

Printing date 19.01.2009

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1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Trade name:** PFC-116
- **Article number:** 116
- **Application of the substance / the preparation** Surface active agent
- **Manufacturer/Supplier:**
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2 Hazards identification

- **GHS label elements**

**Warning**

2.5/C - Contains gas under pressure; may explode if heated.

- **Storage:**
Protect from sunlight. Store in a well-ventilated place.

3 Composition/information on ingredients

- **Chemical characterization:**
- **CAS No. Description**
76-16-4 perfluoroethane

4 First-aid measures

- **General information:** Seek immediate medical advice.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
In cases of frost bites, rinse with plenty of water. Do not remove clothing.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **The following symptoms may occur:**
Frost bites
Causes asphyxiation in high concentrations. May cause an abnormal heart rhythm and prove suddenly fatal.

5 Fire-fighting measures

- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
Hydrogen fluoride (HF)
- **Protective equipment:** Do not inhale explosion gases or combustion gases.

6 Accidental release measures

- **Person-related safety precautions:** Keep people at a distance and stay on the windward side.

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- **Measures for environmental protection:** Inform authorities in case of gas release.
- **Measures for cleaning/collecting:** No special measures required.

7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
 - Keep container tightly sealed.
 - Protect from heat and direct sunlight.
- **Maximum storage temperature:** 40 °C

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Wash hands before breaks and at the end of work.
 - Keep away from tobacco products.
- **Respiratory protection:**
 - Wear respirator for organic gases, where leakage may occur.
 - Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**



Protective gloves

To avoid skin problems reduce the wearing of gloves to the required minimum.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

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· **Eye protection:** Safety glasses

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **General Information**

Form:	Liquefied gas
Colour:	Colourless
Odour:	Odourless

· **Change in condition**

Melting point/Melting range: -101°C

Boiling point/Boiling range: -78°C

· **Flash point:** Not applicable.

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- **Danger of explosion:** Product does not present an explosion hazard.
- **Vapour pressure at 20°C:** 2,981 MPa
- **Density at 0°C:** 1,109 g/cm³
- **Solubility in / Miscibility with water:** Not miscible or difficult to mix.

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:** alkali or alkaline earth metals--powdered Al, Zn, Mg, etc.
- **Dangerous reactions:** No dangerous reactions known.
- **Dangerous decomposition products:**
Danger of forming toxic pyrolysis products.
Fluorophosgene on contact with naked flame or red hot objects.

11 Toxicological information

- **Acute toxicity:** no data

12 Ecological information

- **General notes:**
Ozone depletion potential(ODP) : 0
Global warming potential(GWP) : 9,200

13 Disposal considerations

- **Product:**
- **Recommendation**
Must be specially treated adhering to official regulations.
Incineration in an adequate incinerator is recommended.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN "Model Regulation":** UN2193, HEXAFLUOROETHANE (REFRIGERANT GAS R 116), 2.2

15 Regulatory information

- **Safety phrases:**
3/7 Keep container tightly closed in a cool place.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Toxicology and Product Regulatory
- **Contact:** <http://www.daikin.com/>

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· Abbreviations and acronyms:

*GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)*

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