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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 EK-1909S-601L****Article number: EK1909S601L_F****1.2 Relevant identified uses of the substance or mixture and uses advised against:**

Coating Compound/Surface Coating/Paint

1.3 Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

DAIKIN FLUORO COATINGS (SHANGHAI) CO., LTD.

No. 388, Chunguang Road, Xinzhuang Industry Zone, Shanghai, 201108, China.

Phone: +86-21-54421840

Fax: +86-21-54425050

1.4 Emergency telephone number: +86-21-34151689*** SECTION 2: Hazard identification****2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008



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:**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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: 9002-84-0 Polytetrafluoroethylene	15 – 25%
Binder	5 - 15%
CAS: 1333-86-4 Carbon black	< 5%
CAS: 7732-18-5 Water	40 – 50%
CAS: 872-50-4 N-Methyl-2-pyrrolidone	10 – 20%
Repr. 1B, H360D	
Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	

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Trade name: POLYFLON PTFE EK-1909S-601L

CAS: 68-12-2 *N,N*-Dimethylformamide 1 – 10%
Flam. Liq. 3, H226
Repr. 1B, H360D
Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319

Others 5 - 15%

SVHC:CAS: 872-50-4 *N*-Methyl-2-pyrrolidoneCAS: 68-12-2 *N,N*-Dimethylformamide**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:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

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:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire extinguishing methods suitable for surrounding conditions.

For safety reasons unsuitable extinguishing agents: No further information available.**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.

5.3 Advice for firefighters:**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.

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.

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6.3 Methods and material for containment and cleaning up:

In case of spill a small amount of product, and recovering what was wiped off, use an antistatic tool.

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

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:**

Prevent formation of aerosols.

Ensure good ventilation/exhaustion at the workplace.

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:**

Make floor, wall and columns of the storage location fire-resistant construction. Make beams noncombustible construction.

Store in a cool and dry location.

Provide solvent resistant, sealed floor.

Prevent any seepage into the ground.

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**

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:

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

IOELV (EU) Short-term value: 80 mg/m³, 20 ppm

Long-term value: 40 mg/m³, 10 ppm

Skin

CAS: 68-12-2 N,N-Dimethylformamide

IOELV (EU) Short-term value: 30 mg/m³, 10 ppm

Long-term value: 15 mg/m³, 5 ppm

Skin

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

Oral DNEL - consumer 0.85 mg/kg bw/d (long-term exposure) (systemic effects)

Dermal DNEL - worker 4.8 mg/kg bw/d (long-term exposure) (systemic effects)

DNEL - consumer 2.4 mg/kg bw/d (long-term exposure) (systemic effects)

Inhalative DNEL - worker 40 mg/m³ (long-term exposure) (local effects)

14.4 mg/m³ (long-term exposure) (systemic effects)

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*DNEL - consumer 3.6 mg/m³ (long-term exposure) (systemic effects)
4.5 mg/m³ (long-term exposure) (local effects)*

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

PNEC 0.25 mg/l (fresh water)

0.025 mg/l (marine water)

10 mg/l (sewage treatment plant)

PNEC 1.09 mg/kg dw (fresh water sediment)

0.109 mg/kg dw (marine water sediment)

0.07 mg/kg dw (soil)

Additional information: The lists valid during the making were used as basis.**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:*Synthetic rubber gloves**Rubber***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:	<i>Liquid</i>
Colour:	<i>Black</i>
Odour:	<i>Weak, characteristic</i>
Odour threshold:	<i>Not determined.</i>
pH-value at 25 °C:	<i>8 – 10</i>
Melting point/freezing point:	<i>No further information available.</i>
Initial boiling point and boiling range:	<i>100 °C</i>

Flash point: *Not applicable.***Flammability (solid, gas):** *Not applicable.***Decomposition temperature:** *No further information available.***Auto-ignition temperature:** *Product is not selfigniting.*

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Trade name: POLYFLON PTFE EK-1909S-601L

Explosive properties: Product does not present an explosion hazard.

Explosion limits:

Lower explosive limit: No further information available.

Upper explosive limit: No further information available.

Vapour pressure: No further information available.

Density at 25 °C: 1.1 – 1.3 g/cm³

Relative density Not determined.

Vapour density Not determined.

Evaporation rate Not determined.

Solubility in / Miscibility with water:

Dispersible.

Partition coefficient: n-octanol/water: No further information available.

Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability**Thermal decomposition / conditions to be avoided:**

Even at the temperatures reached during the normal hot processing of fluoropolymers, fume that presents a potential health hazard may be generated.

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: No further relevant information available.

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 toxicological effects**

Acute toxicity no data

LD/LC50 values relevant for classification:**CAS: 872-50-4 N-Methyl-2-pyrrolidone**

Oral LD50 4150 mg/kg (Rat) (OECD 401)

Data from CSR.

3914 mg/kg (Rat)

Dermal LD50 > 5000 mg/kg (Rat) (OECD 402)

Data from CSR.

8000 mg/kg (Rabbit)

Inhalative LC50 > 5100 mg/m³ (Rat) (OECD 403)

Data from CSR.

CAS: 68-12-2 N,N-Dimethylformamide

Oral LD50 2800 mg/kg (Rat)

Dermal LD50 4720 mg/kg (Rabbit)

Inhalative LC50/4h 9400 ppm (Mouse)

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Trade name: POLYFLON PTFE EK-1909S-601L**Primary irritant effect****Skin corrosion/irritation**

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation 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

Persons who have experienced lung diseases are vulnerable to toxicity caused by excessive exposure to pyrolysis products

CMR effects**Germ cell mutagenicity**

Not applicable

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

Not applicable.

vPvB:

No further relevant information available.

Not applicable.

12.6 Other adverse effects: No further relevant information available.**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation:**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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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, 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 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.

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.

Labelling according to Regulation (EC) No 1272/2008

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

Hazard pictograms

GHS07 GHS08

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

N-Methyl-2-pyrrolidone

N,N-Dimethylformamide

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H360D May damage the unborn child.

H335 May cause respiratory irritation.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

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Other regulations, limitations and prohibitive regulations: 1
Substances of very high concern (SVHC) according to REACH, Article 57:

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

CAS: 68-12-2 N,N-Dimethylformamide

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.

Department issuing SDS: SAFETY&ENVIRONMENT DEPT.**Contact:** sds.dfs@daikin.net.cn**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

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

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

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. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Repr. 1B: Reproductive toxicity – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

*** Data compared to the previous version altered.**