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

1.1 Product identifier

- Trade name TECNOFLON® T 636

1.2 Relevant identified uses of the substance or mixture and uses advised against

Uses of the Substance/Mixture

- Electrical industry
- Electronic industry
- Automotive industry
- Chemical industry
- For industrial use only

1.3 Details of the supplier of the safety data sheet

Company

Syensqo (Shanghai) International Trading Co., Ltd.
3966, JINDU RD, XINZHUANG INDUSTRIAL ZONE, MINHANG DISTRICT, SHANGHAI, CHINA 201108
Tel: +86 21 2350 1000

E-mail address

sds.syensqo@syensqo.com

1.4 Emergency telephone number

400 120 6011 (toll-free, access from China only)
NRCC
CHINA (DOMESTIC ONLY): +86 532 8388 9090 (Qingdao)
MULTI LINGUAL EMERGENCY NUMBER (24/7)
Europe/Latin America/Africa:+44 1235 239 670 (UK)
Middle East/Africa speaking Arabic: +44 1235 239 671 (UK)
Asia Pacific : +65 3158 1074 (Singapore)
China : 400 120 6011 (toll-free, access from China only)
North America : +1 800 424 9300

SECTION 2: Hazards identification

2.1 Emergency overview

Appearance	Form:	sheets
	Physical state:	solid
	Colour:	off-white
	Odour	odourless

2.2 Classification of the substance or mixture

GHS Classification and Labeling: Follow GB 15258 and GB 30000 series standard

- Not classified as hazardous product under the regulation above.

2.3 Label elements

GHS Classification and Labeling: Follow GB 15258 and GB 30000 series standard

- Not required to be labelled under the local regulation including regulation above.

2.4 Physical and chemical hazards

- Not classified based on available information.

2.5 Health hazards

- Not classified based on available information.

2.6 Environmental hazards

- Not classified based on available information.

2.7 Other hazards which do not result in classification

- Thermal decomposition can lead to release of toxic and corrosive gases.

SECTION 3: Composition/information on ingredients

3.1 Substance

- Chemical nature Fluoroelastomer

Information on Components and Impurities

Chemical name	CAS-No.	Identification number	Concentration [%]
1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene and tetrafluoroethene	25190-89-0	Not applicable	> 99.9

Remarks

- Contains no hazardous ingredients according to GHS

3.2 Mixture

- Not applicable, this product is a substance.

SECTION 4: First aid measures

4.1 Description of first aid measures

In case of inhalation

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.
- Symptoms of poisoning may develop many hours after exposure.
- Keep under medical supervision for at least 48 hours.

In case of skin contact

- Cool skin rapidly with cold water after contact with hot polymer.

Exposure to decomposition products

- Wash off with soap and water.
- Immediately apply calcium gluconate gel 2.5% and massage into the "affected area using rubber gloves; continue to massage while repeatedly" applying gel until 15 minutes after pain is relieved.
- Consult a physician.

In case of eye contact

Exposure to decomposition products

- Rinse immediately with plenty of water, also under the eyelids.
- Remove contact lenses.

In case of ingestion

- Not applicable

4.2 Most important symptoms and effects, both acute and delayed

In case of inhalation

Effects

- The thermal decomposition vapours of fluorinated polymers may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco.

Symptoms

Exposure to decomposition products

- Headache
- Shortness of breath
- Cough

In case of skin contact

Effects

- No adverse effects are normally expected.

Symptoms

Exposure to decomposition products

- Irritation
- Redness
- Burn

In case of eye contact

Effects

- No adverse effects are normally expected.

Symptoms

Exposure to decomposition products

- Irritation
- Redness
- Burn

In case of ingestion

Effects

- negligible

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

- None

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

- Water
- powder
- Foam
- Dry chemical
- Carbon dioxide (CO2)

Unsuitable extinguishing media

- None

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting

- The product is not flammable.
- Not explosive

- Hazardous decomposition products formed under fire conditions.

Hazardous combustion products:

- Gaseous hydrogen fluoride (HF).
- Fluorophosgene
- Fluorinated olefins
- Other hazardous decomposition products may be formed.

5.3 Advice for firefighters

Special protective equipment for firefighters

- Wear self-contained breathing apparatus and protective suit.
- When intervention in close proximity wear acid resistant over suit.

Further information

- Evacuate personnel to safe areas.
- Approach from upwind.
- Protect intervention team with a water spray as they approach the fire.
- Keep containers and surroundings cool with water spray.
- Keep product and empty container away from heat and sources of ignition.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel

- Prevent further leakage or spillage if safe to do so.

Advice for emergency responders

- Ensure adequate ventilation.
- Keep away from open flames, hot surfaces and sources of ignition.

6.2 Environmental precautions

- Should not be released into the environment.
- Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

- Sweep up or vacuum up spillage and collect in suitable container for disposal.

6.4 Reference to other sections

- Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Ensure adequate ventilation.
- Keep away from heat and sources of ignition.
- Use personal protective equipment.
- To avoid thermal decomposition, do not overheat.
- Take measures to prevent the build up of electrostatic charge.
- Clean and dry piping circuits and equipment before any operations.
- Ensure all equipment is electrically grounded before beginning transfer operations.

- For additional information, consult the current edition of The Guide to the Safe Handling of Fluoropolymers published by the Society of Plastics Industry, Inc. (SPI) Fluoropolymer Division.

Hygiene measures

- Ensure that eyewash stations and safety showers are close to the workstation location.
- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

- Keep in properly labelled containers.
- Keep away from heat and sources of ignition.
- Keep away from combustible material.
- Keep away from incompatible products
- Provide tight electrical equipment well protected against corrosion.
- Refer to protective measures listed in sections 7 and 8.

Packaging material

Suitable material
- Carton + Polyethylene
- Plastic material PP, PE, PVDF, PTFE, PFA.

7.3 Specific end use(s)

- Contact your supplier for additional information

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

- Contains no substances with occupational exposure limit values above their regulatory reporting threshold.

Threshold limit values of by-products from thermal decomposition:

Components with national occupational exposure limits

Components	Value type	Value	Basis
Hydrofluoric acid	MAC	2 mg/m3	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.
	Expressed as :Fluorine		
Carbonyl fluoride	PC-TWA	5 mg/m3	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.
Carbonyl fluoride	PC-STEL	10 mg/m3	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

Components with other occupational exposure limits

Components	Value type	Value	Basis
Hydrofluoric acid	TWA	0.5 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Danger of cutaneous absorption Expressed as :Fluorine		
Hydrofluoric acid	C	2 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Danger of cutaneous absorption Expressed as :Fluorine		
Carbonyl fluoride	TWA	2 ppm	USA. ACGIH Threshold Limit Values (TLV)
Carbonyl fluoride	STEL	5 ppm	USA. ACGIH Threshold Limit Values (TLV)

8.2 Exposure controls

Control measures

Engineering measures

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

Individual protection measures

Respiratory protection

- In case of decomposition (see section 10), use an air breathing apparatus with face mask.
- Use only respiratory protection that conforms to international/ national standards.

Hand protection

- Wear protective gloves.

Suitable material
- Nitrile rubber
- PVC
- Neoprene gloves
- butyl-rubber

- Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection
- Safety goggles

Skin and body protection
- Wear work overall and safety shoes.

Hygiene measures
- Ensure that eyewash stations and safety showers are close to the workstation location.
- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls
- Dispose of rinse water in accordance with local and national regulations.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	solid
Form	sheets
Colour	off-white
Odour	odourless
Odour Threshold	Not applicable
Melting point/freezing point	Melting point/ range: Not applicable
Initial boiling point and boiling range	Boiling point/boiling range: Not applicable
Flammability (solid, gas)	The product is not flammable.
Flammability (liquids)	Not applicable
Flammability/Explosive limit	No data available
Flash point	The product is not flammable.
Auto-ignition temperature	No data available
Decomposition temperature	> 250 °C
pH	Not applicable
Viscosity	No data available
Solubility	Water solubility:

	insoluble
	Solubility in other solvents: Esters: soluble
	Ketones: soluble
Partition coefficient: n-octanol/water	No data available
Vapour pressure	Not applicable
Density	1.83 - 1.9 g/cm3 (23 °C)
Relative density	No data available
Relative vapor density	No data available
Particle characteristics	No data available
Evaporation rate (Butylacetate = 1)	Not applicable

9.2 Other information

Oxidizing properties	Not considered as oxidizing
Self-ignition	Not applicable
Impact sensitivity	Not explosive
Molecular weight	80 - 120 kDa Polymer Molar Mass

SECTION 10: Stability and reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

- During preparation of masterbatches containing finely divided metals or metal oxides an exothermic decomposition may occur.

10.4 Conditions to avoid

- To avoid thermal decomposition, do not overheat.
- Keep away from flames and sparks.

10.5 Incompatible materials

- Alkali metals (molten form)
- Amines
- Finely divided metals
- Metal oxides in high levels
- Metals promote and lower decomposition temperature

10.6 Hazardous decomposition products

- Gaseous hydrogen fluoride (HF).
- Fluorophosgene
- Fluorinated olefins
- Other hazardous decomposition products may be formed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity	No data available
Acute inhalation toxicity	No data available
Acute dermal toxicity	No data available
Acute toxicity (other routes of administration)	No data available
Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitisation	No data available

Mutagenicity

Genotoxicity in vitro	No data available
Genotoxicity in vivo	No data available
Carcinogenicity	No data available

Toxicity for reproduction and development

Toxicity to reproduction/Fertility	No data available
Developmental Toxicity/Teratogenicity	No data available

STOT

STOT - single exposure	No data available
STOT - repeated exposure	No data available
Experience with human exposure	No data available
Aspiration toxicity	No data available
Further information	Description of possible hazardous to health effects is based on experience and/or toxicological characteristics of several components. Thermal decomposition can lead to release of toxic and corrosive gases. The exposure to decomposition products causes severe irritation of eyes, skin and mucous membranes.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fish	No data available
Acute toxicity to daphnia and other aquatic invertebrates	No data available
Toxicity to aquatic plants	No data available
Toxicity to microorganisms	No data available

Chronic toxicity to fish	No data available
Chronic toxicity to daphnia and other aquatic invertebrates	No data available

12.2 Persistence and degradability

Abiotic degradation	No data available
Physical- and photo-chemical elimination	No data available
Biodegradation	
Biodegradability	category approach The substance does not fulfill the criteria for ready biodegradability but fulfills the criteria for ultimate aerobic biodegradability Expert judgement
Degradability assessment	The product is not considered to be rapidly degradable in the environment

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water	No data available
Bioconcentration factor (BCF)	No data available

12.4 Mobility in soil

Adsorption potential (Koc)	No data available
Known distribution to environmental compartments	No data available

12.5 Results of PBT and vPvB assessment No data available

12.6 Other adverse effects

Ecotoxicity assessment

Short-term (acute) aquatic hazard	Not classified due to lack of data.
Long-term (chronic) aquatic hazard	Not classified due to lack of data.
Remarks	Ecological injuries are not known or expected under normal use.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Disposal

- Can be incinerated, when in compliance with local regulations.
- The incinerator must be equipped with a system for the neutralisation or recovery of HF.
- Dispose of in accordance with local regulations.

Advice on cleaning and disposal of packaging

- Empty containers can be landfilled, when in accordance with the local regulations.

SECTION 14: Transport information

CN_DG
not regulated

IMDG
not regulated

IATA
not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Following last version of regulations are applicable for the chemical classification, SDS and label:

- Specification for classification and labelling of chemicals, GB 30000 series standard
- General rules for preparation of precautionary label for chemicals, GB 15258
- Safety data sheet for chemical products—Content and order of sections, GB/T 16483
- GB/T 17519 Guidance on the compilation of safety data sheet for chemical products
- Decree No. 591 of the State Council of the People's Republic of China:Regulations on the Control over Safety of Hazardous Chemicals
- List of dangerous goods GB 12268
- Classification and code of dangerous goods GB 6944

Other regulations

- Law on the Prevention and Control of Occupational Diseases

Notification status

Inventory Information	Status
United States TSCA Inventory	- Listed as active on the TSCA inventory
Canadian Domestic Substances List (DSL)	- Listed on Inventory
Australian Inventory of Industrial Chemicals (AIIC)	- Listed on Inventory
Korea. Korean Existing Chemicals Inventory (KECI)	- Listed on Inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	- Listed on Inventory
Japan. ISHL - Inventory of Chemical Substances	- Listed on Inventory
Japan. ENCS - Existing and New Chemical Substances Inventory	- Listed on Inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	- Listed on Inventory
New Zealand. Inventory of Chemical Substances	- Listed on Inventory

Taiwan. Chemical Substance Inventory (TCSI)	- Listed on Inventory
EU. European Registration, Evaluation, Authorization and Restriction of Chemical (REACH)	- When purchased from a Syensqo legal entity based in the EEA (""European" "Economic Area""), this product is compliant with the registration" provisions of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, and/or registered. When purchased from a legal entity outside of the EEA, please contact your local representative for additional information.

SECTION 16: Other information

Key or legend to 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
- TWA: 8-hour, time-weighted average
- ADR: European Agreement on International Carriage of Dangerous Goods by Road.
- ADN: European Agreement on the International Carriage of Dangerous Goods by Inland Waterways.
- RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
- IATA: International Air Transport Association.
- ICAO-TI: Technical Instructions for Safe Transport of Dangerous Goods by Air.
- IMDG: International Maritime Dangerous Goods.
- TWA: Time weighted average
- ATE: Estimated value of acute toxicity
- EC: European Community number
- CAS: Chemical Abstracts Service.
- LD50: Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).
- LC50: Substance concentration causing 50% (half) death in the test animals group.
- EC50: Effective Concentration of the substance causing the maximum of 50%.
- PBT: Persistent, Bioaccumulative and Toxic substance.
- vPvB: Very Persistent and Very Bioaccumulative.
- GHS/CLP/SEA: Classification, labeling, packaging regulation
- DNEL: Derived No Effect Level
- PNEC: Predicted No Effect Concentration
- STOT: Specific Target Organ Toxicity

Not all acronyms listed above are referenced in this SDS.

Further information

- Distribute new edition to clients
- This data sheet contains changes from the previous version in section(s):
- See section 10

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. The information exclusively relates to the designated product in its unaltered state. Safety and health hazards may change if such product is used in combination with other materials or in any other manufacturing process. Users are responsible for compliance with all regulations linked to product related activities, and to use the products in accordance with technical instructions given by Syensqo, if any.