

Polymer Resources PEI-GP1-TFE5 Polyetherimide, 5% PTFE, Flame Retardant

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

Polyetherimide, General Purpose, 5% PTFE, Flame Retardant Process: Injection Molding Notes: All physical, mechanical and thermal testing conducted on 1/8-inch thick, un-pigmented, test samples. Information provided by Polymer Resources Corporation.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Polymer-Resources-PEI-GP1-TFE5-Polyetherimide-5-PTFE-Flame-Retardant.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.27 g/cc	1.27 g/cc	ASTM D792
Moisture Absorption at Equilibrium	0.60 %	0.60 %	50% RH; ASTM D570
Water Absorption at Saturation	1.1 % @Temperature 22.8 °C	1.1 % @Temperature 73.0 °F	ISO 62
Linear Mold Shrinkage	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ASTM D955
Melt Flow	5.0 - 30 g/10 min @Load 6.70 kg, Temperature 337 °C	5.0 - 30 g/10 min @Load 14.8 lb, Temperature 639 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	110	110	ASTM D785
Tensile Strength at Break	103 MPa	15000 psi	ASTM D638
Tensile Strength, Yield	103 MPa	15000 psi	ASTM D638
Elongation at Break	40 %	40 %	ASTM D638
Elongation at Yield	5.0 %	5.0 %	ASTM D638
Tensile Modulus	3.45 GPa	500 ksi	ASTM D638
Flexural Strength	145 MPa	21000 psi	ASTM D790
Flexural Modulus	3.24 GPa	470 ksi	ASTM D790
Izod Impact, Notched	0.534 J/cm @Temperature 22.8 °C	1.00 ft-lb/in @Temperature 73.0 °F	ASTM D256
	0.534 J/cm @Temperature -30.0 °C	1.00 ft-lb/in @Temperature -22.0 °F	ASTM D256
	5.34 J/cm	10.0 ft-lb/in	

Izod Impact, Unnotched Mechanical Properties	Metric @ Temperature 22.8 °C	English @ Temperature 73.0 °F	ASTM D4812 Comments
Izod Impact, Notched (ISO)	7.35 kJ/m ² @Temperature -30.0 °C	3.50 ft-lb/in ² @Temperature -22.0 °F	ISO 180/1A
	8.82 kJ/m ² @Temperature 22.8 °C	4.20 ft-lb/in ² @Temperature 73.0 °F	ISO 180/1A
Charpy Impact, Notched	1.05 J/cm ² @Temperature 22.8 °C	5.00 ft-lb/in ² @Temperature 73.0 °F	ISO 179/1eA
Gardner Impact	2.26 J	1.67 ft-lb	ASTM D3029

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	39.6 µm/m-°C @Temperature -20.0 - 150 °C	22.0 µin/in-°F @Temperature -4.00 - 302 °F	ASTM E831
CTE, linear, Transverse to Flow	39.6 µm/m-°C @Temperature -20.0 - 150 °C	22.0 µin/in-°F @Temperature -4.00 - 302 °F	ASTM E831
Deflection Temperature at 0.46 MPa (66 psi)	204 °C	400 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	196 °C	385 °F	ASTM D648
Vicat Softening Point	209 °C	409 °F	ISO 306/B120
	214 °C	418 °F	ISO 306/B50
	218 °C	425 °F	120°C/h, 50 N; ASTM D1525
Flammability, UL94	V-0 @Thickness 1.59 mm	V-0 @Thickness 0.0626 in	
	V-0 @Thickness 3.17 mm	V-0 @Thickness 0.125 in	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	332 - 399 °C	630 - 750 °F	
Middle Barrel Temperature	338 - 399 °C	640 - 750 °F	
Front Barrel Temperature	343 - 399 °C	650 - 750 °F	
Melt Temperature	338 - 399 °C	640 - 750 °F	

Processing Properties	Metric ^{177 °C}	English ^{350 °F}	Comments
Drying Temperature	143 - 149 °C	290 - 300 °F	
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	

Descriptive Properties	Value	Comments
Vent	0.001	

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