

RTP 1001 GB 20

Polybutylene Terephthalate

RTP Company

Message:

Warning: The status of this material is 'Commercial: Limited Issue'
The data for this material has not been recently verified.
Please contact RTP Company for current information prior to specifying this grade.
RTP 1001 GB and RTP 1001 M 20 are specially formulated thermoplastic polyester, PBT, compounds designed to minimize warpage.

| General Information | | | |
|------------------------------------|---|-------------------|-------------|
| Filler / Reinforcement | Glass fiber reinforced material, 10% filler by weight | | |
| | Glass beads, 20% filler by weight | | |
| Features | High strength | | |
| | Bending resistance | | |
| | Good electrical performance | | |
| | Thermal stability, good | | |
| Uses | Application in Automobile Field | | |
| RoHS Compliance | Contact manufacturer | | |
| Appearance | Black | | |
| | Natural color | | |
| Forms | Particle | | |
| Processing Method | Injection molding | | |
| Physical | Nominal Value | Unit | Test Method |
| Specific Gravity | 1.52 | g/cm ³ | ASTM D792 |
| Molding Shrinkage - Flow (3.18 mm) | 0.90 | % | ASTM D955 |
| Water Absorption (23°C, 24 hr) | 0.070 | % | ASTM D570 |
| Hardness | Nominal Value | Unit | Test Method |
| Rockwell Hardness (R-Scale) | 117 | | ASTM D785 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | 5100 | MPa | ASTM D638 |
| Tensile Strength | | | ASTM D638 |
| Yield | 53.8 | MPa | ASTM D638 |
| -- | 53.8 | MPa | ASTM D638 |
| Tensile Elongation (Break) | 2.5 | % | ASTM D638 |
| Flexural Modulus | 5030 | MPa | ASTM D790 |
| Flexural Strength | | | ASTM D790 |
| -- | 103 | MPa | ASTM D790 |
| Yield | 103 | MPa | ASTM D790 |

| | | | |
|---|---------------|--------------------|-------------|
| Compressive Strength | 49.6 | MPa | ASTM D695 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact (3.18 mm) | 43 | J/m | ASTM D256 |
| Unnotched Izod Impact (3.18 mm) | 320 | J/m | ASTM D4812 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 204 | °C | ASTM D648 |
| CLTE - Flow | 5.2E-5 | cm/cm/°C | ASTM D696 |
| Thermal Conductivity | 0.17 | W/m/K | ASTM C177 |
| Electrical | Nominal Value | Unit | Test Method |
| Volume Resistivity | 1.0E+16 | ohms·cm | ASTM D257 |
| Dielectric Strength | 20 | kV/mm | ASTM D149 |
| Dielectric Constant (1 MHz) | 2.60 | | ASTM D150 |
| Dissipation Factor (1 MHz) | 0.13 | | ASTM D150 |
| Arc Resistance (1.59 mm) | 140 | sec | ASTM D495 |
| Flammability | Nominal Value | Unit | Test Method |
| Flame Rating (1.59 mm) | HB | | UL 94 |
| Additional Information | | | |
| The value listed as Flammability, UL 94, was tested in accordance with RTP test standards.Mold Shrinkage, Linear-Flow, ASTM D-955, 0.25in.: 11mil/in. | | | |
| Injection | Nominal Value | Unit | |
| Drying Temperature | 121 | °C | |
| Drying Time | 4.0 | hr | |
| Suggested Max Moisture | 0.030 | % | |
| Suggested Max Regrind | 20 | % | |
| Rear Temperature | 232 - 271 | °C | |
| Middle Temperature | 232 - 271 | °C | |
| Front Temperature | 232 - 271 | °C | |
| Mold Temperature | 37.8 - 121 | °C | |
| Injection Pressure | 68.9 - 103 | MPa | |
| Back Pressure | 0.172 - 0.517 | MPa | |
| Screw Speed | 60 - 90 | rpm | |
| Clamp Tonnage | 6.9 - 11 | kN/cm ² | |

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