

Polymer Resources TP-FRG30 Polybutylene Terephthalate, 30% Glass Reinforced, Flame Retardant

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 30% Glass Fiber Filled , Polybutylene Terephthalate (PBT), Glass Fiber Filled, Flame Retardant

Material Notes:

Polybutylene Terephthalate, 30% 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-FRG30-Polybutylene-Terephthalate-30-Glass-Reinforced-Flame-Retardant.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.62 g/cc	1.62 g/cc	ASTM D792
Linear Mold Shrinkage	0.0040 - 0.0080 cm/cm	0.0040 - 0.0080 in/in	ASTM D955
Melt Flow	9.0 - 20 g/10 min @Load 2.16 kg, Temperature 250 °C	9.0 - 20 g/10 min @Load 4.76 lb, Temperature 482 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	114 MPa	16500 psi	ASTM D638
Tensile Strength, Yield	114 MPa	16500 psi	ASTM D638
Flexural Strength	176 MPa	25500 psi	ASTM D790
Flexural Modulus	7.24 GPa	1050 ksi	ASTM D790
Izod Impact, Notched	0.641 J/cm @Temperature 22.8 °C	1.20 ft-lb/in @Temperature 73.0 °F	ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	210 °C	410 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	199 °C	390 °F	ASTM D648
UL RTI, Electrical	140 °C @Thickness 0.851 mm	284 °F @Thickness 0.0335 in	UL 746
	140 °C @Thickness 1.60 mm	284 °F @Thickness 0.0630 in	UL 746
	140 °C	284 °F	

Thermal Properties	Metric	English	UL 746 Comments
	140 °C @Thickness 2.30 mm	284 °F @Thickness 0.0906 in	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	UL 746
UL RTI, Mechanical with Impact	140 °C @Thickness 0.851 mm	284 °F @Thickness 0.0335 in	UL 746
	140 °C @Thickness 1.60 mm	284 °F @Thickness 0.0630 in	UL 746
	140 °C @Thickness 2.30 mm	284 °F @Thickness 0.0906 in	UL 746
	140 °C @Thickness 3.00 mm	284 °F @Thickness 0.118 in	UL 746
UL RTI, Mechanical without Impact	130 °C @Thickness 0.851 mm	266 °F @Thickness 0.0335 in	UL 746
	130 °C @Thickness 1.60 mm	266 °F @Thickness 0.0630 in	UL 746
	130 °C @Thickness 2.30 mm	266 °F @Thickness 0.0906 in	UL 746
	130 °C @Thickness 3.00 mm	266 °F @Thickness 0.118 in	UL 746
Flammability, UL94	V-0 @Thickness 0.850 mm	V-0 @Thickness 0.0335 in	
	V-0 - 5VA @Thickness 2.30 mm	V-0 - 5VA @Thickness 0.0906 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	15 - 30 sec @Thickness 0.851 mm	15 - 30 sec @Thickness 0.0335 in	UL 746
	30 - 60 sec	30 - 60 sec	

Electrical Properties	Metric	English	UL 746 Comments
	30 - 60 sec @Thickness 1.60 mm	30 - 60 sec @Thickness 0.0630 in	UL 746
	60 - 120 sec @Thickness 2.30 mm	60 - 120 sec @Thickness 0.0906 in	UL 746
	60 - 120 sec @Thickness 3.00 mm	60 - 120 sec @Thickness 0.118 in	UL 746
High Amp Arc Ignition, HAI	>= 120 arcs @Thickness 0.851 mm	>= 120 arcs @Thickness 0.0335 in	UL 746
	>= 120 arcs @Thickness 1.60 mm	>= 120 arcs @Thickness 0.0630 in	UL 746
	>= 120 arcs @Thickness 2.30 mm	>= 120 arcs @Thickness 0.0906 in	UL 746
	>= 120 arcs @Thickness 3.00 mm	>= 120 arcs @Thickness 0.118 in	UL 746
High Voltage Arc-Tracking Rate, HVTR	0.000 - 10.0 mm/min	0.000 - 0.394 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	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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