

1: Identification of substance / mixture

1. Product Identifier

Substance

Product Name **Pentadecafluorooctanoic acid, analytical grade**
Product Code 024802
CAS Number 335-67-1
Other Names
IUPAC
MFCD Number MFCD00004174
EC/EINECS 206-397-9
REACH Number Index-No

2. Relevant identified uses of the substance or mixture and uses advised against

Research and development

3. Details of the supplier of the safety data sheet

Fluorochem Ltd
Unit 14, Graphite Way
Hadfield
Derbyshire
SK13 1QH
UK

Telephone: +44(0)1457 860111
Fax: +44(0)1457 892799
Email: sds@fluorochem.co.uk



4. Emergency telephone number

+44(0)7855 268577 -

2. Hazards Identification

1. Classification of the substance or mixture

H302	Acute Tox. 4	
H318	Eye Dam. 1	
H332	Acute Tox. 4	
H351	Carc. 2	
H360D	Repr. 1B	
H362	Lact.	
H372	STOT RE 1	

2. Label elements

Signal Word **Danger**



Hazard Statements

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H351	Suspected of causing cancer cancer..
H360D	May damage the unborn child
H362	May cause harm to breast-fed children.
H372	Causes damage to organs through prolonged or repeated exposure..

Precautionary Phrases

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P263	Avoid contact during pregnancy/while nursing.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P501	Dispose of contents/container to hazardous or special waste collection point.

3. Other Hazards

Additional precautionary phrases are located throughout the safety data sheet

3. Composition / Information on Ingredients

1. Substances

Product Name	Hazards	Concentration
Pentadecafluorooctanoic acid, analytical grade		
CAS Number: 335-67-1 EC/EINECS: 206-397-9	H302, H318, H332, H351, H360D, H362, H372 Acute Tox. 4, Carc. 2, Eye Dam. 1, Lact., Repr. 1B, STOT RE 1	<=100%

4. First Aid Measures

1. Description of first aid measures

<i>Skin Contact</i>	Wash immediately with plenty of soap and water.
<i>Eye Contact</i>	P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse opened eye for several minutes under running water.
<i>Ingestion</i>	P330: Rinse mouth. Wash out mouth with water.
<i>Inhalation</i>	P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Remove casualty from exposure ensuring one's own safety whilst doing so.

2. Most important symptoms and effects

P308 + P313: IF exposed or concerned: Get medical advice/attention.
No symptoms.

3. Indication of any immediate medical attention

P310: Immediately call a POISON CENTER or doctor/physician.
No additional measures required

5. Firefighting measures

1. Extinguishing Media

<i>Suitable</i>	Carbon dioxide. Dry chemical powder. Water.
<i>Unsuitable</i>	Do not use water with a full water jet

2. Special Hazards arising from the substance or mixture

In combustion toxic fumes may form.

3. Advice for Fire Fighters

Wear protective clothing to prevent contact with skin and eyes. Wear self-contained breathing apparatus.

6. Accidental Release Measures

1. Personal Precautions

Refer to section 8 of SDS for personal protection details.

2. Environmental Precautions

Do not discharge into drains or rivers. Do not release into environment. Persistent Organic Pollutant.

3. Methods & Materials

Mix with sand or vermiculite. Transfer to a suitable container.

4. Preventing the occurrence of secondary hazards.

No Special Measures Required

7. Handling and Storage

1. Personal Precautions

Safe Handling Handle in fume hood. Wash hands immediately after contamination. P201: Obtain special instructions before use.
P264: Wash hands and face thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.

Protection against explosions and fires normal measures for preventive fire protection

2. Conditions for safe storage, including any incompatibilities

Managing Storage Risks Keep container tightly closed. Store in cool, well ventilated area.
Storage Controls No special requirements
Maintaining Integrity Keep in tightly closed container in cool area away from direct sunlight or heat sources.
Other advice P405: Store locked up.

3. Specific End Uses

The end use (s) have not been fully determined. The substance is supplied for research and development purposes only by professionals.

8. Exposure Controls/Personal Protection

1. Control Parameters

No Data Available

2. Exposure Controls

General protective and hygiene measures P263: Avoid contact during pregnancy/while nursing.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
De vanlige precautionary measures should be adhered to when handling Wash hands during breaks and at the end of handling the material Immediately remove any contaminated clothing

Engineering measures P271: Use only outdoors or in a well-ventilated area.
Ensure there is sufficient ventilation of the area.

Eye / Face Protection Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Hand protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove'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. De valgte beskyttelseshandsker skal opfylde specifikationerne for EU Directive 89/686 / EEC og standard EN 374 derived from it. Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 m

Respiratory protection P260: Do not breathe dust/fume/gas/mist/vapours/spray.
Where risk assessment shows air purifying respirators are appropriate use a full face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full face air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Skin protection Protective clothing.

Other personal protection advice no data

9. Physical and Chemical Properties

1. Physical and Chemical Properties

Appearance	White solid
Odour	No Data Available
Odour threshold	No Data Available
PH	No Data Available
Melting point / Freezing point	59-60 ° C
Initial boiling point and boiling range	189 ° C / 736mm
Flash point	No Data Available
Evaporation rate	No Data Available
Flammability(solid,gas)	No Data Available
Upper/lower flammability or explosive limits	No Data Available

Vapour pressure	10.0mmHg
Vapour density	No Data Available
Relative density	No Data Available
Solubility(ies):	No Data Available
Partition coefficient: n-octanol/water	No Data Available
Auto-ignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Explosive properties	No Data Available
Oxidising properties	No Data Available

2. Other Information

No additional information available

10. Stability and Reactivity

1. Reactivity

no unusual reactivity

2. Stability

Stable under normal conditions.

3. Possibility of Hazardous Reactions

no hazardous reactions known

4. Conditions to Avoid

no specific conditions to avoid

5. Incompatible Materials

Strong oxidizing agents. Strong bases. Reducing agents.

6. Hazardous Decomposition Products

In combustion emits toxic fumes. In combustion emits toxic fumes or carbon dioxide / carbon monoxide. In combustion emits toxic fumes or hydrogen fluoride.

11. Toxicology information

1. Information

<i>Acute Toxicity</i>	Intraperitoneal LD50 (Rat) 189mg / kg
<i>Skin corrosion/irritation</i>	irritating to skin and mucous membranes
<i>Serious eye Damage/irritation</i>	irritant effect
<i>Respiratory or skin sensitisation</i>	No sensitizing effect known
<i>Germ Cell mutagenicity</i>	Rat DNA damage Rat DNA damage
<i>Carcinogenicity</i>	Suspected human carcinogens IARC: 2B - Group 2B: Possibly carcinogenic to humans (Pentadecafluorooctanoic acid)
<i>Reproductive toxicity</i>	Effects on or via lactation Presumed human reproductive toxicant
<i>STOT-single exposure</i>	not known
<i>STOT-repeated exposure</i>	Causes damage to organs through prolonged or repeated exposure. - Liver
<i>Aspiration hazard</i>	not known

2. Additional

RTECS: RH0781000 Cough, Shortness of breath, Headache, Nausea, Vomiting

12. Ecological Information

1. Toxicity

toxic for fish

2. Persistence and degradability

Persistent Organic Pollutant

3. Bio-Accumulative Potential

not known

4. Mobility and Soil

not known

5. Results of PBT & vPvB assessment

This substance / mixture contains components that are considered to be either persistent, bioaccumulative and Aldrich - 171468 Page 7 of 8 toxic (PBT), or very persistent and very bioaccumulative (vPvB).

6. Other adverse effects

Toxic to aquatic organisms inc. fish, invertebrates and algae.

13. Disposal Considerations

1. Waste Treatment Methods

Disposal Operations Consult state, local or national regulations for proper disposal. Hand over two authorized disposal companies as hazardous waste. Persistent Organic Pollutant. Waste must be separated. See PFOS briefing note June 2011 (Version 2) - managing stockpiles and wastes from exempted uses.

Disposal of Packaging Disposal must be made according to official regulations.

14. Transport Information

Air (ICAO)

1. **UN Number:** 3261
2. **Shipping Name:** Corrosive solid, acidic, organic, n.o.s.
3. **Transport hazard class(es):** : 8 Sub Class :



4. **Packing group:** III
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:**

Road (ADR)

1. **UN Number:** 3261
2. **Shipping Name:** CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S (Pentadecafluorooctanoic acid, analytical grade).
3. **Transport hazard class(es):** : 8 Sub Class :



4. **Packing group:** III
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:**

Sea (IMDG)

1. **UN Number:** 3261
2. **Shipping Name:** Corrosive solid, acidic, organic, n.o.s.
3. **Transport hazard class(es):** : 8 Sub Class :



4. **Packing group:** III
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:** IBCINS: IBC08
IBCPPROV: B3
UNTANKINS: -
TANKPROV: TP33

15. Safety, health, environmental and national regulations

1. Safety, health, environmental and national regulations:

Persistent Organic Pollutant Regulation (EC) 850/2004 (as amended) Pentadecafluorooctanoic acid CAS-No .: 335-67-1 REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59). Toxic for reproduction (article 57c)
Pentadecafluorooctanoic acid CAS-No .: 335-67-1 REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) Toxic for reproduction: category 1B Restricted to professional user

2. Safety Assessment

No Chemical Safety Assessment

16. Other Information

1. Other Information:

ADR: Accord Europe for Transport of Goods Dangerous Goods by Route RID: Rules of Procedure International concern for transport of merchandise dangereuses par chemin de fer (Regulations concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association IATA-DGR: Dangerous Goods Regulations by the International Air Transport Association ICAO: International Civil Aviation Organization ICAO-TI: Techn

2. Associated risk phrases according to European directive 67/548/EEC

3. Disclaimer

The product listed is for research and development purposes only and not for human or animal use. Som sådan, i de fleste tilfælde har de toksikologiske, økologiske og fysisk-kemiske egenskaber ikke været fuldt bestemt og produktet skal behandles med respekt og altid håndteres under passende betingelser af passende kvalificeret personale. Den ansvarlige part skal anvende denne dataark kun i samarbejde med andre kilder af oplysninger indsamlet af dem, og skal gøre en selvstændig bedømmelse af egne