>	Testing not relevant or not possible due to the nature of the product.
<i>Kinematic viscosity:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Particle characteristics:</i>	Does not apply to liquids.

Phase changes

<i>Melting point/Freezing point (°C):</i>	18-19
<i>Softening point/range (waxes and pastes) (°C):</i>	Does not apply to liquids.
<i>Boiling point (°C):</i>	188-190
<i>Vapour pressure:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Relative vapour density:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Decomposition temperature (°C):</i>	No data available

Data on fire and explosion hazards

<i>Flash point (°C):</i>	87-89
<i>Flammability (°C):</i>	No data available
<i>Auto-ignition temperature (°C):</i>	214-216
<i>Lower and upper explosion limit (% v/v):</i>	2.4 - 64

Solubility

<i>Solubility in water:</i>	No data available
<i>n-octanol/water coefficient:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Solubility in fat (g/L):</i>	Testing not relevant or not possible due to the nature of the product.

9.2. Other information

Other physical and chemical parameters:

No data available.

Oxidizing properties:

Testing not relevant or not possible due to the nature of the product.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

10.5. Incompatible materials

Strong acids

Strong oxidizing agents

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

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.

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 sensitisation

Based on available data, the classification criteria are not met.

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

Long term effects

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

Other information

None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

No data available.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product is not covered by regulations on dangerous waste.
SFS Waste regulation (2020:614).

EWC code: Not applicable.

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: TRANSPORT INFORMATION

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group

** Environmental hazards

Additional information

Not dangerous goods according to ADR, IATA and IMDG.

14.6. Special precautions for user

Not applicable.

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

Restrictions for application:

Restricted to professional users.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education:

No specific requirements.

SEVESO - Categories / dangerous substances:

Not applicable.

Additional information:

Not applicable.

Sources:

The Swedish Work Environment Authority's regulations and general guidelines (AFS 2007:5) on pregnant and breastfeeding workers with later amendments, latest AFS 2018:7.

SFS Waste regulation (2020:614).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP).
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

No

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by

Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne (European conformity)

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EuPCS = European Product Categorisation System

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

Additional information

Not applicable.

The safety data sheet is validated by

Johanna Magnusson

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product.

Information in this safety data sheet cannot be used as a product specification.

Country-language: SE-en