SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: POLYFLON PTFE TC-713LB
Article number: 713LB

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.

Additional information:
Contains epoxy constituents. May produce an allergic reaction.
Contains Binder. May produce an allergic reaction.
SECTION 3: Composition/information on ingredients

Information on ingredients:

9002-84-0 Polytetrafluoroethylene <5%
Binder 5-15%
13463-67-7 Titanium dioxide <5%
872-50-4 N-Methyl-2-pyrrolidone 45-55%
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 15-25%
Xn R20; Xi R36/37; F R11
R66
Flam. Liq. 2, H225; Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335
1330-20-7 Xylene 1-10%
Xn R20/21; Xi R38
R10
Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315
Others 5-15%

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
Alcohol resistant 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.
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:
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.

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

**Ingredients with limit values that require monitoring at the workplace:**

**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

**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

**1330-20-7 Xylene**
- OEL (Japan) Long-term value: 217 mg/m³, 50 ppm
- PEL (USA) Long-term value: 435 mg/m³, 100 ppm
- REL (USA) Short-term value: 655 mg/m³, 150 ppm
  - Long-term value: 435 mg/m³, 100 ppm
- TLV (USA) Short-term value: 651 mg/m³, 150 ppm
  - Long-term value: 434 mg/m³, 100 ppm
  - 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

**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

**1330-20-7 Xylene**
- OEL-B (Japan) 800 mg/l
  - 試料: 尿
  - 試料採取時期: 週末の作業終了時
  - 物質: total (o-, m-, p-)methylhippuric acid
Safe data sheet

Trade name: POLYFLON PTFE TC-7113LB

40.0.10 BEI (USA) 1.5 g/g creatinine
 Medium: urine
 Time: end of shift
 Parameter: Methylhippuric acids

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

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.

Eye protection:
Safety glasses

Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>General Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
</tr>
<tr>
<td>Form:</td>
</tr>
<tr>
<td>Colour:</td>
</tr>
<tr>
<td>Odour:</td>
</tr>
<tr>
<td>pH-value:</td>
</tr>
<tr>
<td>Melting point/Melting range:</td>
</tr>
<tr>
<td>Boiling point/Boiling range:</td>
</tr>
<tr>
<td>Flash point:</td>
</tr>
<tr>
<td>Danger of explosion:</td>
</tr>
<tr>
<td>Lower explosive limit:</td>
</tr>
<tr>
<td>Upper explosive limit:</td>
</tr>
<tr>
<td>Vapour pressure:</td>
</tr>
<tr>
<td>Density at 25 °C:</td>
</tr>
<tr>
<td>Solubility in / Miscibility with water:</td>
</tr>
</tbody>
</table>

9.2 Other information:
Partition coefficient (n-octanol/water): No further information available.
No further relevant information available.
安全数据表

根据《2006/1907/EC》第31条
印刷日期：2015年03月19日
版本号：1
修订日期：2015年03月19日

贸易名称：POLYFLON PTFE TC-7113LB

### 第10节：稳定性与反应性

#### 10.1 反应性

#### 10.2 化学稳定性

**热分解/应尽量避免的条件**：为避免热分解，请勿过热。

#### 10.3 可能的有害反应

没有在正常使用条件下已知的危险反应。

#### 10.4 应避免的条件

避免受热、火花、火焰、高温。

#### 10.5 不相容材料

氧化剂

#### 10.6 危险分解产物

对于分解产物，可能生成的颗粒物质和极毒/腐蚀性烟雾（HF、羰基氟化物、单体、全氟异丁烯）。

分解产物根据温度和条件有所不同。

### 第11节：毒理学信息

#### 11.1 毒理学信息

**急性毒性**

**LD/LC50值**

<table>
<thead>
<tr>
<th>化合物</th>
<th>口服LD50 (mg/kg) (大鼠)</th>
<th>皮肤LD50 (mg/kg) (兔子)</th>
</tr>
</thead>
<tbody>
<tr>
<td>872-50-4  N-甲基-2-吡咯烷酮</td>
<td>3914</td>
<td>8000</td>
</tr>
<tr>
<td>108-10-1  甲基异丁基酮</td>
<td>2080</td>
<td>16000</td>
</tr>
<tr>
<td>1330-20-7  松节油</td>
<td>4300</td>
<td>2000</td>
</tr>
</tbody>
</table>

**原发性刺激性**

**皮肤**：刺激皮肤及粘膜。

**眼睛**：刺激性。

**刺激剂**：无已知的接触性刺激。

**额外毒理学信息**：

产品根据计算方法的欧盟分类指导方针的最新版本，显示以下危险：

**刺激**

燃烧过程中产生的烟雾可能引起“聚合物烟雾热”（如发热、寒战、咳嗽）。

这可能持续一整天和一整夜。

**氟化氢**

低浓度的氟化氢可能引起呼吸困难、咳嗽、眼睛、鼻子、喉咙的刺激，发热、寒战1-2天。

之后，呼吸困难、紫绀和肺水肿可能被看到。

高浓度的氟化氢损伤肝脏和肾脏。

**羰基氟化物**

**皮肤**：刺激或皮肤反应

**眼睛**：角膜、结膜溃疡

**呼吸系统**：刺激

**肺**：急性症状如咳嗽、疼痛、呼吸困难

已患有肺部疾病的人对过度暴露于热解产物引起的毒性特别敏感。

**额外毒性**

皮肤：刺激或皮肤反应

眼睛：角膜病变，结膜

呼吸系统：刺激

**肺**：急性症状如咳嗽、疼痛、呼吸困难

已患有肺部疾病的人对过度暴露于热解产物引起的毒性特别敏感。
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.
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

Signal word Danger

Hazard-determining components of labelling:
N-Methyl-2-pyrrolidone
Methyl isobutyl ketone

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