

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH) Classifications according to Regulation (EC) No 1272/2008. Printdate 22 Jul 2024

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

Dimethylsulfoxide

1.1. Catalog No.:

677827

1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical uses: R&D

1.3. Uses advised against:

HPC Standards GmbH Am Wieseneck 7

04451 Cunnersdorf Deutschland

Tel. +49 34291 3372-36 Fax. +49 34291 3372-39 contact@hpc-standards.com

1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36 This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2. Label elements

2.2.1. Pictogram

2.2.2.

2.2 Label elements
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Rapidly absorbed through skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Synonyms : DMSO Methyl sulfoxide Formula : C2H6OS Molecular weight : 78,13 g/mol CAS-No. : 67-68-5



EC-No.: 200-664-3 Registration number: 01-2119431362-50-XXXX No components need to be disclosed according to the applicable regulations.

3.1.1. Formula

C2H6OS

3.1.2. Molecular Weight (g/mol)

78.13

3.1.3. CAS-No.

67-68-5

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 1

4.3 Indication of any immediate medical attention and special treatment needed No data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of

water. 5.2 Special hazards arising from the substance or mixture

Carbon oxides, Sulphur oxides 5.3 Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures Avoid breathing vapours, mist or gas. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8. 6.2 Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal. 6.4 Reference to other sections For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2. 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Store under inert gas. hygroscopic

7.3 Specific end use(s)



Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and

at the end of workday.

Personal protective equipment Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique

(without touching gloves #039;s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Body Protection Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air

respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties a) Appearance Form: liquid, clear Colour: colourless b) Odour No data available c) Odour Threshold No data available d) pH No data available
 e) Melting point/freezing point Melting point/range: 16 - 19 °C f) Initial boiling point and boiling range 189 °C g) Flash point 87 °C - closed cup h) Evaporation rate No data available i) Flammability (solid, gas) No data available i) Upper/lower j) Upper/lower flammability or explosive limits explosive limits Upper explosion limit: 42 %(V) Lower explosion limit: 3,5 %(V) k) Vapour pressure 0,55 hPa at 20 °C l) Vapour density 2,70 - (Air = 1.0) m) Relative density 1,1 g/mL n) Water solubility completely miscible o) Partition coefficient: noctanol/ water water log Pow: -2,03 p) Auto-ignition temperature No data available q) Decomposition tëmperature No data available r) Viscosity No data available s) Explosive properties No data available t) Oxidizing properties No data available
 9.2 Other safety information Relative vapour density 2,70 - (Air = 1.0)

10. STABILITY AND REACTIVITY

10.1 Reactivity No data available 10.2 Chemical stability Stable under recommended storage conditions.



10.3 Possibility of hazardous reactions No data available 10.4 Conditions to avoid Heat, flames and sparks.
10.5 Incompatible materials Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents
10.6 Hazardous decomposition products Other decomposition products - No data available In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects Acute toxicity LD50 Oral - Rat - 14.500 mg/kg LC50 Inhalation - Rat - 4 h - 40250 ppm LD50 Dermal - Rabbit - > 5.000 mg/kg Skin corrosion/irritation Mild skin irritation Serious eye damage/eye irritation No data available Respiratory or skin sensitisation No data available Germ cell mutagenicity Mouse lymphocyte Cytogenetic analysis Mouse lymphocyte Mutation in mammalian somatic cells. Rat Cytogenetic analysis Mouse DNA damage Carcinogenicity Carcinogenicity - Rat - Oral Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Skin and Appendages: Other: Tumors. Carcinogenicity - Mouse - Oral Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Leukaemia Skin and Appendages: Other: Tumors IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. Reproductive toxicity Reproductive toxicity - Rat - Intraperitoneal Effects on Fertility: Abortion. Reproductive toxicity - Rat - Intraperitoneal Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants) Reproductive toxicity - Rat - Subcutaneous Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants per total number of implants). Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth). Reproductive toxicity - Mouse - Oral Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system. Developmental Toxicity - Mouse - Intraperitoneal Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system. Specific target organ toxicity - single exposure No data available No data available Specific target organ toxicity - repeated exposure No data available Aspiration hazard No data available Additional Information RTECS: PV6210000 Exposure to large amounts can cause:, redness of skin, Itching, burning, sedation, Headache, Nausea, Dizziness

12. ECOLOGICAL INFORMATION

12.1 Toxicity Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 34.000 mg/l - 96 h LC50 - Oncorhynchus mykiss (rainbow trout) - 35.000 mg/l - 96 h Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 24.600 mg/l - 48 h (OECD Test Guideline 202) Toxicity to algae EC50 - Pseudokirchneriella subcapitata (green algae) - 17.000 mg/l - 72 h



(OECD Test Guideline 201) 12.2 Persistence and degradability Biodegradability Result: 31 % - According to the results of tests of biodegradability this product is not readily biodegradable. (OECD Test Guideline 301D) 12.3 Bioaccumulative potential No data available 12.4 Mobility in soil No data available 12.5 Results of PBT and vPvB assessment This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. 12.6 Other adverse effects No data available Stability in water - 0,12 - 1,2 h at 30 °C Remarks: Hydrolyses readily.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods Product This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Contaminated packaging Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number ADR/RID: - IMDG: - IATA: -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) ADR/RID: - IMDG: - IATA: -14.4 Packaging group ADR/RID: - IMDG: - IATA: -14.5 Environmental hazards ADR/RID: no IMDG Marine pollutant: no IATA: no 14.6 Special precautions for user No data available

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006. International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors
Neither banned nor restricted Restrictions on the marketing and use of certain dangerous substances and preparations
Neither banned nor restricted Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals
Neither banned nor restricted REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).
This product does not contain substances of very high concern (Regulation (EC) No
1907/2006 (REACH), Article 57).
15.2 Chemical Safety Assessment For this product a chemical safety assessment was not carried out

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!