

Polymer Resources TP-FR-IM Polybutylene Terephthalate, Impact Modified, Flame Retardant, Low Flow

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), Flame Retardant , Polybutylene Terephthalate (PBT), Impact Grade

Material Notes:

Polybutylene Terephthalate, Impact Modified, Flame Retardant, Low Flow 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-FR-IM-Polybutylene-Terephthalate-Impact-Modified-Flame-Retardant-Low-Flow.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.34 g/cc	1.34 g/cc	ASTM D792
Linear Mold Shrinkage	0.010 - 0.014 cm/cm	0.010 - 0.014 in/in	ASTM D955
Melt Flow	3.0 - 9.0 g/10 min @Load 2.16 kg, Temperature 250 °C	3.0 - 9.0 g/10 min @Load 4.76 lb, Temperature 482 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	44.8 MPa	6500 psi	ASTM D638
Tensile Strength, Yield	44.8 MPa	6500 psi	ASTM D638
Flexural Strength	77.57 MPa	11250 psi	ASTM D790
Flexural Modulus	2.00 GPa	290 ksi	ASTM D790
Izod Impact, Notched	5.34 J/cm @Temperature 22.8 °C	10.0 ft-lb/in @Temperature 73.0 °F	ASTM D256
Gardner Impact	36.2 J	26.7 ft-lb	ASTM D3029

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	132 °C	270 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	87.8 °C	190 °F	ASTM D648
UL RTI, Electrical	130 °C @Thickness 0.851 mm	266 °F @Thickness 0.0335 in	UL 746
	130 °C	266 °F	UL 746

Thermal Properties	@Thickness 1.60 mm Metric	@Thickness 0.0630 in English	Comments
	130 °C	266 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical with Impact	130 °C	266 °F	UL 746
	@Thickness 0.851 mm	@Thickness 0.0335 in	
	130 °C	266 °F	UL 746
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	130 °C	266 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	85.0 °C	185 °F	UL 746
	@Thickness 0.851 mm	@Thickness 0.0335 in	
	85.0 °C	185 °F	UL 746
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	110 °C	230 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	V-0	V-0	
	@Thickness 0.850 mm	@Thickness 0.0335 in	
	V-0	V-0	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	ASTM D257
Dielectric Strength	27.2 kV/mm	690 kV/in	ASTM D149
Comparative Tracking Index	>= 600 V	>= 600 V	UL 746
Hot Wire Ignition, HWI	7.0 - 15 sec	7.0 - 15 sec	UL 746
	@Thickness 0.851 mm	@Thickness 0.0335 in	
	15 - 30 sec	15 - 30 sec	UL 746
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	30 - 60 sec	30 - 60 sec	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746

Electrical Properties	@Thickness 0.851 mm Metric	@Thickness 0.0335 in English	Comments
	>= 120 arcs	>= 120 arcs	UL 746
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	>= 120 arcs	>= 120 arcs	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Voltage Arc-Tracking Rate, HVTR	80.0 - 150 mm/min	3.15 - 5.91 in/min	UL 746

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	232 - 260 °C	450 - 500 °F	
Mold Temperature	43.3 - 82.2 °C	110 - 180 °F	
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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