

**ETFE Fluoroplastic Resin 4003**Version  
3.0Revision Date:  
24/04/2025SDS Number:  
CF40-001Date of last issue: 05.01.2025  
Date of first issue: 21.11.2013

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**SECTION 1. IDENTIFICATION**

Product name : ETFE Fluoroplastic Resin

Product code : Everflon™ 4003/S

**Manufacturer or supplier's details**

Company name of supplier : Wuhan Everflon Fluoropolymers Co.,Ltd

Address : Fugiao Industrial Zone,C&amp;F Ave,Caidian,Wuhan, China

Telephone : 0086-27-8488 8055

Emergency telephone : 0086-185-7168-9228

**Recommended use of the chemical and restrictions on use**

Recommended use : Resin for moulding and/or extrusion

Restrictions on use : For industrial use only.  
Do not use or resell Everflon™ materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless agreed to by Seller in a written agreement covering such use. For further information, please contact your Everflon representative.

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**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Not a hazardous substance or mixture.

**GHS label elements**

Not a hazardous substance or mixture.

**Annex II of REACH regulation**

Meets all criteria for absence of persistent, bioaccumulative and toxic substances. Does not contain any substances having endocrine disrupting properties as listed in Article 59(1) of Regulation (EU) no. 1907/2006

**Other hazards**

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

# SAFETY DATA SHEET

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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance  
Substance name : Poly(Ethylene/3,3,4,4,5,5,6,6,6-Nonafluoro-1-Hexene/Tetrafluoroethylene)  
CAS-No : 68258-85-5

#### Components

No hazardous ingredients

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**SECTION 4. FIRST AID MEASURES**

|                                                             |   |                                                                                                                   |
|-------------------------------------------------------------|---|-------------------------------------------------------------------------------------------------------------------|
| If inhaled                                                  | : | If inhaled, remove to fresh air. Get medical attention if symptoms occur.                                         |
| In case of skin contact                                     | : | Wash with water and soap as a precaution. Get medical attention if symptoms occur.                                |
| In case of eye contact                                      | : | Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.                 |
| If swallowed                                                | : | If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water. |
| Most important symptoms and effects, both acute and delayed | : | Polymer fume fever                                                                                                |
| Protection of first-aiders                                  | : | No special precautions are necessary for first aid responders.                                                    |
| Notes to physician                                          | : | Treat symptomatically and supportively.                                                                           |

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**SECTION 5. FIRE-FIGHTING MEASURES**

|                                                |   |                                                                                                                                                                                                                                     |
|------------------------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media                   | : | Water spray;Alcohol-resistant foam;Carbon dioxide (CO2);Dry chemical                                                                                                                                                                |
| Unsuitable extinguishing media                 | : | None known.                                                                                                                                                                                                                         |
| Specific hazards during fire fighting          | : | Exposure to combustion products may be a hazard to health.                                                                                                                                                                          |
| Hazardous combustion products                  | : | Hydrogen fluoride;;carbonyl fluoride;potentially toxic fluorinated compounds;aerosolized particulates;Carbon oxides                                                                                                                 |
| Specific extinguishing methods                 | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment;Use water spray to cool unopened containers;Remove undamaged containers from fire area if it is safe to do so;Evacuate area. |
| Special protective equipment for fire-fighters | : | Wear self-contained breathing apparatus for firefighting if necessary.Use personal protective equipment.                                                                                                                            |

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
- Environmental precautions : Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

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**SECTION 7. HANDLING AND STORAGE**

|                                           |   |                                                                                                                                                                                                                                                                    |
|-------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical measures                        | : | See Engineering measures under EXPOSURE COTROLS/PERSONAL PROTECTION section.                                                                                                                                                                                       |
| Local/Total ventilation                   | : | Use only with adequate ventilation.                                                                                                                                                                                                                                |
| Advice on safe handling                   | : | Do not breathe decomposition products.<br><br>Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-sessment<br><br>Take care to prevent spills, waste and minimize release to the environment. |
| Conditions for safe storage               | : | Keep in properly labeled containers.<br><br>Store in accordance with the particular national regulations.                                                                                                                                                          |
| Materials to avoid                        |   | Do not store with the following product types:<br><br>Strong oxidizing agents                                                                                                                                                                                      |
| Further information on stor-age stability | : | Stable under recommended storage conditions.                                                                                                                                                                                                                       |

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

## Occupational exposure limits of decomposition products

| Components          | CAS-No.   | Value type<br>(Form of exposure) | Control parameters /<br>Permissible concentration | Basis     |
|---------------------|-----------|----------------------------------|---------------------------------------------------|-----------|
| Hydrogen fluoride   | 7664-39-3 | TWA                              | 0.5 ppm<br>(Fluorine)                             | ACGIH     |
|                     |           | C                                | 2 ppm<br>(Fluorine)                               | ACGIH     |
|                     |           | C                                | 6 ppm<br>5 mg/m <sup>3</sup>                      | NIOSH REL |
|                     |           | TWA                              | 3 ppm<br>2.5 mg/m <sup>3</sup>                    | NIOSH REL |
|                     |           | TWA                              | 3 ppm                                             | OSHA Z-2  |
| Carbonyl difluoride | 353-50-4  | TWA                              | 2 ppm                                             | ACGIH     |
|                     |           | STEL                             | 5 ppm                                             | ACGIH     |
|                     |           | TWA                              | 2 ppm<br>5 mg/m <sup>3</sup>                      | NIOSH REL |
|                     |           | ST                               | 5 ppm<br>15 mg/m <sup>3</sup>                     | NIOSH REL |
| Carbon dioxide      | 124-38-9  | TWA                              | 5,000 ppm                                         | ACGIH     |
|                     |           | STEL                             | 30,000 ppm                                        | ACGIH     |
|                     |           | TWA                              | 5,000 ppm<br>9,000 mg/m <sup>3</sup>              | NIOSH REL |
|                     |           | ST                               | 30,000 ppm<br>54,000 mg/m <sup>3</sup>            | NIOSH REL |
|                     |           | TWA                              | 5,000 ppm<br>9,000 mg/m <sup>3</sup>              | OSHA Z-1  |
| Carbon monoxide     | 630-08-0  | TWA                              | 25 ppm                                            | ACGIH     |
|                     |           | TWA                              | 35 ppm<br>40 mg/m <sup>3</sup>                    | NIOSH REL |
|                     |           | C                                | 200 ppm<br>229 mg/m <sup>3</sup>                  | NIOSH REL |
|                     |           | TWA                              | 50 ppm<br>55 mg/m <sup>3</sup>                    | OSHA Z-1  |
|                     |           |                                  |                                                   |           |

**Engineering measures** : Processing may form hazardous compounds (see section 10).  
Ensure adequate ventilation, especially in confined areas.  
Minimize workplace exposure concentrations.

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- Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
- Hand protection : Heat resistant gloves
- Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. Breakthrough time is not determined for the product. Change gloves often!
- Eye protection : Wear the following personal protective equipment: Safety glasses
- Skin and body protection : Skin should be washed after contact.
- Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.  
When using do not eat, drink or smoke.  
Wash contaminated clothing before re-use.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

|                                                  |   |                                                          |
|--------------------------------------------------|---|----------------------------------------------------------|
| Appearance                                       | : | pellets, granules                                        |
| Color                                            | : | off-white, translucent                                   |
| Odor                                             | : | odorless                                                 |
| Odor Threshold                                   | : | No data available                                        |
| pH                                               | : | No data available                                        |
| Melting point/freezing point                     | : | > 482 °F / > 250 °C                                      |
| Initial boiling point and boiling range          | : | No data available                                        |
| Flash point                                      | : | Not applicable                                           |
| Evaporation rate                                 | : | Not applicable                                           |
| Flammability (solid, gas)                        | : | Not classified as a flammability hazard                  |
| Upper explosion limit / Upper flammability limit | : | No data available                                        |
| Lower explosion limit / Lower flammability limit | : | No data available                                        |
| Vapor pressure                                   | : | Not applicable                                           |
| Relative vapor density                           | : | Not applicable                                           |
| Density                                          | : | 1.7g/cm <sup>3</sup>                                     |
| Water solubility                                 | : | insoluble                                                |
| Partition coefficient: n-octanol/water           | : | No data available                                        |
| Autoignition temperature                         | : | No data available                                        |
| Decomposition temperature                        | : | No data available                                        |
| Viscosity, kinematic                             | : | Not applicable                                           |
| Explosive properties                             | : | Not explosive                                            |
| Oxidizing properties                             | : | The substance or mixture is not classified as oxidizing. |
| Particle size                                    | : | No data available                                        |

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**SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions. :

Possibility of hazardous reactions : Can react with strong oxidizing agents.  
Hazardous decomposition products will be formed at elevated temperatures.

Conditions to avoid : None known.

Incompatible materials : Oxidizing agents

**Hazardous decomposition products**

Thermal decomposition : Hydrogen fluoride  
Carbonyl difluoride  
Carbon dioxide  
Carbon monoxide  
1-Propene, 1,1,3,3,3-pentafluoro-2-(trifluoromethyl)-

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**SECTION 11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

Skin contact  
Ingestion  
Eye contact

**Acute toxicity**

Not classified based on available information.

**Skin corrosion/irritation**

Not classified based on available information.

**Serious eye damage/eye irritation**

Not classified based on available information.

**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

**IARC**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**

Not classified based on available information.

**STOT single exposure**

Not classified based on available information.

**STOT repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

No data available

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**SECTION 13. DISPOSAL CONSIDERATIONS**

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

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**SECTION 14. TRANSPORT INFORMATION****International Regulations****UNRTDG**

Not regulated as a dangerous good

**IATA DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**Domestic regulation****49 CFR**

Not regulated as a dangerous good

**Special precautions for user**

Not applicable

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**SECTION 15. REGULATORY INFORMATION****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**US State Regulations****Pennsylvania Right To Know**

Poly(Ethylene/3,3,4,4,5,5,6,6,6-Nonafluoro-1-Hexene/Tetrafluoroethylene) 68258-85-5

**California Prop. 65**

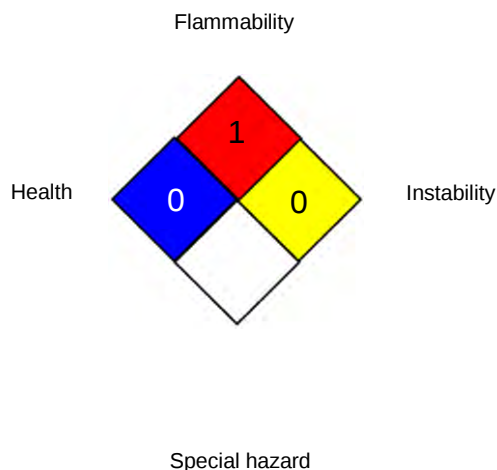
WARNING: This product can expose you to chemicals including Pentadecafluorooctanoic acid, which is/are known to the State of California to cause cancer, and Pentadecafluorooctanoic acid, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov). Note to User: This product is not made with PFOA nor is PFOA intentionally present in the product; however, it is possible that PFOA may be present as an impurity at background (environmental) levels.

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## SECTION 16. OTHER INFORMATION

## NFPA 704:



## HMIS® IV:

|                 |   |   |
|-----------------|---|---|
| HEALTH          | / | 0 |
| FLAMMABILITY    |   | 1 |
| PHYSICAL HAZARD |   | 0 |

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

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## Full text of Full text of other abbreviations

|                 |                                                                                             |
|-----------------|---------------------------------------------------------------------------------------------|
| ACGIH           | : USA. ACGIH Threshold Limit Values (TLV)                                                   |
| NIOSH REL       | : USA. NIOSH Recommended Exposure Limits                                                    |
| OSHA Z-1        | : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants          |
| OSHA Z-2        | : USA. Occupational Exposure Limits (OSHA) - Table Z-2                                      |
| ACGIH / TWA     | : 8-hour, time-weighted average                                                             |
| ACGIH / STEL    | : Short-term exposure limit                                                                 |
| ACGIH / C       | : Ceiling limit                                                                             |
| NIOSH REL / TWA | : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek |
| NIOSH REL / ST  | : STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday    |
| NIOSH REL / C   | : Ceiling value not be exceeded at any time.                                                |
| OSHA Z-1 / TWA  | : 8-hour time weighted average                                                              |
| OSHA Z-2 / TWA  | : 8-hour time weighted average                                                              |

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime

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Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECL - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

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Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.