

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

Perfluoropentanesulfonic acid

1.1. Catalog No.:

689541

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
- Classification according to Regulation (EC) No 1272/2008
GHS05 corrosion
Skin Corr. 1C H314 Causes severe skin burns and eye damage.
GHS07
Acute Tox. 4 H302 Harmful if swallowed.

2.2. Label elements

2.2.1. Pictogram



2.2.2.

- 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
GHS05 GHS07
- Signal word Danger
- Hazard statements
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
- Precautionary statements
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- 2.3 Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Chemical characterisation: Substances
- CAS No. Description
2706-91-4 Perfluoropentane-1-sulphonic acid
- Identification number(s) None
- RTECS: -
- Additional information: For the wording of the listed hazard phrases refer to section 16.

3.1.1. Formula

C₅HF₁₁O₃S

3.1.2. Molecular Weight (g/mol)

350.11

3.1.3. CAS-No.

2706-91-4

4. FIRST AID MEASURES

- 4.1 Description of first aid measures
- General information:
Symptoms of poisoning may occur even after several hours; therefore medical observation for at least 48 hours after the accident is recommended.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact:
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
- After eye contact: Rinse opened eye for several minutes under running water · After swallowing:
Rinse mouth. Do not induce vomiting.
Seek medical treatment.
- 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

5. FIRE-FIGHTING MEASURES

- 5.1 Extinguishing media
- Suitable extinguishing agents: Use fire extinguishing methods suitable for surrounding conditions.
- 5.2 Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in case of fire.
- 5.3 Advice for firefighters
- Protective equipment: Wear self-contained respiratory protective device.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up:
Use neutralising agent.
Dispose of contaminated material as waste according to item 13.
- 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.

7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling
Remove dust thoroughly.
Store in cool, dry place in tightly closed receptacles.
- 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:
Please refer to the manufacturers certificate for specific storage and transport temperature conditions.
Store only in the original receptacle unless other advice is given on the CoA.

- Keep container in a well-ventilated place. Keep away from sources of ignition and heat.
- Information about storage in one common storage facility: Store away from foodstuffs.
 - Further information about storage conditions: Keep container tightly sealed.
 - 7.3 Specific end use(s) No further relevant information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Additional information about design of technical facilities: No further data; see item 7.
- 8.1 Control parameters
- Ingredients with limit values that require monitoring at the workplace: Not required.
- Additional information: Lists used were valid at the time of SDS preparation.
- 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.
Use suitable respiratory protective device in case of insufficient ventilation.
- Protection of hands:
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
The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374
Protective gloves
- Material of gloves Fluorocarbon rubber (Viton)
- 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

9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Information on basic physical and chemical properties
- General Information
- Appearance:
Form: Powder
Colour: Off white
- Odour: Odourless
- Odour threshold: Not determined.
- pH-value: Not applicable.
- Change in condition
Melting point/freezing point: Not determined.
Not determined.
Initial boiling point and boiling range: Not determined.
- Flash point: Not applicable.
- Flammability (solid, gas): Not determined.
- Ignition temperature: Not determined
- Decomposition temperature: Not determined.
- Auto-ignition temperature: Not determined.
- Explosive properties: Not determined.
- Explosion limits:
Lower: Not determined.
Upper: Not determined.
- Vapour pressure: Not applicable.
- Density: Not determined.

- Relative density Not determined.
- Vapour density Not applicable.
- Evaporation rate Not applicable.
- Solubility in / Miscibility with water: Not determined.
- Partition coefficient: n-octanol/water: Not determined.
- Viscosity:
Dynamic: Not applicable.
Kinematic: Not applicable.
- 9.2 Other information No further relevant information available.

10. STABILITY AND REACTIVITY

- 10.1 Reactivity
Stable under normal conditions.
No further relevant information available.
- 10.2 Chemical stability Stable under normal conditions.
Thermal decomposition / conditions to be avoided:
Formation of toxic gases is possible during heating or in case of fire.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid Heat.
- 10.5 Incompatible materials: Strong oxidizing agents.
- 10.6 Hazardous decomposition products:
Formation of toxic gases is possible during heating or in case of fire.

11. TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects
Acute toxicity
Harmful if swallowed.
Primary irritant effect:
Skin corrosion/irritation
Causes severe skin burns and eye damage.
Serious eye damage/irritation
Causes severe skin burns and eye damage.
Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
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.

12. ECOLOGICAL INFORMATION

- 12.1 Toxicity
Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.

- 12.4 Mobility in soil No further relevant information available.
- Additional ecological information:
- General notes:
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised
- 12.5 Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

13. DISPOSAL CONSIDERATIONS

- 13.1 Waste treatment methods
- Recommendation
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- European waste catalogue
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
- Uncleaned packaging:
- Recommendation: Dispose of in accordance with national regulations.

14. TRANSPORT INFORMATION

- 14.1 UN-Number
- ADR, IMDG, IATA UN3261
- ADR 3261 CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
(Perfluoropentane-1-sulphonic acid)
- IMDG, IATA CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
(Perfluoropentane-1-sulphonic acid)
- 14.3 Transport hazard class(es)
- ADR, IMDG, IATA
- Class 8 Corrosive substances.
- Label 8
- 14.4 Packing group
- ADR, IMDG, IATA III
- 14.5 Environmental hazards: Not applicable.
- 14.6 Special precautions for user Warning: Corrosive substances.
- Danger code (Kemler): 80
- EMS Number: F-A,S-B
- Segregation groups Acids
- Stowage Category A
- 14.7 Transport in bulk according to Annex II of
Marpol and the IBC Code Not applicable.
- Transport/Additional information:
- ADR
- Limited quantities (LQ) 5 kg
- Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 1000 g
- Transport category 3
- Tunnel restriction code E
- UN "Model Regulation": UN 3261 CORROSIVE SOLID, ACIDIC, ORGANIC,
N.O.S. (PERFLUOROPENTANE-1-SULPHONIC ACID),
8, III

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.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been 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!