



THE **LARGE-SCALE** FFF 3D-PRINTER  
FOR **PROFESSIONAL** AND **INDUSTRIAL** USE.

TECHNICAL DATA SHEET  
**BigRep PET-CF**

PET-CF is a polyamide grade 3D printing filament with carbon fibres combining outstanding mechanical properties and printability

### Physical Properties

<b>Material</b>	<b>Polyethylene terephthalate with carbon fibres</b>
<b>Filament Net Weight:</b>	<b>2.5, 4.5 and 8.0 kg</b>
<b>Diameter</b>	<b>2.85 mm</b>
<b>Density</b> (ISO 1183)	<b>1.23 g/cm<sup>3</sup></b>
<b>Melting temperature</b> (DSC)	<b>250 °C</b>

### Recommended Printing Conditions (Original BigRep factory files for the material are available from BigRep Global Support)

<b>Nozzle temperature</b>	<b>190 - 210 °C</b>
<b>Heating bed temperature</b>	<b>60 °C</b>
<b>Environmental temperature</b>	<b>0 - 40 °C</b>
<b>Printing speed</b>	<b>&gt;40 mm/s</b>
<b>Additional Comments</b>	<b><i>Material is sensitive to moisture and should be stored under dry conditions at all times</i></b>

## Mechanical Properties (Dry State)

<b>Young's Modulus</b> (ISO 527)	<b>9000 MPa</b>
<b>Tensile Strength</b> (ISO 527)	<b>80 MPa</b>
<b>Elongation at break</b> (ISO 527)	<b>2.5 %</b>
<b>Bending Modulus</b> (ISO 178)	<b>8000 MPa</b>
<b>Bending Strength</b> (ISO 178)	<b>130 MPa</b>
<b>Charpy Impact strength</b> (ISO 179)	<b>40 kJ/m<sup>2</sup></b>
<b>HDT / B</b> (ISO 75)	<b>&gt; 100 °C</b>

Keep sealed in an air tight container, away from humidity.  
Store at around room temperature and protect from direct heat or sunlight.

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