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Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 21 Mar 2023

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

1.1. Product name:

Perfluorotetradecanoic acid

1.1. Catalog No.:

687732

1.2. Relevant identified uses of the substance or mixture

Identified uses: Laboratory chemical
R&D

1.3. Uses advised against:

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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
GHS08 health hazard
Carc. 2 H351 Suspected of causing cancer.
Repr. 1B H360D-H362 May damage the unborn child. May cause harm to breast-fed children.
STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.
GHS05 corrosion
Eye Dam. 1 H318 Causes serious eye damage.
GHS09 environment
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.
GHS07
Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H332 Harmful if inhaled.

2.2. Label elements

2.2.1. Pictogram

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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 GHS08 GHS09
· Signal word Danger
· Hazard statements
H302+H332 Harmful if swallowed or if inhaled.
H318 Causes serious eye damage.
H351 Suspected of causing cancer.
H360D-H362 May damage the unborn child. May cause harm to breast-fed children.
H372 Causes damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.
· Precautionary statements
P263 Avoid contact during pregnancy/while nursing.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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.
· Additional information:
Restricted to professional users.
· 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
376-06-7 Perfluorotetradecanoic acid
· Identification number(s) None
· EC number: 206-803-4
· RTECS: -
· Additional information: For the wording of the listed hazard phrases refer to section 16.
· SVHC
376-06-7 Perfluorotetradecanoic acid

3.1.1. Formula

C14HF27O2

3.1.2. Molecular Weight (g/mol)

714.11

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3.1.3. CAS-No.

376-06-7

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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient in recovery position for transport
Seek medical treatment.
· After skin contact: Immediately wash with water and soap and rinse thoroughly.
· After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
· 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
During heating or in case of fire poisonous gases are produced.
· 5.3 Advice for firefighters
· Protective equipment:
Mouth respiratory protective device.
Wear self-contained respiratory protective device.

6. ACCIDENTAL RELEASE MEASURES

· 6.1 Personal precautions, protective equipment and emergency procedures
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
Avoid formation of dust.
· 6.2 Environmental precautions:
Inform respective authorities in case of seepage into water course or sewage system.
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.
Ensure adequate ventilation.
· 6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

7. HANDLING AND STORAGE

· 7.1 Precautions for safe handling
Ensure good ventilation/extraction at the workplace.
Remove dust thoroughly.
Store in cool, dry place in tightly closed receptacles.
Open and handle receptacle with care.
· Information about fire - and explosion protection: Keep respiratory protective device available.
· 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.
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.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
· Respiratory protection:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
· 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

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9. PHYSICAL AND CHEMICAL PROPERTIES

· 9.1 Information on basic physical and chemical properties
· General Information
· Appearance:
Form: Crystalline
Colour: Colourless
· Odour: Odourless
· Odour threshold: Not determined.
· pH-value: Not applicable.
· Change in condition
Melting point/freezing point: 130 °C
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: Negligible.
· Partition coefficient: n-octanol/water: ca. 10.8 logP
· 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.
· 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 or if inhaled.
· Primary irritant effect:
· Skin corrosion/irritation Based on available data, the classification criteria are not met.
· Serious eye damage/irritation
Causes serious eye damage.
· Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
Carc. 2, Repr. 1B
· Germ cell mutagenicity Based on available data, the classification criteria are not met.
· Carcinogenicity

Suspected of causing cancer.
· Reproductive toxicity
May damage the unborn child. May cause harm to breast-fed children.
· STOT-single exposure Based on available data, the classification criteria are not met.
· STOT-repeated exposure
Causes damage to organs through prolonged or repeated exposure.
· 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 >5000 (BCF)
· 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 3 (German Regulation) (Assessment by list): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
· 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 UN3077
· ADR 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (Perfluorotetradecanoic acid)
· IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (Perfluorotetradecanoic acid), MARINE
POLLUTANT
· IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (Perfluorotetradecanoic acid)
· 14.3 Transport hazard class(es)
· ADR, IMDG, IATA

· Class 9 Miscellaneous dangerous substances and articles.
· Label 9
· 14.4 Packing group
· ADR, IMDG, IATA III
· 14.5 Environmental hazards:
· Marine pollutant: Symbol (fish and tree)
· Special marking (ADR): Symbol (fish and tree)
· Special marking (IATA): Symbol (fish and tree)
· 14.6 Special precautions for user Warning: Miscellaneous dangerous substances and articles.
· Danger code (Kemler): 90
· EMS Number: F-A,S-F
· Stowage Category A
· Stowage Code SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· 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
· UN "Model Regulation": UN 3 0 7 7 ENVIRONMENTALLY HAZARDOUS S U B S T A N C E , S O L I D , N . O . S . (PERFLUOROTETRADECANOIC ACID), 9, III

15. REGULATORY INFORMATION

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
· Philippines Inventory of Chemicals and Chemical Substances Substance is not listed.
· Australian Inventory of Chemical Substances Substance is not listed.
· Standard for the Uniform Scheduling of Medicines and Poisons Substance is not listed.
· Directive 2012/18/EU
· Named dangerous substances - ANNEX I Substance is not listed.
· Seveso category E1 Hazardous to the Aquatic Environment
· Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t
· Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
· National regulations:
· Other regulations, limitations and prohibitive regulations
· Substances of very high concern (SVHC) according to REACH, Article 57
376-06-7 Perfluorotetradecanoic acid
· 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!