# Tufpet PBT G1030

Polybutylene Terephthalate

Mitsubishi Rayon America Inc.

## Message:

Tufpet PBT G1030 is a polybutene terephthalate (PBT) material, which contains a 30% glass fiber reinforced material. This product is available in North America and is processed by injection molding.
The main features of Tufpet PBT G1030 are:
flame retardant/rated flame
high gloss
Good processability
Good dimensional stability
moisture resistance

| General Information | | | |
|---|---|---|---|
| UL YellowCard | E54695-244741 | | |
| Filler / Reinforcement | Glass fiber reinforced material, 30% filler by weight | | |
| Features | Good dimensional stability<br>Highlight<br>Good formability<br>Good electrical performance<br>Good chemical resistance<br>Heat resistance, high<br>General<br>Low or no water absorption | | |
| Forms | Particle | | |
| Processing Method | Injection molding | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Specific Gravity | 1.53 | g/cm³ | ASTM D792 |
| Molding Shrinkage - Flow | 0.15 - 0.90 | % | ASTM D955 |
| Water Absorption (Saturation, 23°C) | 0.40 | % | ASTM D570 |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Rockwell Hardness (R-Scale) | 120 | | ASTM D785 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Strength | 127 | MPa | ASTM D638 |
| Tensile Elongation (Break) | 2.0 | % | ASTM D638 |
| Flexural Modulus | 9810 | MPa | ASTM D790 |
| Flexural Strength | 186 | MPa | ASTM D790 |
| Coefficient of Friction | | | ASTM D1894 |
| With Metal-Dynamic | 0.15 | | ASTM D1894 |
| With self-dynamics | 0.20 | | ASTM D1894 |
| Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel) | 50.0 | mg | ASTM D1044 |

| Impact | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Notched Izod Impact | 78 | J/m | ASTM D256 |
| Unnotched Izod Impact | 640 | J/m | ASTM D256 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load | | | ASTM D648 |
| 0.45 MPa, not annealed | 220 | °C | ASTM D648 |
| 1.8 MPa, not annealed | 190 | °C | ASTM D648 |
| CLTE - Flow | 5.5E-5 | cm/cm/°C | ASTM D696 |
| Specific Heat | 1760 | J/kg/°C | ASTM C351 |
| Thermal Conductivity | 0.34 | W/m/K | ASTM C177 |
| RTI Elec | | | UL 746 |
| 0.760 mm | 75.0 | °C | UL 746 |
| 1.57 mm | 75.0 | °C | UL 746 |
| 3.18 mm | 75.0 | °C | UL 746 |
| RTI Imp | | | UL 746 |
| 0.760 mm | 75.0 | °C | UL 746 |
| 1.57 mm | 75.0 | °C | UL 746 |
| 3.18 mm | 75.0 | °C | UL 746 |
| RTI | | | UL 746 |
| 0.760 mm | 75.0 | °C | UL 746 |
| 1.57 mm | 75.0 | °C | UL 746 |
| 3.18 mm | 75.0 | °C | UL 746 |
| **Electrical** | **Nominal Value** | **Unit** | **Test Method** |
| Volume Resistivity | 3.5E+17 | ohms·cm | ASTM D257 |
| Dielectric Strength | 22 | kV/mm | ASTM D149 |
| Dielectric Constant (1 MHz) | 3.50 | | ASTM D150 |
| Dissipation Factor (1 MHz) | 0.020 | | ASTM D150 |
| Arc Resistance | 139 | sec | ASTM D495 |
| Comparative Tracking Index (CTI) | 400 | V | UL 746 |
| **Flammability** | **Nominal Value** | **Unit** | **Test Method** |
| Flame Rating | | | UL 94 |
| 0.760 mm | HB | | UL 94 |
| 1.57 mm | HB | | UL 94 |
| 3.18 mm | HB | | UL 94 |
| **Additional Information** | | | |
| Coefficient of Linear Thermal Expansion, ASTM D696: 3 to 8 E-5 cm/cm/°C | | | |
| **Injection** | **Nominal Value** | **Unit** | |
| Drying Temperature | 140 | °C | |
| Drying Time | 2.0 | hr | |
| Rear Temperature | 230 - 303 | °C | |
| Middle Temperature | 230 - 303 | °C | |
| Front Temperature | 230 - 303 | °C | |

| | | |
|---|---|---|
| Mold Temperature | 40.0 - 100 | °C |
| Injection Pressure | 81.4 | MPa |
| Screw Speed | 80 | rpm |



## Recommended distributors for this material

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