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Version number 1

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

**Trade name:** *NEOFLON PFA AP-201, 202, 210, 211, 220, 230, 231, 201SH, 211SH, 215SH, 221SH, 230SH, 231SH*

**Article number:** *AP2 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 product 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%*

**Additional information:** *For the wording of the listed hazard phrases refer to section 16.*

**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.*

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**Trade name: NEOFLON PFA AP-201, 202, 210, 211, 220, 230, 231, 201SH, 211SH, 215SH, 221SH, 230SH, 231SH****5.2 Special hazards arising from the substance or mixture:***Formation of toxic gases is possible during heating or in case of fire.***5.3 Advice for firefighters:****Protective equipment:***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 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:***See section 10 for information on incompatible materials.***Further information about storage conditions:***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:***The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.***8.2 Exposure controls****Appropriate engineering controls** *No further data; see section 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*

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**Hand protection**

Protective gloves

Material of gloves: Rubber

**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**

Physical state	Powder
Colour:	Whitish
Odour:	Odourless
Odour threshold:	Not determined.
Melting point/freezing point:	300 °C
Boiling point or initial boiling point and boiling range	Undetermined.
Flammability	Not determined.
Lower and upper explosion limit	
Lower explosive limit:	No further information available.
Upper explosive limit:	Not determined.
Flash point:	Not applicable.
Auto-ignition temperature:	Product is not self-igniting.
Decomposition temperature:	No further information available.
pH	Not applicable.
Viscosity:	
Kinematic viscosity	Not applicable.
Dynamic:	Not applicable.
Solubility	
water:	Not miscible or difficult to mix.
Partition coefficient n-octanol/water (log value)	No further information available.
Vapour pressure:	No further information available.
Density and/or relative density	
Density at 25 °C:	2.1-2.2 g/cm <sup>3</sup>
Relative density	Not determined.
Vapour density	Not applicable.
Particle characteristics	No further information available.

**9.2 Other information:**

Form:	Pellets
Ignition temperature:	Product is not self-igniting.
Explosive properties:	Product does not present an explosion hazard.
Evaporation rate	Not applicable.

**Information with regard to physical hazard classes**

Explosives	Not applicable
Flammable gases	Not applicable
Aerosols	Not applicable
Oxidising gases	Not applicable
Gases under pressure	Not applicable
Flammable liquids	Not applicable
Flammable solids	Not applicable
Self-reactive substances and mixtures	Not applicable

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

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

**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

Eye: Ulcer in cornea, conjunctiva

Respiratory system: Irritation

Lung: Temporary symptoms such as cough, pain, dyspnea

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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:**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**\* 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.

**Other information:** The product is insoluble in water and the biodegradation and ecotoxicity is expected to be low.

**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 relevant information available.

**12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.

**12.7 Other adverse effects:**

**Ecotoxicological effects:** no data

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation:**

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**

**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

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

No further relevant information available.

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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.**