Section 1 - Product and Company Information

Product Name: Pentadecafluorooctanoic acid, 96%
Brand: Aldrich Chemical

Company: Sigma-Aldrich
Address: 3050 Sp Русе Street, SAINT LOUIS, MO 63103 US
Phone: 314 771 5765
Fax: 800 325 5002
Emergency Phone: 414 273 3850 Ext. 5966

Section 2 - Composition/Information on Ingredient

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>SARA 313</th>
<th>EC no</th>
<th>Annex I Index Number</th>
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</thead>
<tbody>
<tr>
<td>PENTADECAFLUOROOCTANOIC ACID</td>
<td>335-67-1</td>
<td>No</td>
<td>206-397-9</td>
<td></td>
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</tbody>
</table>

Formula: C(CHF)15CO2
Synonym: Pentadecafluoroctanoic acid, Pentadecafluoro-octanoic acid, Perfluoropropionic acid, Perfluoroheptaneacetic acid, Perfluorooctanoic acid, PFOA

Section 3 - Hazards Identification

Emergency Overview: Corrosive. Harmful if swallowed. Causes burns. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Hazard Rating
- Health: 3
- Flammability: 0
- Reactivity: 0

NFPA Rating
- Health: 3
- Flammability: 0
- Reactivity: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Eye Exposure: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Flash Point: N/A
Extinguishing Media: Suitable
Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Ends toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Spill or Leak:
- Evacuate area.
- Keep out unnecessary personnel.
- Clean up spill using a bag and do not use open spaces.
- Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling:
- User Exposure: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.
- Storage: Keep tightly closed.

Section 8 - Exposure Controls / PPE

Engineering Controls:
Safety showers and eye bath. Use only in a chemical fume hood.

Personal Protective Equipment:
Respiratory: Government-approved respirator.
Hand: Compatible chemical-resistant gloves.
Eye: Chemical safety goggles.
Section 9 - Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>At Temperature or Pressure</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid</td>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Form</td>
<td>Fine plates</td>
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<tr>
<td>Molecular Weight</td>
<td>414.06 AMU</td>
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<tr>
<td>pH</td>
<td>1.6</td>
<td>Concentration: 100 g/l 1 g/l</td>
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</tr>
<tr>
<td>BP/VP Range</td>
<td>169 °C 736 mmHg</td>
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<tr>
<td>MP/IP Range</td>
<td>55 - 56 °C</td>
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<tr>
<td>Freezing Point</td>
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<td>Vapor Pressure</td>
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<td>Saturated Vapor Conc.</td>
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<td>Bulk Density</td>
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<td>Odor Threshold</td>
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<td>Volatility%</td>
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<td>VOC Content</td>
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<td>Water Content</td>
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<tr>
<td>Solvent Content</td>
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<tr>
<td>Evaporation Rate</td>
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<td>Viscosity</td>
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<td>Decomposition Temp.</td>
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<td>Flash Point °F</td>
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<td></td>
</tr>
<tr>
<td>Flash Point °C</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Explosion Limits</td>
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<td>Flammability</td>
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<tr>
<td>Autoignition Temp</td>
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</tr>
<tr>
<td>Solubility</td>
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</tr>
</tbody>
</table>

N/A = not available

Section 10 - Stability and Reactivity

Stability
- Stable
- Stable
- Materials to Avoid: Bases, Oxidizing agents, Reducing agents.

Section 11 - Toxicological Information

Route of Exposure
- Skin Contact: Causes burns.
- Skin Absorption: May be harmful if absorbed through the skin.
- Eye Contact: Causes burns.
- Inhalation: Material is extremely destructive to the tissue of the mucus membranes and upper respiratory tract. May be harmful if inhaled.
- Inhalation: Material is extremely destructive to the tissue of the mucus membranes and upper respiratory tract. May be harmful if inhaled.
- Intratracheal: May be harmful if inhaled.
- Intranasal: May be harmful if inhaled.
- Intravenous: May be harmful if inhaled.
- Oral: May be harmful if inhaled.
- Subcutaneous: May be harmful if inhaled.
- Transdermal: May be harmful if inhaled.
- Vaginal: May be harmful if inhaled.
- Inhalation: Material is extremely destructive to the tissue of the mucus membranes and upper respiratory tract. May be harmful if inhaled.
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- Inhalation: Material is extremely destru...
Section 15 - Regulatory Information

EU Additional Classification
Symbol of Danger: C
Indication of Danger
Corrosive,
Risk Statements
R: 22 34 53/53
Harmful if swallowed. Causes burns. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Statements
S: 26 36/37/39 45
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Classification and Label Text
Indication of Danger
Corrosive,
Risk Statements
Harmful if swallowed. Causes burns. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Statements
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

United States Regulatory Information
SARA Listed: No
TSCA Inventory Item: Yes

Canada Regulatory Information
WHMIS Classification
This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: No
NDSEL: Yes

Section 16 - Other Information

Disclaimer
For R&D use only. Not for drug, household or other uses.

Warranty
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 guarantees of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.