



# HI-TEMP CF

**STRONG AND HEAT-RESISTANT**

MADE FOR



bigrep **ONE**



bigrep **PRO**



bigrep **STUDIO**

COMPATIBLE  
**FFF 3D PRINTERS**

BigRep's HI-TEMP CF is a **strong, engineering-grade** filament with a high heat deflection temperature. Compared to BigRep HI-TEMP, HI-TEMP CF boasts even **greater stiffness** thanks to the addition of **10% carbon fiber**.

With the combination of **durability** and **heat resistance**, BigRep HI-TEMP CF is ideal for functional applications in demanding conditions and industrial environments. Thanks to its high stiffness, HI-TEMP CF is ideal for **3D printed patterns and molds** for a range of forming applications.

A reliable and easy-to-use material, BigRep HI-TEMP CF is optimized for large-format 3D printing on BigRep machines, producing **lightweight, yet rigid parts**. Produce functional industrial parts at an accessible price.



Stiff and Durable  
Parts



Lightweight  
3D Prints



Good heat deflection  
temperature



Easy to Print for  
Wide Range of Uses



Excellent  
Surface Finish



PHYSICAL PROPERTIES	TEST METHOD	VALUE
Density	ISO 1183	1.2 g/cm <sup>3</sup>
Filament Diameter	-	2.85 mm +/- 0.05
Color Availability	-	Dark grey
Filament Net Weight	-	2.3, 4.5, 8.0 kg
MECHANICAL PROPERTIES	TEST METHOD	VALUE
Tensile Strength	ISO 527	65 MPa
Tensile Modulus	ISO 527	7000 MPa
Elongation at Break	ISO 527	2.5%
Flexural Strength	ISO 178	70 MPa
Flexural Modulus	ISO 178	7200 MPa
Charpy Unnotched Impact Strength	ISO 179	50 kJ/m <sup>2</sup>
Charpy Notched Impact Strength	ISO 179	4.5 kJ/m <sup>2</sup>
THERMAL PROPERTIES	TEST METHOD	VALUE
Vicat Softening Temperature	ISO 306	165 °C
Melting Temperature (Tm)	DSC	170 - 180 °C
<b>COMPLIANCE</b>	<input checked="" type="checkbox"/> REACH Compliant <input checked="" type="checkbox"/> RoHS Certified <input type="checkbox"/> FDA Compliant	

PROPERTIES	RECOMMENDED USAGE
Nozzle Temperature	210 - 240 °C
Bed Temperature	50 - 80 °C
Printer Compatibility	BigRep ONE, BigRep PRO, BigRep STUDIO G2
Fan Speed	25 - 50%
Surface Adhesion	<ul style="list-style-type: none"> <li>• Kapton (additional adhesion using glue, e.g. Magigoo)</li> <li>• BigRep SWITCHPLATE</li> </ul>
Drying	HI-TEMP CF is moderately hygroscopic. Recommended drying at 50 °C for 4 - 6 hours.
Storage and Shelf Life	Keep dry, avoid sunlight, and store at room temperature. Use BigRep SHIELD for best results. When stored properly, product has a shelf life of 24 months.
Handling	Use the BigRep Keep-Dry Box for best material printability. As HI-TEMP CF is highly abrasive, extremely wear-resistant nozzles are required.
Post-Processing	Wear gloves to avoid possible microdamage to skin. Use a dust mask and protective glasses when processing.
Support	<ul style="list-style-type: none"> <li>• Breakaway</li> <li>• BigRep BVOH</li> </ul>