

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 TC-7609M1**Article number:** TC7609M1**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**

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Muta. 1B H340 May cause genetic defects.

Carc. 1B H350 May cause cancer.

Repr. 1B H360D May damage the unborn child.



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**Hazard-determining components of labelling:**

N,N-Dimethylacetamide

Methyl isobutyl ketone

N-Methyl-2-pyrrolidone

Low boiling point naphtha - unspecified

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.

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P303+P361+P353 *IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.*

Additional information:

Restricted to professional users.

SECTION 3: Composition/information on ingredients**Information on ingredients:**

CAS: 26655-00-5	Perfluoro(alkoxy alkane)	5-15%
	Binder	5-15%
CAS: 1333-86-4	Carbon black	<5%
CAS: 127-19-5	N,N-Dimethylacetamide Repr. 1B, H360D Acute Tox. 4, H312; Acute Tox. 4, H332	25-35%
CAS: 872-50-4	N-Methyl-2-pyrrolidone Repr. 1B, H360D Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335 Specific concentration limit: STOT SE 3; H335: C ≥ 10 %	10-20%
CAS: 108-10-1	Methyl isobutyl ketone Flam. Liq. 2, H225 Carc. 2, H351 Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H336 EUH066 ATE: LC50/4h inhalative: 11 ppm	10-20%
CAS: 78-93-3	Butanone Flam. Liq. 2, H225 Eye Irrit. 2, H319; STOT SE 3, H336 EUH066	10-20%
	Others	<5%

SVHC:

CAS: 127-19-5 N,N-Dimethylacetamide

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

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: 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.

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Trade name: NEOFLON PFA TC-7609M1**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:***Alcohol resistant foam**Dry sand**Fire-extinguishing powder**CO₂***For safety reasons unsuitable extinguishing agents:** *Water with full jet***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.**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 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.**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:** *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:***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.*

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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 containers tightly sealed.

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 containers 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**

8.1 Control parameters No further information available.

Ingredients with limit values that require monitoring at the workplace:

CAS: 127-19-5 N,N-Dimethylacetamide

OEL (Japan) Long-term value: 36 mg/m³, 10 ppm

PEL (USA) Long-term value: 35 mg/m³, 10 ppm
Skin

REL (USA) Long-term value: 35 mg/m³, 10 ppm
Skin

TLV (USA) Long-term value: 36 mg/m³, 10 ppm
Skin; BEI

CAS: 108-10-1 Methyl isobutyl ketone

OEL (Japan) Long-term value: 200 mg/m³, 50 ppm

PEL (USA) Long-term value: 410 mg/m³, 100 ppm

REL (USA) Short-term value: 300 mg/m³, 75 ppm
Long-term value: 205 mg/m³, 50 ppm

TLV (USA) Short-term value: 307 mg/m³, 75 ppm
Long-term value: 82 mg/m³, 20 ppm
BEI

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

OEL (Japan) Long-term value: 4 mg/m³, 1 ppm

WEEL (USA) Long-term value: 10 ppm
Skin

CAS: 78-93-3 Butanone

OEL (Japan) Long-term value: 590 mg/m³, 200 ppm

PEL (USA) Long-term value: 590 mg/m³, 200 ppm

REL (USA) Short-term value: 885 mg/m³, 300 ppm
Long-term value: 590 mg/m³, 200 ppm

TLV (USA) Short-term value: 885 mg/m³, 300 ppm
Long-term value: 590 mg/m³, 200 ppm
BEI

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Trade name: NEOFLON PFA TC-7609M1**Ingredients with biological limit values:****CAS: 127-19-5 N,N-Dimethylacetamide**

BEI (USA) 30 mg/g creatinine
Medium: urine
Time: end of shift at end of workweek
Parameter: N-Methylacetamide

CAS: 108-10-1 Methyl isobutyl ketone

OEL-B (Japan) 1.7 mg/l
Medium: urine
Time: end of shift
Parameter: MIBK

BEI (USA) 1 mg/L
Medium: urine
Time: end of shift
Parameter: MIBK

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

BEI (USA) 100 mg/L
Medium: urine
Time: end of shift
Parameter: 5-Hydroxy-N-methyl-2-pyrrolidone

CAS: 78-93-3 Butanone

OEL-B (Japan) 5 mg/l
Medium: urine
Time: End of shift or a few hours after high exposure
Parameter: Methylethylketone

BEI (USA) 2 mg/L
Medium: urine
Time: end of shift
Parameter: MEK

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 formation of toxic gases is possible while the product is heated.

Use respiratory protective device with organic gas cartridge.

Hand protection

Protective gloves

Material of gloves: Rubber**Eye/face protection**

Safety glasses

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Trade name: NEOFLON PFA TC-7609M1

Body protection: Protective work clothing

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****General Information**

Physical state	Fluid
Colour:	Black
Odour:	Characteristic
Melting point/freezing point:	Undetermined.
Boiling point or initial boiling point and boiling range	Undetermined.
Flammability	Not applicable.
Lower and upper explosion limit	
Lower explosive limit:	1.8 Vol % (N,N-dimethylacetamide)
Upper explosive limit:	11.5 Vol % (N,N-dimethylacetamide)
Flash point:	5.8 °C (SCC)
Decomposition temperature:	No further information available.
pH	Not determined.
Viscosity:	
Kinematic viscosity	No further information available.
Solubility	
water:	No further information available.
Partition coefficient n-octanol/water (log value)	No further information available.
Vapour pressure:	No further information available.
Density and/or relative density	
Density:	Not determined.
Vapour density	No further information available.
Particle characteristics	Not applicable.

9.2 Other information:

Form:	Liquid
Auto-ignition temperature:	Product is not self-igniting.

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	
Highly flammable liquid and vapour.	
Flammable solids	Not applicable
Self-reactive substances and mixtures	Not applicable
Pyrophoric liquids	Not applicable
Pyrophoric solids	Not applicable
Self-heating substances and mixtures	Not applicable
Substances and mixtures, which emit flammable gases	
in contact with water	Not applicable
Oxidising liquids	Not applicable
Oxidising solids	Not applicable
Organic peroxides	Not applicable
Corrosive to metals	Not applicable
Desensitised explosives	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.

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Trade name: NEOFLON PFA TC-7609M1**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, 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:**CAS: 127-19-5 N,N-Dimethylacetamide**

Oral LD50 4930 mg/kg (Rat)

Dermal LD50 2240 mg/kg (Rabbit)

CAS: 108-10-1 Methyl isobutyl ketone

Oral LD50 2080 mg/kg (Rat)

Dermal LD50 16000 mg/kg (Rabbit)

Inhalative LC50/4 h 8.3-16.6 ppm (Rat)

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

Oral LD50 3914 mg/kg (Rat)

Dermal LD50 8000 mg/kg (Rabbit)

Low boiling point naphtha - unspecified

Oral LD50 >6800 mg/kg (Rat)

Dermal LD50 >3400 mg/kg (Rabbit)

Inhalative LC50/4 h >10.2 ppm (Rat)

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye irritation.

after inhalation: No further information available.**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**Germ cell mutagenicity**

May cause genetic defects.

Carcinogenicity

May cause cancer.

Reproductive toxicity

May damage the unborn child.

STOT-single exposure

May cause respiratory irritation.

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.

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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

11.2 Information on other hazards

Endocrine disrupting properties

None of the ingredients is listed.

* 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.

12.5 Results of PBT and vPvB assessment

PBT: No further relevant information available.

vPvB: No further information available.

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

12.7 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.

Uncleaned packaging

Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN number or ID 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.

14.4 Packing group:

ADR, IMDG, IATA II

14.5 Environmental hazards:

Marine pollutant: No

14.6 Special precautions for user: Warning: Flammable liquids.

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.

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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

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

Signal word Danger**Hazard-determining components of labelling:**

N,N-Dimethylacetamide

Methyl isobutyl ketone

N-Methyl-2-pyrrolidone

Low boiling point naphtha - unspecified

Hazard statements

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H340 May cause genetic defects.

H350 May cause cancer.

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 [or 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.

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**Other regulations, limitations and prohibitive regulations:****Substances of very high concern (SVHC) according to REACH, Article 57:**

CAS: 127-19-5 N,N-Dimethylacetamide

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

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.

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Trade name: NEOFLON PFA TC-7609M1**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**SVHC: Substances of Very High Concern**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Flammable liquids – Category 2**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Irrit. 2: Serious eye damage/eye irritation – Category 2**Muta. 1B: Germ cell mutagenicity – Category 1B**Carc. 1B: Carcinogenicity – Category 1B**Repr. 1B: Reproductive toxicity – Category 1B**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3**** Data compared to the previous version altered.**