bigrep FILAMENT

HI-TEMP

STIFF AND ECO-FRIENDLY

MADE FOR

bigrep **ONE**

bigrep **PRO**

bigrep **STUDIO**

COMPATIBLE
FFF 3D PRINTERS

Especially stiff with minimal warping, BigRep's HI-TEMP filament produces **rigid, highly accurate parts** with an **attractive matte surface finish**. HI-TEMP is the choice for functional prototyping and end use parts intended for indoor use, particularly low-volume production or custom tooling and manufacturing aids.

Optimized for large-format printers like the BigRep ONE, HI-TEMP also delivers great results on a wide range of third party FFF 3D printers. HI-TEMP is a thermoplastic derived from organic compounds and is **biodegradable** under the correct conditions. It is **CO2 neutral** and environmentally friendly with a much lower ecological impact than other thermoplastics derived from fossil fuels, such as ABS. BigRep HI-TEMP filament is FDA compliant for **food safety** and meets all requirements of EU Directives on food contact.

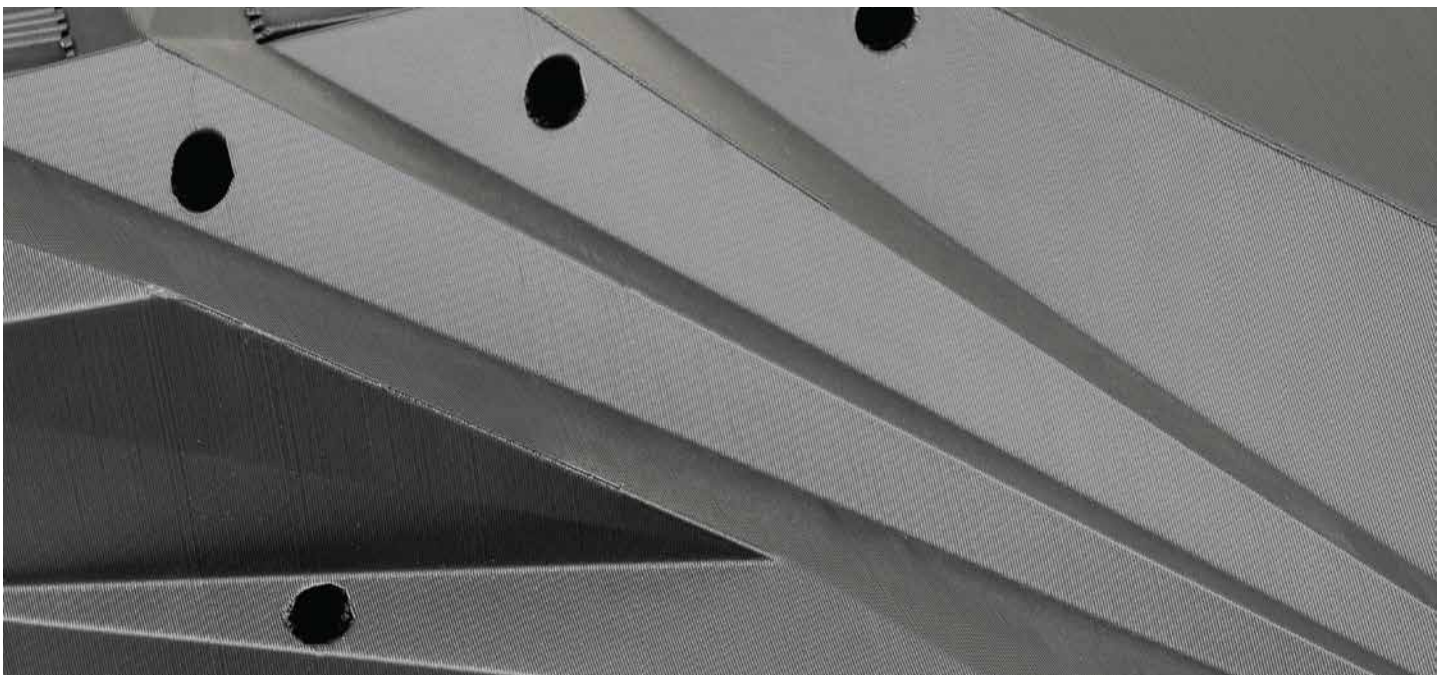CO2 Neutral and Eco-Friendly

FDA and EU Certified Food Safe

Stiff and Rigid Parts

Minimal Shrinkage for Part Accuracy

Great Surface Quality and Haptics

PHYSICAL PROPERTIES	TEST METHOD	VALUE
Density	ISO 1183	1.4 g/cm³
Filament Diameter	-	2.85 mm +/- 0.05
Color Availability	-	Black, Natural, Silver
Filament Net Weight	-	2.5, 4.5, 8.0 kg
MECHANICAL PROPERTIES	**TEST METHOD**	**VALUE**
Tensile Strength	ISO 527	50 MPa
Tensile Modulus	ISO 527	4300 MPa
Elongation at Break	ISO 527	2.8%
Flexural Strength	ISO 178	55 MPa
Flexural Modulus	ISO 178	4500 MPa
Charpy Unnotched Impact Strength	ISO 179	45 kJ/m²
Charpy Notched Impact Strength	ISO 179	4 kJ/m²
THERMAL PROPERTIES	**TEST METHOD**	**VALUE**
HDT - B - 0.45 MPa	ISO 75	58 °C
Vicat Softening Temperature	ISO 306	154 °C
Melting Temperature (Tm)	DSC	170 - 180 °C

COMPLIANCE	✓ REACH Compliant	✓ RoHS Certified	✓ FDA Compliant (excluding silver color)

PROPERTIES	RECOMMENDED USAGE
Nozzle Temperature	190 - 230 °C
Bed Temperature	50 - 70 °C
Printer Compatibility	BigRep ONE, BigRep PRO, BigRep STUDIO, BigRep STUDIO G2
Fan Speed	50 - 100%
Surface Adhesion	• Kapton (additional adhesion using glue, e.g. Magigoo) • BigRep SWITCHPLATE
Drying	HI-TEMP is somewhat 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.
Post-Processing	Wear gloves to avoid possible microdamage to skin. Use a dust mask and protective glasses when processing.
Support	• Breakaway • BigRep BVOH