

# Ranger PBT PBT-201-G25 291

Polybutylene Terephthalate  
Beijing Ranger Chemical Co., Ltd.

Message:

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 froction 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.

| General Information            |                                    |       |             |
|--------------------------------|------------------------------------|-------|-------------|
| Features                       | Flame Retardant                    |       |             |
|                                | Good Chemical Resistance           |       |             |
|                                | Good Dimensional Stability         |       |             |
|                                | Good Electrical Properties         |       |             |
|                                | Good Flexibility                   |       |             |
|                                | Good Flow                          |       |             |
|                                | Good Processability                |       |             |
|                                | Good Surface Finish                |       |             |
|                                | High Strength                      |       |             |
|                                | Low Friction                       |       |             |
|                                | Low to No Water Absorption         |       |             |
| Uses                           | Automotive Applications            |       |             |
|                                | Electrical/Electronic Applications |       |             |
|                                | Housings                           |       |             |
|                                | Lighting Fixtures                  |       |             |
| Forms                          | Pellets                            |       |             |
| Processing Method              | Injection Molding                  |       |             |
| Physical                       | Nominal Value                      | Unit  | Test Method |
| Specific Gravity               | 1.56                               | g/cm³ | ASTM D792   |
| Molding Shrinkage - Flow       | 0.40 to 0.80                       | %     | ASTM D955   |
| Water Absorption (23°C, 24 hr) | 0.060                              | %     | ASTM D570   |
| Mechanical                     | Nominal Value                      | Unit  | Test Method |
| Tensile Strength (Yield)       | 110                                | MPa   | ASTM D638   |
| Flexural Modulus               | 7500                               | MPa   | ASTM D790   |

|                                   |               |                   |             |
|-----------------------------------|---------------|-------------------|-------------|
| Flexural Strength                 | 175           | MPa               | ASTM D790   |
| Impact                            | Nominal Value | Unit              | Test Method |
| Notched Izod Impact Strength      | 9.0           | kJ/m <sup>2</sup> | ASTM D256   |
| Unnotched Izod Impact Strength    | 55            | kJ/m <sup>2</sup> | ASTM D256   |
| Thermal                           | Nominal Value | Unit              | Test Method |
| Deflection Temperature Under Load |               |                   | ASTM D648   |
| 0.45 MPa, Unannealed              | 210           | °C                |             |
| 1.8 MPa, Unannealed               | 200           | °C                |             |
| Electrical                        | Nominal Value | Unit              | Test Method |
| Volume Resistivity (2.00 mm)      | 1.3E+16       | ohms·cm           | ASTM D257   |
| Dielectric Strength (2.00 mm)     | 20            | kV/mm             | ASTM D149   |
| Dielectric Constant (50 Hz)       | 3.20          |                   | ASTM D150   |
| Dissipation Factor (50 Hz)        | 0.020         |                   | ASTM D150   |
| Flammability                      | Nominal Value | Unit              | Test Method |
| Flame Rating                      |               |                   | UL 94       |
| 0.800 mm                          | V-0           |                   |             |
| 1.60 mm                           | V-0           |                   |             |

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