

Polymer Resources TPSF-G10 Polybutylene Terephthalate, Structural Foam, 10% Glass Reinforced

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 10% Glass Fiber Filled

Material Notes:

Polybutylene Terephthalate, Structural Foam, 10% Glass Reinforced Process: Foam 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-TPSF-G10-Polybutylene-Terephthalate-Structural-Foam-10-Glass-Reinforced.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.26 g/cc	1.26 g/cc	ASTM D792
Linear Mold Shrinkage	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	ASTM D955
Melt Flow	8.0 - 18 g/10 min @Load 2.16 kg, Temperature 250 °C	8.0 - 18 g/10 min @Load 4.76 lb, Temperature 482 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	72.4 MPa	10500 psi	ASTM D638
Tensile Strength, Yield	72.4 MPa	10500 psi	ASTM D638
Flexural Strength	103 MPa	15000 psi	ASTM D790
Flexural Modulus	2.96 GPa	430 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

Thermal Properties	Metric	English	Comments
CTE, linear	32.4 µm/m-°C @Temperature -20.0 - 150 °C	18.0 µin/in-°F @Temperature -4.00 - 302 °F	ASTM E831
Deflection Temperature at 0.46 MPa (66 psi)	138 °C	280 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	121 °C	250 °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

Thermal Properties	Metric	English	Comments
	105 °C	221 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical with Impact	105 °C	221 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
	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	HB	HB	
	@Thickness 1.59 mm	@Thickness 0.0626 in	
	HB	HB	
	@Thickness 3.17 mm	@Thickness 0.125 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	ASTM D149
Dissipation Factor	0.0014	0.0014	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.0046	0.0046	ASTM D150
	@Frequency 1.00e+9 Hz	@Frequency 1.00e+9 Hz	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	238 - 254 °C	460 - 490 °F	
Middle Barrel Temperature	243 - 260 °C	470 - 500 °F	
Front Barrel Temperature	249 - 266 °C	480 - 510 °F	
Melt Temperature	249 - 260 °C	480 - 500 °F	

Processing Properties	Metric ^{13.3 °C}	English ^{10 °F}	Comments
Drying Temperature	82.2 - 121 °C	180 - 250 °F	
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	

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