

Product Information

PF-601 is a melt-processable fluoropolymer (ETFE), a 1:1 alternating copolymer of ethylene and tetrafluoroethylene, containing no other polymers or additives; the resin is in the form of clear granules.

TYPICAL PROPERTIES OF ETFE PF-601

(Data not for specification purposes)

Physical Properties			
Index	Unit	PF-601	Test Method
Relative density	g/cm ³	1.73-1.79	ASTM D792
Melt flow rate	g/10min	12-20	ASTM D1238
Melting point	°C	265±10	GB/T 16582
Mechanical Properties			
Tensile strength	MPa	≧ 25	ASTM D638
Elongation at break	%	≧ 200	ASTM D638
Hardness	Shore hardness	60	ASTM D2240
Yield strength	MPa	—	—
Dynamic friction coefficient	—	0.4	GB/T 10006
Thermal Properties			
Maximal Temperature of Continuous Work	°C	150	-
Heat distortion temperature	°C (1.82MPa)	74	GB/T 19466
Thermal expansion Coefficient	(-10 ⁻⁵ /°C)	9.0-9.3	ASTM D 696
Electrical Properties			
Volume resistivity	Ω .cm	10 ¹⁸	ASTM D 257
Insulation breakdown Voltage	KV(3.2mm Thickness)	20	ASTM D149
Relative dielectric Constant	10 ⁶ Hz	2.3-2.5	ASTM D150
Dielectric loss angle tangent	10 ⁶ Hz	<0.008	ASTM D150

Feature

PF-601 has a high melt index, excellent mechanical properties and extrusion processability, good electrical insulation, usually used for extruding the insulation layer of wire and cable.

PROCESSING

PF-601 can be molded by thermoplastic processing methods such as molding and extrusion, and has a high critical shear rate, making it suitable for extrusion of thin-walled objects. Parts in contact with the resin must be made of corrosion-resistant metals. Processing temperatures need to be precisely controlled to ensure full plasticization without compromising performance, and a screw length-to-diameter (L/D) ratio of 22:1 to 25:1 is recommended.

Processing Temperature References

Processing method	Rear/°C	Middle/°C	Front/°C	Nozzle/°C	Pressure/MPa
Injection molding	280-300	320-340	330-350	350-370	340-360

Package

PF-601 is cylindrical granule, packed in double-layer plastic bag, packing specification 25 kg/bag.

Storage and Use

PF-601 resin is not affected by storage time. After the raw material package is opened, the moisture of the raw material particles and the pollution of the external environment should be avoided. It is recommended to dry at 120 °C for 2 hours before use.

Use of this product equipment must be cleaned, there can not be any residue inside.

Safety Precautions

When the processing temperature of ETFE resin exceeds 260°C, a small amount of decomposition products will be released, and when it reaches 380°C or more, the decomposition products will increase.

The decomposition products may be hazardous to humans, and inhalation of these decomposition gases must be avoided. Therefore, it is important to ensure adequate ventilation of the process equipment and work area.

For more information, refer to the MSDS for this product.

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