

Printing date 24.03.2015

Version number 1

Revision: 24.03.2015

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name: NEOFLON PFA TC-1559M2****Article number: TC1559M2****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:***Umeda Center Bldg., 4-12, Nakazaki-Nishi 2-chome, Kita-Ku, Osaka, JAPAN**Phone: (+81) 6-6373-4345 Fax: (+81) 6-6373-4281***Further information obtainable from:** <http://www.daikin.com/>**1.4 Emergency telephone number:***+81-6-6349-7521, +86-512-5-232-0949, +86-21-34151689,**+82-2-568-1722, +1-256-306-5000, +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***Flam. Liq. 2 H225 Highly flammable liquid and vapour.**Repr. 1B H360D May damage the unborn child.**Acute Tox. 4 H332 Harmful if inhaled.**Skin Irrit. 2 H315 Causes skin irritation.**Eye Irrit. 2 H319 Causes serious eye irritation.**STOT SE 3 H335 May cause respiratory irritation.***2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008:***The product is classified and labelled according to the CLP regulation.***Signal word: Danger****Precautionary statements:***P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**P241 Use explosion-proof electrical/ventilating/lighting/equipment.**P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**P405 Store locked up.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.*

Safety data sheet

Printing date 24.03.2015

Version number 1

Revision: 24.03.2015

Trade name: NEOFLON PFA TC-1559M2

SECTION 3: Composition/information on ingredients

Information on ingredients:

26655-00-5 PFA	10-20%
<i>Binder</i>	1-10%
<i>Acute Tox. 4, H302</i>	
1333-86-4 Carbon black	<5%
872-50-4 N-Methyl-2-pyrrolidone	20-30%
<i>T Repr. Cat. 2 R61; Xi R36/37/38</i>	
<i>Repr. 1B, H360D; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335</i>	
127-19-5 N,N-Dimethylacetamide	15-25%
<i>T Repr. Cat. 2 R61; Xn R20/21</i>	
<i>Repr. 1B, H360D; Acute Tox. 4, H312; Acute Tox. 4, H332</i>	
108-10-1 Methyl isobutyl ketone	15-25%
<i>Xn R20; Xi R36/37; F R11</i>	
<i>R66</i>	
<i>Flam. Liq. 2, H225; Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335</i>	
1330-20-7 Xylene	1-10%
<i>Xn R20/21; Xi R38</i>	
<i>R10</i>	
<i>Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315</i>	
<i>Others</i>	<5%

SVHC:

872-50-4 N-Methyl-2-pyrrolidone

127-19-5 N,N-Dimethylacetamide

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Seek medical treatment.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact:

Remove contaminated clothes immediately.

Immediately wash with water and soap and rinse thoroughly.

Consult a doctor in case of complaints.

After eye contact:

Immediately rinse with a lot of water for several minutes. Remove contact lenses if possible. Continue rinsing.

Consult an ophthalmologist in case of complaints.

After swallowing:

Rinse mouth with water. Do not induce vomiting.

Consult a doctor in case of complaints.

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:

Foam

Safety data sheet

Printing date 24.03.2015

Version number 1

Revision: 24.03.2015

Trade name: NEOFLON PFA TC-1559M2

Fire-extinguishing powder

CO2

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture:

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

Receptacle may explode when heated.

Extremely flammable; can ignite easily with heat, sparks, fire.

5.3 Advice for firefighters: Remove receptacles from area of fire if possible.

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:

Wear protective clothing.

Ensure adequate ventilation before entering the area.

Stay on the windward side.

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 to enter sewers/ surface or ground water.

Prevent seepage into sewage system, workpits and cellars.

6.3 Methods and material for containment and cleaning up:

Do not flush with water or aqueous cleansing agents

For a small amount of leakage: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders) or collect in an empty container that can be sealed tightly.

For a small amount of leakage: Use clean anti-static tools when absorbing the product.

For a large amount of leakage: Enclose with banks to avoid outflow. Lead the leakage to a safe place and collect.

Remove ignition sources immediately.

Ground all equipment when the product leaks.

There is a danger of explosion. Prepare fire extinguisher in case of emergency.

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:

Open and handle receptacle with care.

Prevent formation of aerosols.

Ensure good ventilation/exhaustion at the workplace.

Handle with care. Avoid jolting, friction and impact.

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.

Protect against electrostatic charges.

Use flame proof electric/ lighting devices and ventilation equipment.

Ground/Bond container and receiving equipment.

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.

Provide solvent resistant, sealed floor.

Keep receptacle tightly sealed.

Safety data sheet

Printing date 24.03.2015

Version number 1

Revision: 24.03.2015

Trade name: NEOFLON PFA TC-1559M2**Information about storage in one common storage facility:***Store away from oxidising agents.**See section 10 for information on incompatible materials.***Further information about storage conditions:***Protect from heat and direct sunlight.**Store receptacle in a well ventilated area.**Store locked up.***7.3 Specific end use(s):** No further relevant information available.**SECTION 8: Exposure controls/personal protection****Additional information about design of technical facilities:** No further data; see item 7.**8.1 Control parameters** No further information available.**Ingredients with limit values that require monitoring at the workplace:****872-50-4 N-Methyl-2-pyrrolidone**IOELV (EU) Short-term value: 80 mg/m³, 20 ppmLong-term value: 40 mg/m³, 10 ppm

Skin

108-10-1 Methyl isobutyl ketoneIOELV (EU) Short-term value: 208 mg/m³, 50 ppmLong-term value: 83 mg/m³, 20 ppm**127-19-5 N,N-Dimethylacetamide**IOELV (EU) Short-term value: 72 mg/m³, 20 ppmLong-term value: 36 mg/m³, 10 ppm

Skin

1330-20-7 XyleneIOELV (EU) Short-term value: 442 mg/m³, 100 ppmLong-term value: 221 mg/m³, 50 ppm

Skin

100-41-4 EthylbenzeneIOELV (EU) Short-term value: 884 mg/m³, 200 ppmLong-term value: 442 mg/m³, 100 ppm

Skin

8.2 Exposure controls**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 formation of toxic gases is possible while the product is heated.**Use respiratory protective device with organic gas cartridge.***Protection of hands:**

Protective gloves

Material of gloves: Rubber**Penetration time of glove material***The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.*

Safety data sheet

Printing date 24.03.2015

Version number 1

Revision: 24.03.2015

Trade name: NEOFLON PFA TC-1559M2

Eye 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****Appearance**

Form:	Liquid
Colour:	Black
Odour:	Characteristic
pH-value:	No further information available.
Melting point/Melting range:	No further information available.
Boiling point/Boiling range:	No further information available.
Flash point:	15,6 °C (SCC)
Lower explosive limit:	1,3 Vol %
Upper explosive limit:	11,5 Vol %
Vapour pressure:	No further information available.
Density:	No further information available.
Solubility in / Miscibility with water:	No further information available.
Partition coefficient (n-octanol/water):	No further information available.

9.2 Other information:

SECTION 10: Stability and reactivity

10.1 Reactivity**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:** Oxidizing agents**10.6 Hazardous decomposition products:**

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

Decomposition products differ depending on the temperature and conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects**Acute toxicity****LD/LC50 values relevant for classification:****872-50-4 N-Methyl-2-pyrrolidone**

Oral LD50 3914 mg/kg (Rat)

Dermal LD50 8000 mg/kg (Rabbit)

108-10-1 Methyl isobutyl ketone

Oral LD50 2080 mg/kg (Rat)

Dermal LD50 16000 mg/kg (rab)

Safety data sheet

Printing date 24.03.2015

Version number 1

Revision: 24.03.2015

Trade name: NEOFLON PFA TC-1559M2**Inhalative LC50/4 h 8,3-16,6 ppm (Rat)****127-19-5 N,N-Dimethylacetamide**

Oral LD50 4930 mg/kg (Rat)

Dermal LD50 2240 mg/kg (Rabbit)

Primary irritant effect**on the skin:** Irritant to skin and mucous membranes.**on the eye:** Irritating effect.**Sensitisation:** No sensitising effects known.**Additional toxicological information:***The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:***Harmful****Irritant****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*Persons who have experienced lung diseases are vulnerable to toxicity caused by excessive exposure to pyrolysis products***CMR effects****Repr. 1B****Germ cell mutagenicity:** No further information available.**Carcinogenicity:** No further information available.**Reproductive toxicity:** No further information available.**Aspiration hazard:** No further information available.**Specific target organ toxicity - single exposure:** No further information available.**Specific target organ toxicity - repeated exposure:** No further information available.**SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:** No further relevant information available.**12.2 Persistence and degradability:** No further relevant information available.**12.3 Bioaccumulative potential:** No further relevant information available.**12.4 Mobility in soil:** No further relevant information available.**Ecotoxicological effects:** no data**12.5 Results of PBT and vPvB assessment****PBT:** No further relevant information available.**vPvB:** No further relevant information available.**12.6 Other adverse effects:** No further relevant information available.**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation:** Disposal must be made according to official regulations.

Safety data sheet

Printing date 24.03.2015

Version number 1

Revision: 24.03.2015

Trade name: NEOFLON PFA TC-1559M2

Uncleaned packaging**Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number:

ADR, IMDG, IATA UN1263

14.2 UN proper shipping name:ADR: 1263 PAINT
IMDG, IATA PAINT**14.3 Transport hazard class(es):**

ADR, IMDG, IATA

**Class:**

3 Flammable liquids.

Label:

3

14.4 Packing group:

ADR, IMDG, IATA II

14.5 Environmental hazards:**Marine pollutant:**

No

14.6 Special precautions for user:

Warning: Flammable liquids.

Danger code (Kemler):

33

EMS Number:

F-E,S-E

14.7 Transport in bulk according to Annex II of**MARPOL73/78 and the IBC Code:****Transport/Additional information:**

Not applicable.

Avoid direct sunlight. Make sure of no damage, corrosion, leaks on the receptacles.

Take necessary measures for preventing cargo shift.

ADR**Limited quantities (LQ):**

5L

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

2

D/E

Transport category:**Tunnel restriction code:****IMDG****Limited quantities (LQ):**

5L

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

UN "Model Regulation":

UN1263, PAINT, 3, II

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

The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS02



GHS07



GHS08

Safety data sheet

Printing date 24.03.2015

Version number 1

Revision: 24.03.2015

Trade name: NEOFLON PFA TC-1559M2**Signal word Danger****Hazard-determining components of labelling:***N,N-Dimethylacetamide**N-Methyl-2-pyrrolidone**Methyl isobutyl ketone**Xylene***Hazard statements***H225 Highly flammable liquid and vapour.**H332 Harmful if inhaled.**H315 Causes skin irritation.**H319 Causes serious eye irritation.**H360D May damage the unborn child.**H335 May cause respiratory irritation.***Precautionary statements***P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**P241 Use explosion-proof electrical/ventilating/lighting/equipment.**P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**P405 Store locked up.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.***National regulations** No further information available.**Other regulations, limitations and prohibitive regulations:** No further information available.**Substances of very high concern (SVHC) according to REACH, Article 57:**872-50-4 *N-Methyl-2-pyrrolidone*127-19-5 *N,N-Dimethylacetamide***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 européen sur le transport 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

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Repr. 1B: Reproductive toxicity, Hazard Category 1B

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3