PEFLON

TECHNICAL DATA ETFE PF-660

Product Information

PF-660 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-660

(Data not for specification purposes)

Physical Properties			
Index	**Unit**	**PF-660**	**Test Method**
Relative density	g/cm^3	1.73-1.79	ASTM D792
Melt flow rate	g/10min	≥25	ASTM D1238
Melting point	℃	>240	GB/T 16582
Mechanical Properties			
Tensile strength	MPa	≧ 25	ASTM D638
Elongation at break	%	≧200	ASTM D638
Hardness	Shore hardness	≧60D	ASTM D2240
Dynamic friction coefficient	——	0.4	GB/T 10006
Thermal Properties			
Maximal Temperature of Continuous Work	℃	2150	-
Heat distortion temperature	℃ (1.82MPa)	74	GB/T 19466
Thermal expansion Coefficient	$(-10^{-5}/℃)$	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	10^6Hz	2.2-2.4	ASTM D150
Dielectric loss angle tangent	10^6Hz	<0.005	ASTM D150

Feature

PF-660 has a high melt index, excellent mechanical properties and extrusion processability, good electrical insulation, and is usually used for extruding insulation for thin-layer wires.

PROCESSING

PF-660 can be processed by die molding and extrusion and has a high critical shear rate for thin-walled parts. Corrosion-resistant metals are required for parts in contact with the resin, and accurate control of processing temperature, residence time, and shear rate is required. Recommended screw length-to-diameter (L/D) ratios are 22:1 to 25:1.

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-660 is cylindrical granule, packed in double-layer plastic bag, packing specification 25 kg/bag.

Storage and Use

PF-660 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 ℃ 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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