

## Beijing Ranger Chem PBT-201-G10 Flame Retarding FR PBT

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

### Material Notes:

Modified PBT Characteristics: Unreinforced grades have abundant strength and flexibility, and have strong characteristics against brittleness. UL-certified slow-burning (94HB) and self-extinguishing grades (94V-0, V-2) exist, and electrical properties exhibited are the highest of any thermoplastic. Low water absorption is exhibited, and excellent electrical properties (CTI and GWIT) are retained over extended periods of usages, even with widely varied temperature and humidity conditions. The surface of molded products is smooth, and a low coefficient of friction is exhibited. As the amount of friction is low, PBT is suitable for use in application requiring friction and wear properties. The material is exceptionally reliable, with small in-use dimensional variation, and superior molding stability and dimensional precision. Long-term chemical resistance is exceptional, and at room temperature, there is almost no degradation in properties after. Both unreinforced and reinforced grades exhibit exceptional flowability, and excellent processability. Application: VCD drive frames Connectors Trimmers Switch buttons for gas-fired instantaneous water heaters Relay blocks Driers Rectifiers Outer handles Height sensor cases Door mirror stays Drive component housings Energy saving lamp. Information provided by Beijing Ranger Chemical Co.

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Physical Properties	Metric	English	Comments
Density	1.45 g/cc	0.0524 lb/in <sup>3</sup>	ASTM D792
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Moisture Absorption at Equilibrium	0.080 %	0.080 %	ASTM D570
	@Temperature 23.0 °C, Time 86400 sec	@Temperature 73.4 °F, Time 24.0 hour	
Linear Mold Shrinkage	0.0060 - 0.013 cm/cm	0.0060 - 0.013 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	95.0 MPa	13800 psi	ASTM D638
Flexural Strength	140 MPa	20300 psi	ASTM D790
Flexural Modulus	6.50 GPa	943 ksi	ASTM D790
Izod Impact, Notched (ISO)	6.00 kJ/m <sup>2</sup>	2.86 ft-lb/in <sup>2</sup>	ASTM D256
Izod Impact, Unnotched (ISO)	40.0 kJ/m <sup>2</sup>	19.0 ft-lb/in <sup>2</sup>	ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	205 °C	401 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	195 °C	383 °F	ASTM D648

Thermal Properties	Metric	English	Comments
Flammability, UL94	@Thickness 0.800 mm	@Thickness 0.0315 in	
	V-0	V-0	
	@Thickness 1.60 mm	@Thickness 0.0630 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.10e+16 ohm-cm	1.10e+16 ohm-cm	ASTM D257
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Dielectric Constant	3.0	3.0	ASTM D150
	@Frequency 50.0 Hz	@Frequency 50.0 Hz	
Dielectric Strength	19.0 kV/mm	483 kV/in	ASTM D149
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Dielectric Loss Index	0.020	0.020	Tangent; ASTM D150
	@Frequency 50.0 Hz	@Frequency 50.0 Hz	

Processing Properties	Metric	English	Comments
Nozzle Temperature	240 °C	464 °F	
Melt Temperature	225 - 245 °C	437 - 473 °F	
Mold Temperature	60.0 - 80.0 °C	140 - 176 °F	
Injection Pressure	40.0 - 100 MPa	5800 - 14500 psi	
Back Pressure	4.00 - 15.0 MPa	580 - 2180 psi	
Screw Speed	<= 100 rpm	<= 100 rpm	

## Contact Songhan Plastic Technology Co.,Ltd.

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