

Product Information

PF-413 is a resin with excellent mechanical, high temperature and electrical properties, suitable for applications requiring high temperature and electrical properties, mainly for wire and cable or high temperature injection molded parts.

TYPICAL PROPERTIES OF Fusible PF-413

(Data not for specification purposes)

Physical Properties			
Index	Unit	PF-413	Test Method
Relative density	g/cm ³	2.12-2.18	ASTM D792
Melt flow rate	g/10min	13-22	ASTM D1238
Melting point	°C	307±5	GB/T 16582
Mechanical Properties			
Tensile strength	MPa	≥ 18	ASTM D638
Elongation at break	%	≥ 250	ASTM D638
Hardness	Shore hardness	≥ 58D	ASTM D2240
Yield strength	MPa	-	-
Dynamic friction coefficient	—	0.2	GB/T 10006
Thermal Properties			
Maximal Temperature of Continuous Work	°C	260	-
Thermal expansion Coefficient	(-10-5/°C)	12-20	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	≤2.1	ASTM D150
Dielectric loss angle tangent	10 ⁶ Hz	<0.0003	ASTM D150

Feature

PF-413 has good high temperature resistance and mechanical properties, as well as excellent electrical properties, flame retardant properties and chemical resistance, so it is generally used in wire and cable insulation and high temperature and chemical resistant injection molding parts.

Processing

PF-413 can be processed by general thermoplastic molding methods, such as extrusion, molding, injection molding and blow molding, etc. Corrosion-resistant metals need to be selected for the parts in contact with the resin, such as extruder screws, sleeves and molds, in order to prevent corrosion of decomposition products generated during the process. The processing temperature of fluoroplastics is high, in order to ensure that the resin is fully plasticized without affecting the resin properties, it is necessary to accurately control the processing temperature, residence time and shear rate.

Processing Temperature References

Processing method	Rear/°C	Middle/°C	Front/°C	Nozzle/°C	Pressure/MPa
Injection molding	330-350	340-360	360-380	380-400	80-120

Package

Packed in double-layer plastic bags, packing specification 25 kg/bag.

Storage and Use

PF-413 resin is not affected by storage time. After the raw material package is opened, the raw material particles should be protected from moisture and external environmental pollution.

Before use, it is recommended to dry at 120°C for 2 hours.

The equipment must be cleaned and there should not be any residue inside.

Safety Precautions

CAS No. 26655-00-5 Composition 100%

When the processing temperature of PFA resin exceeds 420°C, a small amount of decomposition products will be released. These decomposition products may be hazardous to human beings and should be avoided.

Inhalation of these decomposition gases must be avoided. Therefore, it is important to ensure adequate ventilation of the extruder, process equipment and work area.

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

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