

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

Printing date 12.07.2022

Version number 14.0

Revision: 12.07.2022

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

- **1.1 Product identifier**
- **Trade name:** Dimethyl sulfoxide, 99,9%, anhydrous (max. 0,005% H₂O)
- **Article number:** SU0152
- **CAS Number:**
67-68-5
- **EC number:**
200-664-3
- **Registration number** 01-2119431362-50-XXXX
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation:** Laboratory reagent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Scharlab, S.L.
C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa
08181 Sentmenat (Barcelona) SPAIN
Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65
email: scharlab@scharlab.com
Internet Web Site: www.scharlab.com
- **Regional representation:**
Scharlab, S.L.
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Internet Web Site: www.scharlab.com
- **Further information obtainable from:** technical department
- **1.4 Emergency telephone number:**
Please contact the regional Scharlab distributor/dealer in your country
During normal opening times: Scharlab, S.L. (+34) 93 715 18 11

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



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- **Signal word** Warning

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- **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
- **Precautionary statements**
P280 Wear protective gloves / eye protection / face protection.
P264 Wash thoroughly after handling.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: 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:**
Take affected persons into fresh air and keep quiet.
If the affected having trouble breathing again, let oxygen through a face mask
In case of unconsciousness place patient stably in side position for transportation.
Call a doctor immediately.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
Protect unharmed eye.
Call a doctor immediately.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
The main symptoms are described for different cases of contact: Skin, eyes, inhalation and ingestion.
- **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.

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- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
Vapours may form explosive mixtures with air.
Under certain fire conditions, traces of other toxic gases cannot be excluded, e.g.: Sulfoxides
- **5.3 Advice for firefighters**
- **Protective equipment:**
In the work of extinction it is necessary to provide respiratory protection and full chemical protective clothing.
- **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**
Avoid sources of ignition.
Ventilate area.
Use water fog to evaporate or ventilate.
If confined space, use self-contained breathing apparatus.
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **6.2 Environmental precautions:**
Do not allow to penetrate the ground/soil.
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:**
Send for recovery or disposal in suitable receptacles.
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**
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Handle only at temperatures at least 15°C below the flash point.
Fumes can combine with air to form an explosive mixture.
Vapors are heavier than air and may spread along floors.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
It must be stored between 15 - 25 °C.
Suitable material for receptacles: precious metals.
Store only in unopened original receptacles.
Store in a cool, dry, well-ventilated place.
- **Information about storage in one common storage facility:**
Store away from oxidising agents.
Do not store together with acids.

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Do not store together with halogenated compounds.

Materials to avoid:

Zinc

NaH

Steel

Further information about storage conditions:

Protect from heat and direct sunlight.

Protect from humidity and water.

This product is hygroscopic.

Store in nitrogen.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters**Additional information about design of technical facilities:** No further data; see item 7.**Ingredients with limit values that require monitoring at the workplace:** Not required.**DNELs**DNEL worker, cronic. Systematic effects: Inhalative - 394 mg/m³

DNEL worker, cronic. Systematic effects: Dermic - 400 mg/kg body weight

DNEL consumer, prolonged. Systematic effects:

- Inhalative: 70 mg/m³

- Dermic: 200 mg/kg body weight

- Oral: 100 mg/kg body weight

PNECs

PNEC (Sea water): 17 mg/L

PNEC (Fresh water): 1.7 mg/L

PNEC (Sediments): 55.75 mg/kg

PNEC (Soil): 3.41 mg/kg

PNEC (Residual water depuration system): 11 mg/kg

Additional information: The lists valid during the making were used as basis.**8.2 Exposure controls****Personal protective equipment:****General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Respiratory protection: Not required.**Protection of hands:**

Protective gloves

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.

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• 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 protection:

Tightly sealed goggles

SECTION 9: Physical and chemical properties**• 9.1 Information on basic physical and chemical properties****• General Information****• Appearance:****Form:**

Fluid

Colour:

Colourless

• Odour:

Odourless

• Odour threshold:

Not determined.

• pH-value:

Not determined.

• Change in condition**Melting point/freezing point:**

18.45 °C

Initial boiling point and boiling range:

189 °C

• Flash point:

87 °C

• Flammability (solid, gas):

Not applicable.

• Ignition temperature:

301 °C

• Decomposition temperature:

> 190 °C

• Auto-ignition temperature:

Not determined.

• Explosive properties:

Product does not present an explosion hazard.

• Explosion limits:**Lower:**

2.6 Vol %

Upper:

28.5 Vol %

• Vapour pressure at 20 °C:

0.55 hPa

• Density at 20 °C:1.104 g/cm³**• Relative density**

Not determined.

• Vapour density

Not determined.

• Evaporation rate

Not determined.

• Solubility in / Miscibility with water:

Fully miscible.

• Partition coefficient: n-octanol/water:

log Pow = -1.35 (experimental)

• Viscosity:**Dynamic at 20 °C:**

2.14 mPas

Kinematic:

Not determined.

• 9.2 Other information

No further relevant information available.

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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 dangerous reactions known.
- **10.4 Conditions to avoid**
Heat, open flames and sparks
Exposure to moisture.
Exposure to light
Thermal decomposition: > 190 °C
- **10.5 Incompatible materials:**
Strong acids
Strong oxidizing agents.
Hydrides
Zinc
Halogens
- **10.6 Hazardous decomposition products:**
Sulphur oxides
Formaldehyde
Mercaptans
Carbon monoxide and carbon dioxide
Carbon bisulphide

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**
Oral LD50 14500 mg/kg (rat)
Dermal LD50 40000 mg/kg (rat)
Inhalative LC50/4 h 5.3 mg/l (rat)
- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**
Toxicity to fish
LC50 - Oncorhynchus mykiss (rainbow trout) - 38000 mg/L - 96 h

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Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (large sea flea) - 16250 mg/L - 24 h

Toxicity to algae

NOEC - Scenedesmus quadricauda (Green algae) - 10000 mg/L - 72 d

12.2 Persistence and degradability

Result: 90.4 % (Exposure time: 32 days) - OECD

Degradable en plantas de tratamiento de aguas residuales.

12.3 Bioaccumulative potential

log Pow ≤ -1.35

Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.

12.4 Mobility in soil No further relevant information available.**Additional ecological information:****General notes:**

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects**

Additional ecological information

Hazard for drinking water supplies.

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Recommendation**

Must be specially treated adhering to official regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:**Recommendation:**

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**

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

Void

Class

Void

14.4 Packing group

ADR, IMDG, IATA

Void

14.5 Environmental hazards:**Marine pollutant:**

No

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

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Void

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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 -**
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **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.
- **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.

- **Classification according to Regulation (EC) No 1272/2008**
The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.
- **Department issuing SDS:** product safety department
- **Contact:** msds@scharlab.com
- **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
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
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2