

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

**1.1 Product identifier**

**Trade name:** POLYFLON PTFE SS-1608S-9202

**Synonyms:** Fluororesin Coatings SS-1608S-9202

**Article number:** SS-1608S-9202\_DFS

**1.2 Relevant identified uses of the substance or mixture and uses advised against:** Coating compound  
**Sector of Use SU8** Manufacture of bulk, large scale chemicals (including petroleum products)

**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.

**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-Methyl-2-pyrrolidone

**Precautionary statements:**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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

P308+P313 IF exposed or concerned: Get medical advice/attention.

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: 7732-18-5  | Water  | 70 – 80% |
| CAS: 26655-00-5 | Perfluoro(alkoxy alkane)                                 | 1 – 10%  |
|                 | Binder   | < 5%     |
| CAS: 872-50-4   | N-Methyl-2-pyrrolidone                                   | < 5%     |
|                 | Repr. 1B, H360D  |          |
|                 | Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335 |          |
| CAS: 107-21-1   | Ethylene glycol  | < 5%     |
|                 | STOT RE 2, H373  |          |
|                 | Acute Tox. 4, H302                                       |          |
|                 | Others   | 10 – 20% |

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**SVHC:**

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.

**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:** 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:**

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

**5.3 Advice for firefighters:****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.

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:**

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:**

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.

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**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.

Prevent any seepage into the ground.

Keep containers tightly sealed.

**Information about storage in one common storage facility:**

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.**Additional information about design of technical facilities:** No further data; see item 7.**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/m<sup>3</sup>, 20 ppmLong-term value: 40 mg/m<sup>3</sup>, 10 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/m<sup>3</sup> (long-term exposure) (local effects)14.4 mg/m<sup>3</sup> (long-term exposure) (systemic effects)DNEL - consumer 3.6 mg/m<sup>3</sup> (long-term exposure) (systemic effects)4.5 mg/m<sup>3</sup> (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)

**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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**Protection of hands:**

Protective gloves

**Material of 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**

|  |   |
|--|---|
| <b>Form:</b>                                   | Liquid  |
| <b>Colour:</b>                                 | Black and White particles mixed Clour         |
| <b>Odour:</b>                                  | Weak, characteristic                          |
| <b>Odour threshold:</b>                        | Not determined.                               |
| <b>pH-value at 25 °C:</b>                      | 8 – 10  |
| <b>Melting point/freezing point:</b>           | No further information available.             |
| <b>Flash point:</b>                            | Not applicable.                               |
| <b>Flammability (solid, gas):</b>              | Not applicable.                               |
| <b>Decomposition temperature:</b>              | No further information available.             |
| <b>Auto-ignition temperature:</b>              | Product is not selfigniting.                  |
| <b>Explosive properties:</b>                   | Product does not present an explosion hazard. |
| <b>Explosion limits:</b>                       |   |
| <b>Lower explosive limit:</b>                  | No further information available.             |
| <b>Upper explosive limit:</b>                  | No further information available.             |
| <b>Vapour pressure:</b>                        | No further information available.             |
| <b>Density:</b>                                | No further information available.             |
| <b>Relative density</b>                        | Not determined.                               |
| <b>Vapour density</b>                          | Not determined.                               |
| <b>Evaporation rate</b>                        | Not determined.                               |
| <b>Solubility in / Miscibility with water:</b> | Dispersible.                                  |
| <b>Partition coefficient: n-octanol/water:</b> | No further information available.             |
| <b>Viscosity:</b>                              |   |
| <b>Dynamic:</b>                                | Not determined.                               |
| <b>Kinematic:</b>                              | Not determined.                               |
| <b>9.2 Other information:</b>                  | 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:** 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.

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

**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/m<sup>3</sup> (Rat) (OECD 403)

Data from CSR.

**Primary irritant effect**

**Skin corrosion/irritation** No further information available.

**Serious eye damage/irritation** No further information available.

**after inhalation:** No further information available.

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

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

**Reproductive toxicity**

May damage the unborn child.

**STOT-single exposure** Based on available data, the classification criteria are not met.

**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.

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**\* 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.***Other information***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: 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.*

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**Hazard pictograms**

GHS08

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

N-Methyl-2-pyrrolidone

**Hazard statements**

H360D May damage the unborn child.

**Precautionary statements**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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

P308+P313 IF exposed or concerned: Get medical advice/attention.

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**

None of the ingredients is listed.

**National regulations** No further information available.**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

**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

<http://www.daikin.com/>**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

Acute Tox. 4: Acute toxicity - oral - Category 4

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

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

Repr. 1B: Reproductive toxicity - Category 1B

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

*STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2*

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