

Polymer Resources TP-FRG15 Polybutylene Terephthalate, 15% Glass Reinforced, Flame Retardant

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 20% Glass Fiber Filled , Polybutylene Terephthalate (PBT), Glass Fiber Filled, Flame Retardant

Material Notes:

Polybutylene Terephthalate, 15% Glass Reinforced, Flame Retardant 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-FRG15-Polybutylene-Terephthalate-15-Glass-Reinforced-Flame-Retardant.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.54 g/cc	1.54 g/cc	ASTM D792
Linear Mold Shrinkage	0.0050 - 0.0090 cm/cm	0.0050 - 0.0090 in/in	ASTM D955
Melt Flow	10 - 20 g/10 min @Load 2.16 kg, Temperature 250 °C	10 - 20 g/10 min @Load 4.76 lb, Temperature 482 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	89.6 MPa	13000 psi	ASTM D638
Tensile Strength, Yield	89.6 MPa	13000 psi	ASTM D638
Flexural Strength	138 MPa	20000 psi	ASTM D790
Flexural Modulus	4.93 GPa	715 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
Deflection Temperature at 0.46 MPa (66 psi)	204 °C	400 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	174 °C	345 °F	ASTM D648
UL RTI, Electrical	130 °C @Thickness 0.800 mm	266 °F @Thickness 0.0315 in	UL 746
	130 °C @Thickness 1.50 mm	266 °F @Thickness 0.0591 in	UL 746
	130 °C	266 °F	

Thermal Properties	Metric	English	UL 746 Comments
UL RTI, Mechanical with Impact	130 °C	266 °F	UL 746
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	130 °C	266 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	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	V-0	V-0	
	@Thickness 0.850 mm	@Thickness 0.0335 in	
	V-0 - 5VA	V-0 - 5VA	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	ASTM D257
Dielectric Strength	22.8 kV/mm	580 kV/in	ASTM D149
Comparative Tracking Index	250 - 400 V	250 - 400 V	UL 746
Hot Wire Ignition, HWI	7.0 - 15 sec	7.0 - 15 sec	UL 746
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	15 - 30 sec	15 - 30 sec	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 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
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	>= 120 arcs	>= 120 arcs	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	>= 120 arcs	>= 120 arcs	

Electrical Properties	Metric @ Thickness 3.00 mm	English @ Thickness 0.118 in	UL 746 Comments
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	246 - 274 °C	475 - 525 °F	
Mold Temperature	71.1 - 87.8 °C	160 - 190 °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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