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*** SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name: POLYFLON PTFE ST-1909S-9202****Synonyms: Fluororesin Coatings ST-1909S-9202****Article number: ST-1909S-9202_DFS****1.2 Relevant identified uses of the substance or mixture and uses advised against: Coating compound.****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

Further information obtainable from: sds.dfs@daikin.net.cn**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**Hazard-determining components of labelling:**

N-Methyl-2-pyrrolidone

Precautionary statements:

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

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

10 – 20%

Binder

1 – 10%

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CAS: 1333-86-4 Carbon black	< 5%
CAS: 121-44-8 triethylamine	< 5%
Flam. Liq. 2, H225	
Skin Corr. 1A, H314	
Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	
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	
Poly(oxyethylene) nonylphenyl ether	< 5%
Aquatic Acute 1, H400	
Eye Irrit. 2, H319	
Others	10-20%

SVHC:

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

Poly(oxyethylene) nonylphenyl ether

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.

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Trade name: POLYFLON PTFE ST-1909S-9202*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.***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****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/m³, 20 ppmLong-term value: 40 mg/m³, 10 ppm

Skin

CAS: 1333-86-4 Carbon black**PEL (USA) Long-term value:** 3.5 mg/m³

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REL (USA) Long-term value: 3.5* mg/m³
*0.1 in presence of PAHs; See Pocket Guide Apps.A+C

TLV (USA) Long-term value: 3* mg/m³
*inhalable fraction

CAS: 121-44-8 triethylamine

PEL (USA) Long-term value: 100 mg/m³, 25 ppm

TLV (USA) Short-term value: (12.4) NIC-4.14 mg/m³, (3) NIC-1 ppm
Long-term value: (4.1) NIC-2.07 mg/m³, (1) NIC-0.5 ppm
Skin

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:	Liquid
Colour:	Black
Odour:	Weak, characteristic
Odour threshold:	Not determined.
pH-value at 25 °C:	8 – 11
Melting point/freezing point:	No further information available.
Initial boiling point and boiling range:	100 °C No further information available.
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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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/cm ³
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:

Strong alkalis

Strong acids

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 3914 mg/kg (Rat)

Dermal LD50 8000 mg/kg (Rabbit)

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.

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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

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.

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:**

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

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

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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

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/hearing 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.**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

Poly(oxyethylene) nonylphenyl ether

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

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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

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

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.**