

## Chemical Safety Data Sheet MSDS / SDS

**Pentadecafluorooctanoic acid**

Revision Date:2024-04-27 Revision Number:1

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

Product name : Pentadecafluorooctanoic acid  
CBnumber : CB4256038  
CAS : 335-67-1  
EINECS Number : 206-397-9  
Synonyms : PFOA,Perfluorooctanoic Acid

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 400-158-6606

**SECTION 2: Hazards identification****GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Danger

**Precautionary statements**

P501 Dispose of contents/container to.....  
P406 Store in corrosive resistant/... container with a resistant inner liner.  
P405 Store locked up.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P390 Absorb spillage to prevent material damage.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continuerinsing.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P273 Avoid release to the environment.

P271 Use only outdoors or in a well-ventilated area.  
P270 Do not eat, drink or smoke when using this product.  
P264 Wash skin thoroughly after handling.  
P264 Wash hands thoroughly after handling.  
P263 Avoid contact during pregnancy/while nursing.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P234 Keep only in original container.  
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P202 Do not handle until all safety precautions have been read and understood.  
P201 Obtain special instructions before use.

#### **Hazard statements**

H402 Harmful to aquatic life  
H372 Causes damage to organs through prolonged or repeated exposure  
H370 Causes damage to organs  
H362 May cause harm to breast-fed children  
H360 May damage fertility or the unborn child  
H351 Suspected of causing cancer  
H332 Harmful if inhaled  
H318 Causes serious eye damage  
H314 Causes severe skin burns and eye damage  
H302 Harmful if swallowed  
H290 May be corrosive to metals  
H225 Highly Flammable liquid and vapour

#### **Disposal**

WARNING.Cancer - <https://oehha.ca.gov/proposition-65/chemicals/perfluorooctanoic-acid-pfoa-and-its-salts>

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## SECTION 3: Composition/information on ingredients

### **Substance**

|              |  |
|--------------|--|
| Product name | : Pentadecafluorooctanoic acid                   |
| Synonyms     | : PFOA,Perfluorooctanoic Acid                    |
| CAS          | : 335-67-1                                       |
| EC number    | : 206-397-9                                      |
| MF           | : C <sub>8</sub> H <sub>F</sub> 15O <sub>2</sub> |
| MW           | : 414.07   |

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## SECTION 4: First aid measures

### **Description of first aid measures**

#### **General advice**

First aiders need to protect themselves. Show this material safety data sheet to the doctor

#### **If inhaled**

After inhalation: fresh air. Call in physician.

**In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

**In case of eye contact**

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

**If swallowed**

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

**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 11

**Indication of any immediate medical attention and special treatment needed**

No data available

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## SECTION 5: Firefighting measures

**Extinguishing media**

**Suitable extinguishing media**

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

**Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

**Special hazards arising from the substance or mixture**

Carbon oxides Hydrogen fluoride Combustible.

Risk of dust explosion.

Development of hazardous combustion gases or vapours possible in the event of fire.

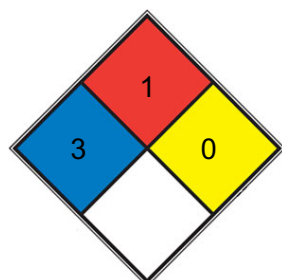
**Advice for firefighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

**Further information**

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

**NFPA 704**



|  |        |   |   |
|--|--------|---|---|
| <input checked="" type="checkbox"/>  | HEALTH | 3 | Short exposure could cause serious temporary or moderate residual injury (e.g. <a href="#">liquid hydrogen</a> , <a href="#">sulfuric acid</a> , <a href="#">calcium hypochlorite</a> , hexafluorosilicic acid) |
| <hr/>  |        |   |   |
| Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion |        |   |   |
| <input checked="" type="checkbox"/>  | FIRE   | 1 | can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. <a href="#">mineral oil</a> , ammonia)          |
| <hr/>  |        |   |   |
| <input checked="" type="checkbox"/>  | REACT  | 0 | Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, <a href="#">N<sub>2</sub></a> )  |
| <hr/>  |        |   |   |
| <input type="checkbox"/>   | SPEC.  |   |   |
| <input type="checkbox"/>   | HAZ.   |   |   |

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

### Environmental precautions

Do not let product enter drains.

### Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### Precautions for safe handling

#### Advice on safe handling

Work under hood. Do not inhale substance/mixture.

#### Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

### Conditions for safe storage, including any incompatibilities

#### Storage conditions

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

## Specific end use(s)

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

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## SECTION 8: Exposure controls/personal protection

### control parameter

#### Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

### Exposure controls

#### Personal protective equipment

##### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

##### Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested:KCL 741 Dermatril? L

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested:KCL 741 Dermatril? L

##### Body Protection

Acid-resistant protective clothing

##### Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P3

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

##### Control of environmental exposure

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Appearance

colorless flakes

Chemical Book

|  |   |
|--|---|
| Odour  | stinging  |
| Odour Threshold                              | No data available   |
| pH   | 2,6 at 1 g/l at 20 °C   |
| Melting point/freezing point                 | Melting point/range: 55 - 56 °C - lit.  |
| Initial boiling point and boiling range      | 189 °C at 981 hPa - lit.  |
| Flash point                                  | 189-192°C   |
| Evaporation rate                             | No data available   |
| Flammability (solid, gas)                    | No data available   |
| Upper/lower flammability or explosive limits | No data available   |
| Vapour pressure                              | 0,69 hPa at 25 °C   |
| Vapour density                               | No data available   |
| Relative density                             | 1.7   |
| Water solubility                             | 3,4 g/l at 20 °C  |
| Partition coefficient: n-octanol/water       | log Pow: 6,30 - Potential bioaccumulation, (Lit.)                               |
| Autoignition temperature                     | No data available   |
| Decomposition temperature                    | >300 °C -   |
| Viscosity                                    | Viscosity, kinematic: No data available Viscosity, dynamic: 5,72 mPa.s at 60 °C |
| Explosive properties                         | No data available   |
| Oxidizing properties                         | No data available   |

### Other safety information

No data available

## SECTION 10: Stability and reactivity

### Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### Possibility of hazardous reactions

Violent reactions possible with:

Strong oxidizing agents Strong acids

Bases

### Conditions to avoid

no information available

### Incompatible materials

No data available

### **Hazardous decomposition products**

In the event of fire: see section 5

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## **SECTION 11: Toxicological information**

### **Information on toxicological effects**

#### **Acute toxicity**

Acute toxicity estimate Oral - 500,1 mg/kg (Expert judgment)

Acute toxicity estimate Oral - 500,1 mg/kg (Expert judgment)

Acute toxicity estimate Inhalation - 4 h - 11,1 mg/l (Expert judgment)

Acute toxicity estimate Inhalation - 4 h - 11,1 mg/l (Expert judgment)

Dermal

#### **Skin corrosion/irritation**

No data available

#### **Serious eye damage/eye irritation**

Causes serious eye damage.

#### **Respiratory or skin sensitization**

No data available

#### **Germ cell mutagenicity**

No data available No data available No data available

#### **Carcinogenicity**

No data available

#### **Reproductive toxicity**

May damage the unborn child.

Studies indicating a hazard to babies during the lactation period

#### **Specific target organ toxicity - single exposure**

No data available

#### **Specific target organ toxicity - repeated exposure**

Causes damage to organs through prolonged or repeated exposure. - Liver

#### **Aspiration hazard**

No data available

#### **Toxicity**

dnd-esc 50 mmol MUREAV 89,95,81

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## **SECTION 12: Ecological information**

### **Toxicity**

No data available

### **Toxicity to daphnia and other aquatic invertebrates**

Remarks: No data available (pentadecafluorooctanoic acid)

#### **Toxicity to algae**

Remarks: No data available  
(pentadecafluorooctanoic acid)

#### **Persistence and degradability**

No data available

#### **Bioaccumulative potential**

No data available

#### **Mobility in soil**

No data available

#### **Results of PBT and vPvB assessment**

This substance/mixture contains components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

#### **Other adverse effects**

Discharge into the environment must be avoided.

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## SECTION 13: Disposal considerations

### **Waste treatment methods**

#### **Product**

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14: Transport information

### **UN number**

ADR/RID: - IMDG: - IATA: -

### **UN proper shipping name**

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods

### **Transport hazard class(es)**

ADR/RID: - IMDG: - IATA: -

### **Packaging group**

ADR/RID: - IMDG: - IATA: -

### **Environmental hazards**



ADR/RID: no IMDG Marine pollutant: no IATA: no

## Special precautions for user

## Further information

Not classified as dangerous in the meaning of transport regulations.

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# SECTION 15: Regulatory information

## Safety, health and environmental regulations/legislation specific for the substance or mixture

### Regulations on the Safety Management of Hazardous Chemicals

China Catalog of Hazardous chemicals 2015:Not Listed. website: <https://www.mem.gov.cn/>

### Measures for Environmental Management of New Chemical Substances

Vietnam National Chemical Inventory:Listed. website: <https://chemicaldata.gov.vn/>

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: <https://www.epa.gov/>

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: <https://emb.gov.ph/>

New Zealand Inventory of Chemicals (NZIoC):Listed. website: <https://www.epa.govt.nz/>

Korea Existing Chemicals List (KECL):Listed. website: <http://ncis.nier.go.kr>

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: <https://echa.europa.eu/>

EC Inventory:Listed.

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: <https://www.mee.gov.cn/>

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# SECTION 16: Other information

## Abbreviations and acronyms

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

CAS: Chemical Abstracts Service

EC50: Effective Concentration 50%

IATA: International Air Transportation Association

IMDG: International Maritime Dangerous Goods

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

STEL: Short term exposure limit

TWA: Time Weighted Average

## References

**[1]** CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

**[2]** ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

**[3]** ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

**[4]** eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:

[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

- 【5】 ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- 【6】 Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- 【7】 HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- 【8】 IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- 【9】 IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- 【10】 Sigma-Aldrich, website: <https://www.sigmaaldrich.com/>

**Disclaimer:**

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