

SAFETY DATA SHEET

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP/GHS) & 453/2010.

1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1	Product identifier	
	Product Name	Fluoroplast-4D of "Sh", "L", "E", "T", "U" brands. Fluoroplast-4DM of "E", "T", "O", brands
	Chemical Name	Polytetrafluoroethene.
	Trade name	Fluoroplast-4D Fluoroplast-4DM
	Alternative names	Teflon, fluoroplast, ftonlon, polytetrafluoroethylene.
	Formula	[C ₂ F ₄] _n
	№ EC	618-337-2
	REACH Registration No.	None assigned.
	REACH Registration No. for monomer TETRAFLUOROETHYLENE (TFE)	01-2119487991-21-0002
	REACH C&L bulk notification No	02-2119699472-25-0000
	CAS No.	9002-84-0
1.2	Relevant identified uses of the substance or mixture and uses advised against	
	Identified use(s)	Used for producing articles or films with good dielectric properties, resistance to highly corrosive media and service temperature up to +250 °C (482 °F).
	Uses advised against	None assigned.
1.3	Details of the supplier of the Safety Data Sheet	
1.3.1	Manufacturer	«HaloPolymer Kirovo-Chepetsk», LLC per. Pozharny, 2, 613040, Kirovo-Chepetsk, Kirov Region, The Russian Federation.
	Telephone	+7-83361-9-3594
	Fax	+7-83361-9-4281
	Website	www.halopolymer.com
1.3.2	Only representative of a non-Community manufacturer	URALCHEM Assist GmbH Johannsenstrasse 10 30159, Hannover, Germany
	Telephone	+49-511/45 99 444
	Fax	+49-511/45 99 446
	E-mail	info@uralchem-assist.de
1.4	Emergency telephone number	
	Manufacturer/supplier:	+7-83361-4-1250 [24 hours.]
	European emergency number:	112 Consult the relevant national official advisory body if necessary.

2. SECTION 2: HAZARDS IDENTIFICATION

Classification and labeling have been performed according to EU directives 1999/45/EC and 67/548/EEC as amended and adapted, and Regulation (EC) No. 1272/2008 (CLP/GHP)

2.1	Classification of the substance or mixture	
2.1.1	Regulation (EC) No. 1272/2008	Not classified as dangerous for supply/use.
2.1.2	Directive 67/548/EEC & Directive 1999/45/EC	Not classified as dangerous for supply/use.
2.2	Other hazards	Combustion or thermal decomposition will evolve toxic and irritant vapours. IF INHALED: Decomposition products (see Section 5.2) can cause the symptoms of so called "polymer fume fever". High concentrations: Dust may have slight irritant effect on skin, eyes and air passages.
2.3	Additional Information	See Also Section: 15.1.1.

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Product as supplied: Polymer.

3.1 Substances

Product identifier type in accordance with Article 18(2) of Regulation (EC) No 1272/2008	Identifier number	Identification name	Weight % content (or range)	EC Number
CAS number	9002-84-0	Polytetrafluoroethylene	100	618-337-2

3.2 Mixtures
Not applicable.

3.3 **Additional Information**
None.

4. SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Inhalation

IF INHALED: Decomposition products: Remove a victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms develop, obtain medical attention.

Skin Contact

Remove contaminated clothing immediately and wash skin with plenty of water or soap and water. In the event of contact with molten polymer: Molten material can cause severe burns. Do NOT try to peel molten polymer from the skin. Cool rapidly with water. If symptoms persist, obtain medical attention.

Eye Contact

Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. If symptoms persist, obtain medical attention.

Ingestion

Unlikely route of exposure. IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Polymer fume fever: Fever. Excessive sweating. Cough. Chest discomfort. Headache, nausea and vomiting. Generally, polymer fume fever lasts for 24 to 48 hours.

4.3 Indication of immediate medical attention and special treatment needed

No special requirements

5. SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media

Extinguish with carbon dioxide, dry chemical, foam or waterspray.

Unsuitable Extinguishing Media

None.

5.2 Special hazards arising from the substance or mixture

Can decompose in a fire evolving toxic fumes. The product can decompose if heated to temperatures above (°C): 250.

Hazardous decomposition products: ultrafine particles of low-molecular fluoropolymer, hydrogen fluoride, tetrafluoroethylene, hexafluoropropylene or perfluoroisobutylene, carbonyl fluoride, carbon monoxide, carbon dioxide.

5.3 Advice for fire-fighters

Evacuate the area. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Chemical protection suit.

5.4 Additional Information

To cool closed containers at seat of fire, use water spray.

6. SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Shut off leaks if without risk. Ensure suitable personal protection during substance removal.

6.2 Environmental precautions

Do not allow to enter drains, sewers or watercourses.

6.3 Methods and material for containment and cleaning up

Use vacuum equipment for collecting spilt material, where practicable. Sweep up spilt substance, avoid dusting. Dampening

6.4 Reference to other sections
6.5 Additional Information

with water can reduce dusting. Transfer to a lidded container for disposal or recycle. Caution - spillages can be slippery.
See Also Section: 8 and 13.
None.

7. SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Provide adequate ventilation. Avoid accumulation of dust. Avoid inhalation of high concentrations of dust. Do not breathe fumes/vapor from heated product. Store containers in a clean, cool and dry room away from heat sources. Do not eat, drink or smoke when using this product. Wash hands and exposed skin after use.

7.2 Conditions for safe storage, including any incompatibilities

Storage Temperature

Tightly closed containers shall be stored in clean and dry places, at minimal distance of 1 m from heating systems. Avoid contamination. Stable under normal conditions. Properties deteriorate in course of time.

Storage Life

Incompatible materials

Metal powder (Aluminium and magnesium), oxidizers (fluorine, chlorine trifluoride).

7.3 Specific end use(s)

Used for producing articles or films with good dielectric properties, resistance to highly corrosive media and service temperature up to +250 °C (482 °F).

8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note:
Polytetrafluoroethylene	9002-84-0	-	-	-	-	None

8.1.2 Biological limit value

No information available.

8.1.3 PNECs and DNELs

No information available.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Provide adequate ventilation, including appropriate local exhaust.

8.2.2 Personal protection equipment

Eye/face protection

Use eye protection (face shield or goggles).



Skin protection

Hand protection: Protective gloves.

Body protection: Wear suitable protective clothing.



Respiratory protection

Where engineering controls are not fitted or inadequate wear suitable respiratory protective equipment. During thermal processing: A suitable mask with filter of A-type (EN141 or EN405) may be needed.



Thermal hazards

Use gloves with thermal insulation, when needed. Wear insulating gloves EN407 (heat).

8.2.3 Environmental Exposure Controls

Avoid release to the environment.

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1	Information on basic physical and chemical properties	
	Appearance	Powder.
	Colour	White.
	Odour	Odourless.
	Odour Threshold (ppm)	Not established.
	pH (Value)	Not applicable.
	Melting Point (°C) / Freezing Point (°C)	320°C - 346 °C [ASTM D 4894].
	Boiling point/boiling range	Not applicable.
	Flash Point (°C)	Not applicable.
	Evaporation rate	Not applicable.
	Flammability (solid, gas)	Non-flammable.
	Explosive limit ranges.	Not applicable.
	Vapour Pressure (mm Hg)	Not applicable.
	Vapour Density (Air=1)	Not applicable.
	Density (g/ml) @ 23°C	2.21 – 2.24
	Solubility (Water)	Insoluble.
	Solubility (Other)	Not established.
	Partition Coefficient (n-Octanol/water)	Not available.
	Auto Ignition Temperature (°C)	Not applicable.
	Decomposition Temperature (°C)	>250
	Viscosity (mPa.s)	Not applicable.
	Explosive properties	Not explosive.
	Oxidising properties	Not oxidising.
9.2	Other information	None.

10. SECTION 10: STABILITY AND REACTIVITY

10.1	Reactivity	Stable under normal conditions. Decomposes at temperatures above (°C): 250.
10.2	Chemical stability	Stable under normal conditions.
10.3	Possibility of hazardous reactions	Polytetrafluoroethylene can ignite in fluorine-oxygen medium, or at 704.4°C (1300°F) in pure oxygen at atmospheric pressure when used as 20 AWG wires insulation. Sealing tape made of Teflon burned vigorously in contact with sodium-potassium alloy in helium.
10.4	Conditions to avoid	Heating.
10.5	Incompatible materials	Metal powder (Aluminium and magnesium), oxidizers (fluorine, chlorine trifluoride).
10.6	Hazardous Decomposition Product(s)	>250°C – ultrafine particles of low-molecular fluoropolymer. >398.9°C – Highly toxic fumes of fluorine. >400°C - Hydrogen fluoride. >450°C – Tetrafluoroethylene. >460°C – Hexafluoropropylene. >475°C – Perfluoroisobutylene. >500°C – Carbonyl fluoride. >650°C – Carbon monoxide, Carbon dioxide.

11. SECTION 11: TOXICOLOGICAL INFORMATION

This material is unlikely to present a significant health hazard under normal conditions of handling and use

11.1	Information on toxicological effects	
	Acute toxicity	
	Ingestion	Low oral toxicity, but ingestion can cause gastrointestinal tract irritation.
	Inhalation	Dust and vapors or fumes evolved during thermal processing can cause irritation of the respiratory system. IF INHALED: Decomposition products: Fever. Excessive sweating. Cough. Chest discomfort. Headache, nausea and vomiting. (Polymer fume fever).
	Skin Contact	Low acute toxicity. Decomposition products: Can cause skin irritation.
	Eye Contact	Low acute toxicity. Decomposition products: Can cause eyes irritation.
	Skin corrosion/irritation	Not classified. No evidence of irritant effects at normal handling and use.

	Serious eye damage/irritation	Not classified.
	Respiratory or skin sensitization	Not classified.
	Mutagenicity	No evidence of genotoxicity.
	Carcinogenicity	IARC Classification: Group 3. No evidence of carcinogenicity in man.
	Reproductive toxicity	Not classified.
	STOT - single exposure	IF INHALED: Decomposition products: Fever. Excessive sweating. Cough. Chest discomfort. Headache, nausea and vomiting. (Polymer fume fever).
	STOT - repeated exposure	Long Term Exposure: Pulmonary Fibrosis.
	Aspiration hazard	Not classified.
11.2	Other information	None.

12. SECTION 12: ECOLOGICAL INFORMATION

12.1	Toxicity	Low toxicity to aquatic organisms.
12.2	Persistence and degradability	According to experiences this product is inert and not degradable.
12.3	Bioaccumulative potential	The product has no potential for bioaccumulation.
12.4	Mobility in soil	The product is estimated to have low mobility in soil.
12.5	Results of PBT and VPVB assessment	Not classified as PBT or vPvB.
12.6	Other adverse effects	None anticipated.

13. SECTION 13: DISPOSAL CONSIDERATIONS

13.1	Waste treatment methods	Disposal shall be accomplished in accordance with local, state or national legislation. Do not allow to enter drains, sewers or watercourses. Recover or recycle if possible.
13.2	Additional Information	WGK 0 (Official classification).
13.2.1	Regulatory information	References: Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on waste, Decision 2000/532/EC.
13.2.2	Waste code	Waste Product Code No. for uncontaminated product (European Waste Catalogue): 20 01 06, other plastics.

14. SECTION 14: TRANSPORT INFORMATION

Not classified as dangerous for transport.		
14.1	UN number	Not applicable.
14.2	Proper Shipping Name	Not applicable.
14.3	Transport hazard class(es)	Not applicable.
14.4	Packing Group	Not applicable.
14.5	Environmental hazards	Not applicable.
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.

15. SECTION 15: REGULATORY INFORMATION

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture	
15.1.1	EU regulations	None known.
	Authorizations and/or restrictions on use	
15.1.2	National regulations	Hazard classification - In accordance with: State Standard of Russian Federation (GOST 12.1.007). Label elements - In accordance with: State Standard of Russian Federation (GOST 31340-07).
15.2	Chemical Safety Assessment	No data available.

16. SECTION 16: OTHER INFORMATION

16.1	Classification of the substance or mixture	Regulation (EC) No. 1272/2008 (CLP/GHP): Not classified as dangerous for supply/use.
16.1.1	Label elements	According to Regulation (EC) No. 1272/2008 (CLP/GHP).
	Product Name	Fluoroplast-4D of "Sh", "L", "E", "T", "U" brands. Fluoroplast-4DM of "E", "T", "O", brands

Hazard Pictogram(s)	None.
Signal word(s)	None.
Hazard statement(s)	None.
Precautionary statement(s)	None.
16.1.2 Label elements	According to Directive 67/548/EEC & Directive 1999/45/EC.
Product Name	Fluoroplast-4D of "Sh", "L", "E", "T", "U" brands. Fluoroplast-4DM of "E", "T", "O", brands
Hazard Symbol	None.
Risk Phrases	None.
Safety Phrases	None.

The following sections contain revisions or new statements: 1-16.

LEGEND

LTEL	Long Term Exposure Limit
STEL	Short Term Exposure Limit
STOT	Specific Target Organ Toxicity
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
PBT	PBT: Persistent, Bioaccumulative and Toxic

Additional Information

General Sanitary Requirements to Industrial Air in RF
PDK (MAC)= 10 mg/m³, class of danger – 4 (low - hazardous substance).
(MAC – Maximum permissible concentration of substance in the air working area)

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An Employer must inform employees and other persons of the dangers they can be incurred and precautionary measures they should apply.

Annex to the extended Safety Data Sheet (eSDS)

No information available.