

## Beijing Ranger Chem PBT 403 M-G20 HF Halogen Free Flame Retarding FR PBT

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 20% 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.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Beijing-Ranger-Chem-PBT-403-M-G20-HF-Halogen-Free-Flame-Retarding-FR-PBT.php](http://www.lookpolymers.com/polymer_Beijing-Ranger-Chem-PBT-403-M-G20-HF-Halogen-Free-Flame-Retarding-FR-PBT.php)

| Physical Properties                | Metric                               | English                              | Comments  |
|------------------------------------|--------------------------------------|--------------------------------------|-----------|
| Density                            | 1.50 g/cc                            | 0.0542 lb/in <sup>3</sup>            | ASTM D792 |
|                                    | @Temperature 23.0 °C                 | @Temperature 73.4 °F                 |           |
| Moisture Absorption at Equilibrium | 0.070 %                              | 0.070 %                              | ASTM D570 |
|                                    | @Temperature 23.0 °C, Time 86400 sec | @Temperature 73.4 °F, Time 24.0 hour |           |
| Linear Mold Shrinkage              | 0.0040 - 0.0080 cm/cm                | 0.0040 - 0.0080 in/in                | ASTM D955 |

| Mechanical Properties        | Metric                 | English                    | Comments  |
|------------------------------|------------------------|----------------------------|-----------|
| Tensile Strength, Yield      | 90.0 MPa               | 13100 psi                  | ASTM D638 |
| Flexural Strength            | 140 MPa                | 20300 psi                  | ASTM D790 |
| Flexural Modulus             | 7.60 GPa               | 1100 ksi                   | ASTM D790 |
| Izod Impact, Notched (ISO)   | 7.00 kJ/m <sup>2</sup> | 3.33 ft-lb/in <sup>2</sup> | ASTM D256 |
| Izod Impact, Unnotched (ISO) | 50.0 kJ/m <sup>2</sup> | 23.8 ft-lb/in <sup>2</sup> | ASTM D256 |

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

| Thermal Properties | V-0<br>Metric      | V-0<br>English      | Comments |
|--------------------|--------------------|---------------------|----------|
|                    | @Thickness 3.20 mm | @Thickness 0.126 in |          |

| Electrical Properties | Metric                                | English                                 | Comments           |
|-----------------------|---------------------------------------|---|--------------------|
| Volume Resistivity    | 2.00e+16 ohm-cm<br>@Thickness 2.00 mm | 2.00e+16 ohm-cm<br>@Thickness 0.0787 in | ASTM D257          |
| Dielectric Constant   | 3.7<br>@Frequency 50.0 Hz             | 3.7<br>@Frequency 50.0 Hz               | ASTM D150          |
| Dielectric Strength   | 24.0 kV/mm<br>@Thickness 2.00 mm      | 610 kV/in<br>@Thickness 0.0787 in       | ASTM D149          |
| Dielectric Loss Index | 0.0020<br>@Frequency 50.0 Hz          | 0.0020<br>@Frequency 50.0 Hz            | Tangent; ASTM D150 |

| Processing Properties | Metric          | English          | Comments |
|-----------------------|-----------------|------------------|----------|
| Nozzle Temperature    | 240 °C          | 464 °F           |          |
| Melt Temperature      | 225 - 250 °C    | 437 - 482 °F     |          |
| Mold Temperature      | 60.0 - 80.0 °C  | 140 - 176 °F     |          |
| Injection Pressure    | 60.0 - 120 MPa  | 8700 - 17400 psi |          |
| Back Pressure         | 6.00 - 18.0 MPa | 870 - 2610 psi   |          |
| Screw Speed           | <= 100 rpm      | <= 100 rpm       |          |

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