

BASF Petra® 140 45% Glass Filled PET

Category : Polymer , Thermoplastic , Polyester, TP , Polyethylene Terephthalate (PET) , Polyethylene Terephthalate (PET), 50% Glass Reinforced

Material Notes:

Petra 140 is a 45% glass reinforced injection molding polyethylene terephthalate (PET) offering an increased level of strength, stiffness, high temperature performance and dimensional stability. Excellent resistance to creep under load, and maintains the inherent chemical and electrical properties associated with polyesters.

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Petra-140-45-Glass-Filled-PET.php

Physical Properties	Metric	English	Comments
Density	1.44 g/cc	0.0520 lb/in ³	Melt; ISO 1183
	1.70 g/cc	0.0614 lb/in ³	ISO 1183
Viscosity Measurement	0.52	0.52	Inherent Viscosity
Linear Mold Shrinkage	0.0020 cm/cm	0.0020 in/in	ASTM Data; MD

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	116	116	ASTM Test
Tensile Strength at Break	180 MPa	26100 psi	0.2 in/min; ASTM Test
Tensile Strength, Ultimate	180 MPa	26100 psi	5mm/min; ISO 527
Elongation at Break	3.0 %	3.0 %	5mm/min; ISO 527
	3.0 %	3.0 %	0.2 in/min; ASTM Test
Tensile Modulus	16.2 GPa	2350 ksi	1mm/min; ISO 527
Flexural Strength	255 MPa	37000 psi	ISO Data
	285 MPa	41300 psi	ASTM Test
	110 MPa	16000 psi	ASTM Test
	@Temperature 120 °C	@Temperature 248 °F	
Flexural Modulus	370 MPa	53700 psi	ASTM Test
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Flexural Modulus	13.1 GPa	1900 ksi	ASTM Test
	4.69 GPa	680 ksi	ASTM Test
	@Temperature 120 °C	@Temperature 248 °F	

Mechanical Properties	1.10 J/cm Metric	2.06 ft-lb/in English	Comments
	@Thickness 3.17 mm	@Thickness 0.125 in	
Izod Impact, Unnotched	9.60 J/cm	18.0 ft-lb/in	ASTM Test
Charpy Impact, Notched	1.15 J/cm ²	5.47 ft-lb/in ²	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	22.0 µm/m-°C @Temperature -30.0 - 30.0 °C	12.2 µin/in-°F @Temperature -22.0 - 86.0 °F	ASTM Test
CTE, linear, Parallel to Flow	22.0 µm/m-°C	12.2 µin/in-°F	ASTM Test
Specific Heat Capacity	1.573 J/g-°C	0.3760 BTU/lb-°F	Melt
Thermal Conductivity	0.310 W/m-K	2.15 BTU-in/hr-ft ² -°F	Melt
Melting Point	245 °C	473 °F	10 K/min
	245 °C	473 °F	ASTM Test
Deflection Temperature at 0.46 MPa (66 psi)	242 °C	468 °F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	220 °C	428 °F	ISO 75
	225 °C	437 °F	ASTM Test

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+13 ohm-cm	>= 1.00e+13 ohm-cm	IEC 60093

Processing Properties	Metric	English	Comments
Melt Temperature	275 °C	527 °F	Injection molding
Mold Temperature	115 °C	239 °F	Injection molding
Injection Velocity	115 mm/sec	4.53 in/sec	Injection molding

Descriptive Properties	Value	Comments
Color	Natural	
Commercial Status	Active America	
Form	Pellets	
Impact Modified	No	

Descriptive Properties	Technique	Value on Molding	Comments
Processing		Injection Molding	

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