

Polymer Resources PEI-G40 Polyetherimide, 40% Glass Reinforced

Category : Polymer , Thermoplastic , Polyetherimide (PEI) , Polyetherimide (PEI), 40% Glass Fiber

Material Notes:

Polyetherimide, 40% 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-G40-Polyetherimide-40-Glass-Reinforced.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.60 g/cc	1.60 g/cc	ASTM D792
Water Absorption	0.13 % @Time 86400 sec	0.13 % @Time 24.0 hour	ASTM D570
Moisture Absorption at Equilibrium	0.90 %	0.90 %	ASTM D570
Linear Mold Shrinkage	0.0010 - 0.0030 cm/cm	0.0010 - 0.0030 in/in	ASTM D955
Melt Flow	3.0 - 18 g/10 min @Load 6.70 kg, Temperature 337 °C	3.0 - 18 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	177 MPa	25600 psi	ASTM D638
Tensile Strength, Yield	177 MPa	25600 psi	ASTM D638
Elongation at Break	2.5 %	2.5 %	ASTM D638
Tensile Modulus	11.7 GPa	1690 ksi	ASTM D638
Flexural Strength	234 MPa	34000 psi	ASTM D790
Flexural Modulus	11.0 GPa	1600 ksi	ASTM D790
Izod Impact, Notched	0.961 J/cm @Temperature 22.8 °C	1.80 ft-lb/in @Temperature 73.0 °F	ASTM D256
Izod Impact, Unnotched	4.27 J/cm @Temperature 22.8 °C	8.00 ft-lb/in @Temperature 73.0 °F	ASTM D4812

Thermal Properties	Metric	English	Comments
	14.4 µm/m-°C	8.00 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)	214 °C	418 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	212 °C	413 °F	ASTM D648
Vicat Softening Point	232 °C	450 °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	1.50e+16 ohm-cm	1.50e+16 ohm-cm	ASTM D257
Dielectric Constant	3.7	3.7	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	23.6 kV/mm	600 kV/in	in oil; ASTM D149
Dissipation Factor	0.0020	0.0020	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	

Processing Properties	Metric	English	Comments
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Processing Properties	Metric	English	Comments
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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