

PBT Filaments

Technical Data sheet

rev. 1



DESCRIPTION

PBT is 3D Printing Filament in PBT (Polybutylene terephthalate) resin. Only in Black Colour.

APPLICATIONS

3D Printing Prototyping Technologies

| Property Test Condition | Standard | Unit | Values |
|---|------------|-------|-----------|
| Mechanical Properties | | | |
| Tensile Strength, at Yield | ASTM D638 | MPa | 50 |
| Tensile Strength, at Break | ASTM D638 | MPa | 46 |
| Tensile Modulus | ASTM D790 | Gpa | 2,2 |
| Elongation at Break | ASTM D638 | % | 170 |
| Flexural Strenght | ASTM D790 | MPa | 80 |
| Flexural Modulus | ASTM D790 | MPa | 2,1 |
| IZOD Impact, Notched (-30°C) | ASTM D256 | J/m | 60 |
| IZOD Impact, Notched (23°C) | ASTM D256 | J/m | 80 |
| Thermal Properties | | | |
| Vicat (B, 50°C/h at 50 N) | ASTM D1525 | °C | 110 |
| Other Properties | | | |
| Specific Gravity | ISO 1183 | g/cm3 | 1,25 |
| 3D Printing Processing (suggested) | | | |
| Melt Temperature Range | | °C | 235 – 265 |
| Bed Temperature Range | | °C | 100 – 130 |
| Air Cooling | | | no |
| Speed | | | medium |

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SUPPLY FORM

PBT is supplied as Filaments. It has to be kept in its original packaging. Avoid direct exposure to sunlight.

HAZARD AND HANDLING PRECAUTIONS

PBT biopolymers have a very low degree of toxicity and, under normal conditions of use, should pose no unusual problems from incidental ingestion, or eye and skin contact. However, caution is advised when handling, storing, using, or disposing of these resins, and good housekeeping and controlling of dusts are necessary for safe handling of product. Workers should be protected from the possibility of contact with molten resin during fabrication. Handling and fabrication of resins can result in the generation of vapours and dusts that may cause irritation to eyes and the upper respiratory tract. In dusty atmospheres, use an approved dust respirator. Pellets or beads may present a slipping hazard. Good general ventilation of the polymer processing area is recommended. At temperatures exceeding the polymer melt temperature, polymer can release fumes, which may contain fragments of the polymer, creating a potential to irritate eyes and mucous membranes. Good general ventilation should be sufficient for most conditions.

PROCESSING

PBT Filaments can be processed by all conventional 3D printing techniques..
Mass temperature can be less as 270°C..

DISPOSAL

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. For unused or uncontaminated material, the preferred options include recycling into the process or sending to an industrial composting facility, if available; otherwise, send to an incinerator or other thermal destruction device. For used or contaminated material, the disposal options remain the same, although additional evaluation is required. (For example, in the U.S.A., see 40 CFR, Part 261, "Identification and Listing of Hazardous Waste.") All disposal methods must be in compliance with Federal, State/Provincial, and local laws and regulations.

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