

Technical Data Sheet

BFI3D Premium PETG Filament

| Identification | |
|----------------|--|
| Trade name | Premium PET-G |
| Chemical name | Polyethylene terephthalate glycol-modified |
| Use | Additive Manufacturing |



| Filament Specification | |
|----------------------------|----------------|
| Diameter 1.75 | 1.75 ± 0.05 mm |
| Diameter 2.85 | 2.85 ± 0.05 mm |
| "Verify your spool" option | YES |


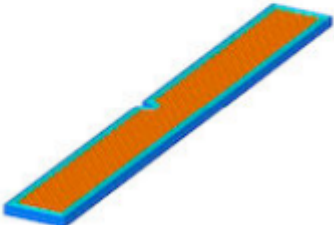
| Material properties | | |
|-----------------------------|------------------------|-----------|
| Melt Flow Index | 11 g/10 min | ISO 1133 |
| Melting point | > 220°C | - |
| Density | 1.27 g/cm ³ | ASTM D792 |
| Vicat softening temperature | 85°C | ISO 306 |
| Heat deflection temperature | 70°C | ISO 75 |
| Water solubility | insoluble | - |
| Odor | odorless | - |



| Guideline for print settings* | |
|-------------------------------|------------------|
| Nozzle temperature | 230-255°C |
| Bed temperature | 60-80°C |
| Active cooling fan | YES (up to 100%) |
| Layer height** | 0.08 - 0.30 mm |
| Shell thickness** | 0.40 – 2.4 mm |
| Print speed** | 40 – 120 mm/s |

*Settings are based on a 0,4 mm nozzle.

** The range depends on the geometrical complexity

| Mechanical properties | Tensile test | | Test Method ASTM D638 | |
|--|--|-------|--|-------|
| | Printed vertical (Z-axis) | | Printed horizontal (X, Y-axis) | |
| Infill | 50 % | 100 % | 50 % | 100 % |
| Tensile strength (MPa) | 11,5 | 15,9 | 18,7 | 27,1 |
| Force at break (MPa) | 11,5 | 15,9 | 17,2 | 25,2 |
| Elongation at max force (%) | 0,04 | 4,7 | 10,5 | 11,0 |
| Elongation at break (%) | 0,04 | 4,7 | 9,6 | 9,5 |
| Emodulus (MPa) | 283,9 | 341,7 | 266,5 | 360,4 |
| <p>All specimens were printed using the BLIXET B100 Multi 3D printer using following parameters:</p> <p>Nozzle temperature: 240°C Bed temperature: 80°C Printing speed: 45mm/s Number of shells: 4 Infill type: lattice Infill under: 45°</p> |  | |  | |

| Mechanical properties | Impact test | | Test Method ISO 179 | |
|--|---|------|--|------|
| | Charpy - Printed vertical (Z-axis) | | Charpy - Printed horizontal (X, Y-axis) | |
| Infill | 50% | 100% | 50% | 100% |
| Impact strength (J/cm ²) | 1,13 | 1,25 | 1,43 | 1,94 |
| Impact energy (mJ) | 500 | 566 | 566 | 766 |
| <p>All specimens were printed using the BLIXET B100 Multi 3D printer using following parameters:</p> <p>Nozzle temperature: 240°C Bed temperature: 80°C Printing speed: 45mm/s Number of shells: 4 Infill type: lattice Infill under: 45°</p> |  | |  | |

| Mechanical properties | Flexural test | | Test Method ISO 178 | |
|---|---|-------|---|-------|
| | Printed vertical (Z-axis) | | Printed horizontal (X, Y-axis) | |
| Infill | 50% | 100% | 50% | 100% |
| Flexural modulus (MPa) | 1388 | 1628 | 1388 | 1932 |
| Maximum bending stress (MPa) | 22,09 | 38,79 | 47,72 | 72,26 |
| Deflection (mm) | 2 | 9 | 3 | 10,5 |
| All specimens were printed using the BLIXET B100 Multi 3D printer using following parameters: Nozzle temperature: 240°C Bed temperature: 80°C Printing speed: 45mm/s Number of shells: 4 Infill type: lattice Infill under: 45° |  | |  | |

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All shown data are typical properties. Users should confirm results by their own tests.