

Polymer Resources TP-GP2 Polybutylene Terephthalate, General Purpose

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), Unreinforced, Molded

Material Notes:

Polybutylene Terephthalate, General Purpose 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-TP-GP2-Polybutylene-Terephthalate-General-Purpose.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.31 g/cc	1.31 g/cc	ASTM D792
Linear Mold Shrinkage	0.016 - 0.022 cm/cm	0.016 - 0.022 in/in	ASTM D955
Melt Flow	12 - 20 g/10 min @Load 2.16 kg, Temperature 250 °C	12 - 20 g/10 min @Load 4.76 lb, Temperature 482 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	48.3 MPa	7000 psi	ASTM D638
Tensile Strength, Yield	48.3 MPa	7000 psi	ASTM D638
Flexural Strength	79.3 MPa	11500 psi	ASTM D790
Flexural Modulus	2.31 GPa	335 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
Gardner Impact	16.9 J	12.5 ft-lb	ASTM D3029

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	149 °C	300 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	60.0 °C	140 °F	ASTM D648
UL RTI, Electrical	130 °C @Thickness 1.50 mm	266 °F @Thickness 0.0591 in	UL 746
	130 °C @Thickness 3.00 mm	266 °F @Thickness 0.118 in	UL 746
UL RTI, Mechanical with Impact	130 °C	266 °F	UL 746

Thermal Properties	@Thickness 1.50 mm Metric	@Thickness 0.0591 in English	Comments
	130 °C	266 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	120 °C	248 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	120 °C	248 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	HB	HB	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
Dielectric Strength	29.9 kV/mm	760 kV/in	ASTM D149
Comparative Tracking Index	>= 120 V	>= 120 V	UL 746
Hot Wire Ignition, HWI	15 - 30 sec	15 - 30 sec	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	15 - 30 sec	15 - 30 sec	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	>= 120 arcs	>= 120 arcs	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Voltage Arc-Tracking Rate, HVTR	10.0 - 25.4 mm/min	0.394 - 1.00 in/min	UL 746

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	232 - 249 °C	450 - 480 °F	
Middle Barrel Temperature	238 - 254 °C	460 - 490 °F	
Front Barrel Temperature	243 - 260 °C	470 - 500 °F	
Melt Temperature	232 - 260 °C	450 - 500 °F	

Processing Properties	Metric	English	Comments
Drying Temperature	116 - 121 °C	240 - 250 °F	
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	

Descriptive Properties	Value	Comments
Vent	0.0005	

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