

Printing date 15.03.2023

Version number 1

Revision: 15.03.2023

**\* SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name:** NEOFLON PFA ACX-21, ACX-31, ACX-34, AC-5600, AC-5820, AC-5840**Article number:** ACX STD**1.2 Relevant identified uses of the substance or mixture and uses advised against:**

No further relevant information available.

**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

DAIKIN INDUSTRIES, LTD. CHEMICALS DIVISION:

OSAKA UMEDA TWIN TOWERS SOUTH, 1-13-1 Umeda, Kita-ku, Osaka-shi, Osaka, 530-0001, Japan

Phone: +81-6-6147-9702 Fax: +81-6-6147-9807

**Further information obtainable from:** <http://www.daikin.com/>**1.4 Emergency telephone number:**

Japan: +81-6-6349-7521

China: +86-532-8388-9090, +86-21-34151689

South Korea: +82-2-568-1722

Americas: CHEMTREC +1-800-424-9300 (Outside US/Canada: +1-703-527-3887)

Europe: +49-211-179 225-0

**SECTION 2: Hazard identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

The substance is not classified, according to the CLP regulation.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008:** Not applicable**Signal word:** Not applicable**SECTION 3: Composition/information on ingredients****Information on ingredients:**

CAS: 26655-00-5 Perfluoro(alkoxy alkane)

100%

**SECTION 4: First aid measures****4.1 Description of first aid measures****General information:** Seek medical treatment.**After inhalation:** In case of inhaling decomposed gases: supply fresh air and consult a doctor in case of complaints.**After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

After contact with the molten product, cool rapidly with cold water.

Do not pull solidified product off the skin.

Consult a doctor in case of complaints.

**After eye contact:**

Rinse opened eye for several minutes under running water.

Consult an ophthalmologist in case of complaints.

**After swallowing:** If symptoms persist consult a doctor.**4.2 Most important symptoms and effects, both acute and chronic:** No further relevant information available.**4.3 Indication of any immediate medical attention and special treatment needed:**

No further relevant information available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents:** Use fire extinguishing methods suitable for surrounding conditions.**For safety reasons unsuitable extinguishing agents:** No further information available.**5.2 Special hazards arising from the substance or mixture:**

During heating or in case of fire poisonous gases may be produced.

Formation of toxic gases is possible during heating or in case of fire.

Printing date 15.03.2023

Version number 1

Revision: 15.03.2023

**Trade name: NEOFLON PFA ACX-21, ACX-31, ACX-34, AC-5600, AC-5820, AC-5840****5.3 Advice for firefighters:****Protective equipment:***Wear fully protective suit.**Wear self-contained breathing apparatus and protective suit.**Do not inhale explosion gases or combustion gases.***SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures:***Ensure adequate ventilation before entering the area.**Keep out unauthorized persons.**Wear appropriate protective devices (See Section 8 Exposure Controls/Personal Protection).**Avoid contact with eyes and skin.**Do not swallow the product.***6.2 Environmental precautions:** *Do not allow product to reach sewage system or any water course.***6.3 Methods and material for containment and cleaning up:** *Pick up mechanically.***6.4 Reference to other sections:***See Section 7 for information on safe handling.**See Section 8 for information on personal protection equipment.**See Section 13 for disposal information.***SECTION 7: Handling and storage****7.1 Precautions for safe handling:***Ensure good ventilation/exhaustion at the workplace.**Extractors are required on all machines used for thermal processing or powder handling processes.**Do not handle until all safety precautions have been read and understood.***Information about fire - and explosion protection:** *Keep ignition sources away - Do not smoke.***7.2 Conditions for safe storage, including any incompatibilities:****Storage****Requirements to be met by storerooms and receptacles:** *Store in a cool and dry location.***Information about storage in one common storage facility:***No further information available.**See section 10 for information on incompatible materials.***Further information about storage conditions:***Store in cool, dry conditions in well sealed receptacle.**Protect from heat and direct sunlight.**Store containers in a well ventilated area.***7.3 Specific end use(s):** *No further relevant information available.***SECTION 8: Exposure controls/personal protection****8.1 Control parameters** *No further information available.***Ingredients with limit values that require monitoring at the workplace:** *Not required.***Additional information:** *The lists valid during the making were used as basis.***8.2 Exposure controls****Appropriate engineering controls** *No further data; see item 7.***Individual protection measures, such as personal protective equipment****General protective and hygienic measures:***Wash hands before breaks and at the end of work.**Do not eat or drink while working.**Keep away from tobacco products.***Respiratory protection:***Use respiratory protective device with filters for organic and acid gas (or airline respirators in some cases), if the product is heated above 260 °C and toxic gas is formed.**Dust respirator, simplified dust respirator*

Printing date 15.03.2023

Version number 1

Revision: 15.03.2023

Trade name: **NEOFLON PFA ACX-21, ACX-31, ACX-34, AC-5600, AC-5820, AC-5840**

**Hand protection**

Synthetic rubber gloves



Protective gloves

**Material of gloves:** Rubber

**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/face protection**



Safety glasses

**Body protection:** Protective work clothing

\* **SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

**General Information**

<b>Physical state</b>	Powder
<b>Colour:</b>	Whitish
<b>Odour:</b>	Odourless
<b>Odour threshold:</b>	Not determined.
<b>Melting point/freezing point:</b>	Undetermined.
<b>Boiling point or initial boiling point and boiling range</b>	Undetermined.
<b>Flammability</b>	Product is not flammable.
<b>Lower and upper explosion limit</b>	
<b>Lower explosive limit:</b>	No further information available.
<b>Upper explosive limit:</b>	Not determined.
<b>Flash point:</b>	Not applicable.
<b>Decomposition temperature:</b>	No further information available.
<b>pH</b>	Not applicable.
<b>Viscosity:</b>	
<b>Kinematic viscosity</b>	Not applicable.
<b>Dynamic:</b>	Not applicable.
<b>Solubility</b>	
<b>water:</b>	Not miscible or difficult to mix.
<b>Partition coefficient n-octanol/water (log value)</b>	No further information available.
<b>Vapour pressure:</b>	No further information available.
<b>Density and/or relative density</b>	
<b>Density at 20 °C:</b>	1 g/cm <sup>3</sup>
	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not applicable.
<b>Particle characteristics</b>	No further information available.

**9.2 Other information:**

<b>Form:</b>	Powder
<b>Auto-ignition temperature:</b>	Not determined.
<b>Explosive properties:</b>	Product does not present an explosion hazard.
<b>Evaporation rate</b>	Not applicable.

**Information with regard to physical hazard classes**

<b>Explosives</b>	Not applicable
<b>Flammable gases</b>	Not applicable
<b>Aerosols</b>	Not applicable
<b>Oxidising gases</b>	Not applicable
<b>Gases under pressure</b>	Not applicable

Printing date 15.03.2023

Version number 1

Revision: 15.03.2023

Trade name: NEOFLON PFA ACX-21, ACX-31, ACX-34, AC-5600, AC-5820, AC-5840

<i>Flammable liquids</i>	<i>Not applicable</i>
<i>Flammable solids</i>	<i>Not applicable</i>
<i>Self-reactive substances and mixtures</i>	<i>Not applicable</i>
<i>Pyrophoric liquids</i>	<i>Not applicable</i>
<i>Pyrophoric solids</i>	<i>Not applicable</i>
<i>Self-heating substances and mixtures</i>	<i>Not applicable</i>
<i>Substances and mixtures, which emit flammable gases in contact with water</i>	<i>Not applicable</i>
<i>Oxidising liquids</i>	<i>Not applicable</i>
<i>Oxidising solids</i>	<i>Not applicable</i>
<i>Organic peroxides</i>	<i>Not applicable</i>
<i>Corrosive to metals</i>	<i>Not applicable</i>
<i>Desensitised explosives</i>	<i>Not applicable</i>

### **SECTION 10: Stability and reactivity**

**10.1 Reactivity** No further relevant information available.

#### **10.2 Chemical stability**

**Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.

**10.3 Possibility of hazardous reactions:** No dangerous reactions known under normal conditions of use.

**10.4 Conditions to avoid:** Keep away from heat, sparks, flame, high temperature.

#### **10.5 Incompatible materials:**

Metal powder (e.g. Al, Mg) and fluorine oxidizer. There is a danger of chemical reactions that could cause fire or explosion when the product is heated with them.

#### **10.6 Hazardous decomposition products:**

As for decomposition products, particulate matters and extremely toxic/corrosive fumes may be generated (HF, carbonyl fluoride, monomers, perfluoroisobutylene).

Decomposition products differ depending on the temperature and conditions.

### **SECTION 11: Toxicological information**

#### **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Acute toxicity** no data

**LD/LC50 values relevant for classification:** No further information available.

**Skin corrosion/irritation** No further information available.

**Serious eye damage/irritation** No further information available.

**after inhalation:** No further information available.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT-single exposure** Based on available data, the classification criteria are not met.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

**Other information (about experimental toxicology):** No further information available.

**Subacute to chronic toxicity** No further information available.

#### **Additional toxicological information:**

**General effects:**

Fumes generated during burning may cause "polymer fume fever" (flu-like symptoms such as fever, chill, cough). This may last for a whole day and night.

Fumes are not absorbed in skin. No sensitizing effect known.

**Effects of hydrogen fluoride:**

Low concentration of hydrogen fluoride may cause feeling of dyspnea, cough, irritation in eyes, nose, throat, fever, chill for 1-2 days.

After that, dyspnea, cyanosis and pulmonary edema may be seen.

High concentration of hydrogen fluoride damages liver and kidney.

**Effects of carbonyl fluoride:**

Skin: Irritation or eruption

Printing date 15.03.2023

Version number 1

Revision: 15.03.2023

**Trade name: NEOFLON PFA ACX-21, ACX-31, ACX-34, AC-5600, AC-5820, AC-5840***Eye: Ulcer in cornea, conjunctiva**Respiratory system: Irritation**Lung: Temporary symptoms such as cough, pain, dyspnea**Persons who have experienced lung diseases are vulnerable to toxicity caused by excessive exposure to pyrolysis products***11.2 Information on other hazards****Endocrine disrupting properties***Substance is not listed.***\* SECTION 12: Ecological information****12.1 Toxicity***Aquatic toxicity: No further relevant information available.**12.2 Persistence and degradability: The product is thought to be non-biodegradable.**12.3 Bioaccumulative potential: No further relevant information available.**12.4 Mobility in soil: No further relevant information available.***12.5 Results of PBT and vPvB assessment***PBT: No further relevant information available.**vPvB: No further information available.**12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.***12.7 Other adverse effects:***Ecotoxicological effects: no data***SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation:***After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.**Landfill disposal is recommended.**In case of incineration, the temperature must be higher than 800 °C.**Treat exhaust gas such as HF in a suitable way.**Disposal must be made according to official regulations.***Uncleaned packaging***Recommendation: Disposal must be made according to official regulations.***SECTION 14: Transport information****14.1 UN number or ID number****ADR, ADN, IMDG, IATA***Not applicable***14.2 UN proper shipping name:****ADR, ADN, IMDG, IATA***Not applicable***14.3 Transport hazard class(es):****ADR, ADN, IMDG, IATA****Class:***Not applicable***14.4 Packing group:****ADR, IMDG, IATA***Not applicable***14.5 Environmental hazards:****Marine pollutant:***No***14.6 Special precautions for user:***Not applicable.***14.7 Maritime transport in bulk according to IMO instruments***Not applicable.***Transport/Additional information:***Avoid direct sunlight. Make sure of no damage, corrosion, leaks on the receptacles.**Take necessary measures for preventing cargo shift.***UN "Model Regulation":***Not applicable*

Printing date 15.03.2023

Version number 1

Revision: 15.03.2023

Trade name: NEOFLON PFA ACX-21, ACX-31, ACX-34, AC-5600, AC-5820, AC-5840

**\* SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

No further relevant information available.

**Labelling according to Regulation (EC) No 1272/2008** Not applicable**Hazard pictograms** Not applicable**Signal word** Not applicable**Hazard statements** Not applicable**National regulations** No further information available.**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**SECTION 16: Other information**

The product is for the industrial use only. We do not guarantee the safety in case the product is used for the other purposes. When using the product for health-care application or food/feed application, consult us in advance.

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 SDS:** EHS Department**Contact:** <http://www.daikin.com/>**Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

**\* Data compared to the previous version altered.**