



Material Safety Data Sheet

Product Name: Perfluoroelastomer Teflus® PR-100

Compilation Date: March 31st, 2020

Revision Date: March 1st, 2023

According to GB/T 16483 & GB/T 17519

MSDS Code: Teflus® PR-100

Version: A1

1. PRODUCT AND COMPANY IDENTIFICATION

1.1. Product

Product Name	Perfluoroelastomer Teflus® PR-100
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1.2. Company

Company	TFT LIMITED
Address	Unit 1101, 11th floor, Tower 1, Enterprise Square Bldg, No.9 Sheung Yuet Road, Kowloon Bay, Hong Kong
Post code	999077
Telephone No.	+852-2893-5300, +86-20-8918-9425
Fax No.	+852-2803-4763
E-mail	kevin@tftlimited.com

1.3. Emergency Tel line

National Emergency Tel	+86-532-83889090
General	+852-2893-5300, +86-20-8918-9425

1.4. Identified uses of the substance and uses advised against

Uses of the Substance	Chemical industry; Semiconductors, Electrical industry; Electronic industry; Oil & gas industry
Recommendation for use	For industrial use only

2. HAZARDS IDENTIFICATION (POTENTIAL HEALTH EFFECTS)

2.1. Description of substance

The substance is a colorless semi-transparent blocky solid

2.2. GHS Classification

Not classified as hazardous product under the regulation above.

2.3. Label Elements

Not applicable.

2.4. Physical Hazards

Not applicable.

2.5. Health Hazards

Not applicable.

2.6. Environmental Hazards

Not applicable.

2.7. Other Hazards

During vulcanization ammonia is formed and liberated as a gas.
Thermal decomposition can lead to release of toxic and corrosive gases

3. INFORMATION ON INGREDIENTS

3.1. Substance

Ingredient	Perfluoroelastomer
CAS	26425-79-6
Chemical name	Copolymer of tetrafluoroethylene monomer(C2F4) and perfluoromethyl vinyl ether monomer(PMVE)
Concentration [%]	/

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3.2.Mixture

Not applicable.

4.FIRST-AID MEASURES

4.1.Description of first aid measures

Inhalation Exposure	Exposure to decomposition products Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. Oxygen or artificial respiration if needed. Consult a physician. Symptoms of poisoning may develop many hours after exposure. Keep under medical supervision for at least 48 hours.
Skin Exposure	Cool skin rapidly with cold water after contact with hot polymer. Exposure to decomposition products Remove Cloth, Wash off with soap and water. Immediately apply calcium gluconate gel 2.5% and massage into the "affected area using rubber gloves. To massage while repeatedly" applying gel until 15 minutes after pain is relieved. Consult a physician.
Eye Exposure	Exposure to decomposition products Rinse immediately with flowing water or saline solution Consult a physician.
Ingestion	Not applicable.

4.2.Most important symptoms and effects, both acute and delayed

Inhalation Exposure	Exposure to decomposition products: Headache; Shortness of breath; Cough.
Skin Exposure	Exposure to decomposition products: Irritation; Redness; Burn.
Eye Exposure	Exposure to decomposition products: Irritation; Redness; Burn.
Ingestion	Not applicable.

4.3.Indication of any immediate medical attention and special treatment needed

1	Hazardous decomposition products such as Gaseous hydrogen fluoride (HF), Fluorophosgene, Fluorinated olefins formed under fire conditions. Wear self-contained breathing apparatus and protective suit. When intervention in close proximity wear acid resistant over suit
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4.4.Notes to Physicians

None

5.FIRE FIGHTING MEASURES

5.1.Extinguishing Media

Proper	Dry chemical, Water spray, Carbon dioxide or appropriate foam
Improper	N/A

5.2.Special hazards arising from the substance or mixture

During vulcanization ammonia is formed and liberated as a gas.

Hazardous decomposition products such as Gaseous hydrogen fluoride (HF), Fluorophosgene, Fluorinated olefins formed under fire conditions

5.3.Precautions and protective measures for fire fighting

Protective measures	Uninvolved persons should evacuate to a safe place. Fire-extinguishing work should be carried out from the windward side. Keep containers cool by spraying with water.
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	Collect contaminated water separately. Do not drain drains. Fire residues and contaminated water must be disposed as local regulations. Adopt fire extinguishing measures suitable for the local environment. If it is safe to operate, remove undamaged containers from the fire area.
Advice for firefighters	Wear self-contained breathing apparatus and protective clothing to prevent contact with acid.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel	None
Advice for emergency responders	Remove all ignition sources. Wear personal protective suit. Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition.

6.2. Environmental precautions

1	Avoid discharging into the environment.
2	Collect contaminated washing water. Do not flush into sewers, surface water, and groundwater.

6.3. Methods and materials for containment and cleaning up

1	Clean and collect in suitable containers for disposal.
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7. Handling and Storage

7.1. Precautions for safe handling

Precautions for safe handling	Ensure adequate ventilation Use personal protective equipment Operate in accordance with good industrial hygiene and safety practices. Keep away from open flames, hot surfaces and sources of ignition. To avoid thermal decomposition, do not overheat.
Hygiene measures	Ensure that eyewash stations and safety showers are close to the working area. Wash hands after using. Do not eat, drink or smoke when using. Remove protective equipment before entering food area.

7.2. Storage

Storage condition	Stay away from open flames, hot surfaces. Stay away from combustible materials. Stay away from incompatible products.
Packing material	Polythene film.

8. Exposure controls/personal protection

8.1. Components with occupational exposure limits

Contains no substances with occupational exposure limit values above their regulatory reporting threshold
During vulcanization Ammonia is formed and liberated as a gas.

Components	Basis	Value Type	Value
Ammonia	Occupational exposure limits for hazardous agents in the workplace— Part 1: Chemical hazardous agents	PC-TWA	20 mg/m ³
Ammonia	Occupational exposure limits for hazardous agents in the workplace— Part 1: Chemical hazardous agents	PC-STEL	30 mg/m ³

Threshold limit values of by-products from thermal decomposition:

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Components	Basis	Value Type	Value
Hydrofluoric acid	GBZ2.1-2019 Occupational exposure limits for hazardous agents in the workplace— Part 1: Chemical hazardous agents	MAC	2 mg/m ³
Carbonyl difluoride	GBZ2.1-2019 Occupational exposure limits for hazardous agents in the workplace— Part 1: Chemical hazardous agents	PC-TWA	5 mg/m ³
Carbonyl difluoride	GBZ2.1-2019 Occupational exposure limits for hazardous agents in the workplace— Part 1: Chemical hazardous agents	PC-STEL	10 mg/m ³

8.2. Biological limit

Threshold limit values of by-products from thermal decomposition:

Components	Basis	Value Type	Value
Hydrofluoric acid	GBZ2.1-2019 Occupational exposure limits for hazardous agents in the workplace— Part 1: Chemical hazardous agents	42 mmol/mol Cr (7mg/g Cr) 24 mmol/mol Cr (4 mg/g Cr)	After work shift Before work shift

8.3. Control measures

None

8.4. Engineering measures

1	Provide local ventilation appropriate to the product decomposition risk (Section 10)
2	Refer to protective measures listed in sections 7 and 8.
3	Apply technical measures to comply with the occupational exposure limits

8.5. Individual protection measures

Respiratory protection	Use an air respirator with a mask appropriate to the product decomposition risk (see Section 10). Use only personal protective equipment that conforms to international/ national standards.
Eye protection	Wear protective gloves made of Nitrile rubber, PVC, Neoprene or butyl-rubber.
Eye protection	Safety goggles.
Skin and body protection	Wear work overall and safety shoes.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Semi-transparent, Solid
Odor	Weak odor
pH Value	No data available
Melting Point	No data available
Boiling Point	No data available
Flash Point	Not applicable
Flammability/Explosive limit	No data available
Vapor Pressure	Not available

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Vapor Density (Air=1)	No data available
Specific Gravity	2.04g/cm ³
Solubility	Water solubility
	Solubility in other solvents:
	Esters: insoluble
	Ketones: insoluble
	Fluorinated solvent: slightly soluble
Partition coefficient of n-octanol/water	No data available
Auto-ignition temperature	Not applicable
Decomposition temperature	>250°C
Viscosity	No data available
Explosivity	Not explosive
Oxidizing properties	Not considered as oxidizing

9.2. Other Information

None

10. Stability and reactivity

Stability	Stable under recommended storage conditions.
Dangerous reaction	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from flames and sparks. To avoid thermal decomposition, do not overheat.
Incompatible materials	Alkali metals (molten form)
Hazardous decomposition products	Gaseous hydrogen fluoride (HF), Fluorophosgene, Fluorinated olefins. The release of other hazardous decomposition products is possible.

11. Toxicological information

Toxicological information	No data available
Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitisation	No data available
Toxicity for reproduction and development	No data available
Carcinogenicity	No data available
Toxicity to reproduction/Fertility	No data available
STOT - single exposure	No data available
STOT - repeated exposure	No data available
Aspiration toxicity	No data available

12. Ecological information

12.1. Toxicity

No data available

12.2. Persistence and degradability

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No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

13. Waste treatment methods

13.1. Disposal of Product

Recycle as much as possible. If it cannot be recycled, incineration method shall be adopted for treatment. Incineration equipment must be available for neutralizing or collecting hydrofluoric acid.

13.2. Disposal of packaging

Return the containers to producer or dispose with the local regulations.

13.3. Note for disposal

Prior to disposal, relevant national and local regulations should be consulted. Safety precautions for disposal personnel see section 8.

14. Transport information

UN Dangerous Goods Number: No data available

UN shipping name: No data available

UN Hazard classification: No data available

Packing Category: No data available

Packing Mark: No data available

Package: Closed packaging in plastic drums

IMDG: not regulated

Note: This product is transported as non hazardous. The product should be packaged correctly to avoid any leakage. If there is a leak, please treat it as non hazardous goods.

For other transport information, please contact our representatives.

15. REGULATORY INFORMATION

The latest version of following regulations/legislation or standards specific for the substance on classification SDS and labels:

GB 13690: General rules for classification and hazard communication of chemicals

GB30000.2~GB30000.29:

Series standards of Safety rules for classification, precautionary labeling and precautionary statements of chemical

GB 15258: General rules for preparation of precautionary label for chemicals

GB/T 16483: Safety data sheet for chemical products—Content and order of sections

Decree No. 591 of the State Council of the People's Republic of China:
Regulations on the Control over Safety of Hazardous Chemicals

GB 12268: List of Dangerous Goods

GB 6944: Classification and code of dangerous goods

16. OTHER INFORMATION

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Abbreviations and acronyms used in the safety data sheet

C: Ceiling limit

CN BEI: China. Biological Occupational Exposure Indices

MAC: Maximum allowable concentration

PC-STEL: Permissible concentration - short term exposure limit

PC-TWA: Permissible concentration - time weighted average

STEL: Short-term exposure limit

IATA: International Air Transport Association.

IMDG: International Maritime Dangerous Goods.

TWA: Time weighted average

CAS: Chemical Abstracts Service.

PBT: Persistent, Bioaccumulative and Toxic substance.

vPvB: Very Persistent and Very Bioaccumulative.

GHS/CLP/SEA: Classification, labeling, packaging regulation

The information in this SDS (Safety Data Sheet) is only applicable to the specified products. Unless otherwise specified, it is not applicable to the mixture of this product and other substances. This SDS only provides information on product use safety for those who have received appropriate professional training. Users of this SDS must make independent judgments on the applicability of this SDS under special conditions of use. Under special circumstances, the author of this SDS will not be responsible for any damage caused by the use of this SDS.