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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:** POLYFLON PTFE TC-7805GN**Article number:** 7805GN**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, +1-256-306-5000, +86-512-5-232-0949, +82-2-568-1722, +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.



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.

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

9002-84-0 Polytetrafluoroethylene

5-15%

Binder

5-15%

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Cobalt Green	<5%
872-50-4 N-Methyl-2-pyrrolidone	40-50%
T Repr. Cat. 2 R61; Xi R36/37/38	
Repr. 1B, H360D; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	
108-10-1 Methyl isobutyl ketone	10-20%
Xn R20; Xi R36/37; F R11	
R66	
Flam. Liq. 2, H225; Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	
108-88-3 Toluene	5-15%
Xn R48/20-63-65; Xi R38; F R11	
R67	
Repr. Cat. 3	
Flam. Liq. 2, H225; Repr. 2, H361d; STOT RE 2, H373; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336	
78-93-3 Butanone	5-15%
Xi R36; F R11	
R66-67	
Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	

**SVHC:**

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

**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:**

Immediately wash with water and soap and rinse thoroughly.

Remove contaminated clothes immediately.

**After eye contact:**

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

**After swallowing:** Rinse mouth with water. Do not induce vomiting.**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:**

Water haze

Water spray

Foam

Fire-extinguishing powder

CO2

Dry sand

**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:**

The flash point is extremely low: water spray can be used for a large fire only if other extinguishing means have no effect.

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**Trade name: POLYFLON PTFE TC-7805GN***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.**Wear fully protective suit.*

### 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.**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 respiratory protective device available.**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.**Keep receptacle 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 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.*

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**Trade name: POLYFLON PTFE TC-7805GN****8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:****872-50-4 N-Methyl-2-pyrrolidone**OEL (Japan) Long-term value: 4 mg/m<sup>3</sup>, 1 ppmWEEL (USA) Long-term value: 10 ppm  
Skin**108-10-1 Methyl isobutyl ketone**OEL (Japan) Long-term value: 200 mg/m<sup>3</sup>, 50 ppmPEL (USA) Long-term value: 410 mg/m<sup>3</sup>, 100 ppmREL (USA) Short-term value: 300 mg/m<sup>3</sup>, 75 ppm  
Long-term value: 205 mg/m<sup>3</sup>, 50 ppmTLV (USA) Short-term value: 307 mg/m<sup>3</sup>, 75 ppm  
Long-term value: 82 mg/m<sup>3</sup>, 20 ppm  
BEI**108-88-3 Toluene**OEL (Japan) Long-term value: 188 mg/m<sup>3</sup>, 50 ppmPEL (USA) Long-term value: 200 ppm  
Ceiling limit: 300; 500\* ppm  
\*10-min peak per 8-hr shiftREL (USA) Short-term value: 560 mg/m<sup>3</sup>, 150 ppm  
Long-term value: 375 mg/m<sup>3</sup>, 100 ppmTLV (USA) Long-term value: 75 mg/m<sup>3</sup>, 20 ppm  
BEI**78-93-3 Butanone**OEL (Japan) Long-term value: 590 mg/m<sup>3</sup>, 200 ppmPEL (USA) Long-term value: 590 mg/m<sup>3</sup>, 200 ppmREL (USA) Short-term value: 885 mg/m<sup>3</sup>, 300 ppm  
Long-term value: 590 mg/m<sup>3</sup>, 200 ppmTLV (USA) Short-term value: 885 mg/m<sup>3</sup>, 300 ppm  
Long-term value: 590 mg/m<sup>3</sup>, 200 ppm  
BEI**Cobalt Green**OEL (Japan) Long-term value: 0,05 mg/m<sup>3</sup>  
as CoPEL (USA) Long-term value: 0,1\* mg/m<sup>3</sup>  
as Co; \*for metal dust and fumeREL (USA) Long-term value: 0,05 mg/m<sup>3</sup>  
as Co; metal dust & fumeTLV (USA) Long-term value: 0,02 mg/m<sup>3</sup>  
as Co, BEI**Ingredients with biological limit values:****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

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Trade name: **POLYFLON PTFE TC-7805GN****108-10-1 Methyl isobutyl ketone**

OEL-B (Japan) 1,7 mg/l

試料: 尿

試料採取時期: 作業終了時

物質: Methylisobutylketone

BEI (USA) 1 mg/L

Medium: urine

Time: end of shift

Parameter: MIBK

**108-88-3 Toluene**

OEL-B (Japan) 0,6 mg/l

試料: 血液

試料採取時期: 週の後半の作業終了前 2 時間以内

物質: Toluene

0,06 mg/l

試料: 尿

試料採取時期: 週の後半の作業終了前 2 時間以内

物質: Toluene

BEI (USA) 0,02 mg/L

Medium: blood

Time: prior to last shift of workweek

Parameter: Toluene

0,03 mg/L

Medium: urine

Time: end of shift

Parameter: Toluene

0,3 mg/g creatinine

Medium: urine

Time: end of shift

Parameter: o-Cresol with hydrolysis (background)

**78-93-3 Butanone**

OEL-B (Japan) 5 mg/l

試料: 尿

試料採取時期: 作業終了時または高濃度曝露後数時間以内

物質: Methyl ethyl ketone

BEI (USA) 2 mg/L

Medium: urine

Time: end of shift

Parameter: MEK

**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.

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Trade name: POLYFLON PTFE TC-7805GN

### Protection of hands:



Protective gloves

### 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 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

<b>Form:</b>	Liquid
<b>Colour:</b>	Green
<b>Odour:</b>	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:** 13 °C (SCC)

**Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

**Lower explosive limit:** No further information available.

**Upper explosive limit:** No further information available.

**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:** No further relevant information available.

## 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.

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### 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)

Inhalative LC50/4 h 8,3-16,6 ppm (Rat)

##### 108-88-3 Toluene

Oral LD50 5000 mg/kg (Rat)

Dermal LD50 12124 mg/kg (Rabbit)

Inhalative LC50/4 h 5320 ppm (Mouse)

##### 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:

##### 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

**Carcinogenicity:** No further information available.

**Reproductive toxicity:** 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.

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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 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:

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: 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.

## ADR

Limited quantities (LQ): 5L

Transport category: 2

Tunnel restriction code: D/E

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

Labelling according to Regulation (EC) No 1272/2008

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

## Hazard pictograms



GHS02



GHS07



GHS08

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**Trade name: POLYFLON PTFE TC-7805GN**

**Signal word** *Danger*

**Hazard-determining components of labelling:**

*N-Methyl-2-pyrrolidone*

*Toluene*

**Hazard statements**

*H225 Highly flammable liquid and vapour.*

*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**

**Other regulations, limitations and prohibitive regulations:**

**Substances of very high concern (SVHC) according to REACH, Article 57:**

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

## 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

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