

Polymer Resources PEI-G10 Polyetherimide, 10% Glass Reinforced

Category : Polymer , Thermoplastic , Polyetherimide (PEI) , Polyetherimide (PEI), 10% Glass Fiber

Material Notes:

Polyetherimide, 10% Glass Reinforced 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-G10-Polyetherimide-10-Glass-Reinforced.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.34 g/cc	1.34 g/cc	ASTM D792
Water Absorption	0.21 % @Time 86400 sec	0.21 % @Time 24.0 hour	ASTM D570
Moisture Absorption at Equilibrium	1.2 %	1.2 %	ASTM D570
Linear Mold Shrinkage	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	ASTM D955
Melt Flow	5.0 - 22 g/10 min @Load 6.70 kg, Temperature 337 °C	5.0 - 22 g/10 min @Load 14.8 lb, Temperature 639 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	114	114	ASTM D785
Tensile Strength at Break	114 MPa	16500 psi	ASTM D638
Tensile Strength, Yield	114 MPa	16500 psi	ASTM D638
Elongation at Break	6.0 %	6.0 %	ASTM D638
Tensile Modulus	4.55 GPa	660 ksi	ASTM D638
Flexural Strength	186 MPa	27000 psi	ASTM D790
Flexural Modulus	4.48 GPa	650 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
Izod Impact, Unnotched	4.81 J/cm @Temperature 22.8 °C	9.00 ft-lb/in @Temperature 73.0 °F	ASTM D4812

Thermal Properties	Metric	English	Comments
	32.4 µm/m-°C	18.0 µin/in-°F	

Thermal Properties	Metric	English	Comments
	@ Temperature -20.0 - 150 °C	@ Temperature -4.00 - 302 °F	
Deflection Temperature at 0.46 MPa (66 psi)	207 °C	405 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	204 °C	400 °F	ASTM D648
Vicat Softening Point	221 °C	430 °F	120°C/h, 50 N; ASTM D1525
UL RTI, Electrical	105 °C	221 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	105 °C	221 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical with Impact	105 °C	221 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	105 °C	221 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	105 °C	221 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	105 °C	221 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	V-0	V-0	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-0	V-0	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+17 ohm-cm	1.00e+17 ohm-cm	ASTM D257
Dielectric Constant	3.5	3.5	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	27.2 kV/mm	690 kV/in	in oil; ASTM D149
Dissipation Factor	0.0014	0.0014	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.0046	0.0046	ASTM D150

Electrical Properties	Metric	English	Comments
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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	
Mold Temperature	107 - 177 °C	225 - 350 °F	
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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