

FlexiFil™

FlexiFil™ is a rubber-like high-performance TPC (Thermoplastic Co-Polyester) type of 3D printer filament. FlexiFil™ has unique flexural strength properties, as 3D printed objects with FlexiFil™ will have a “flexural memory”, allowing objects to return back to their original position after being bent.

The combination of flexibility, mechanical strength, durability, good resistance to chemicals, excellent UV resistance and extreme temperatures makes FlexiFil™ a unique filament.

FlexiFil™ is available in a variety of standard colours. All below standard colours can be delivered from stock.

	Black	RAL ±9017
	White	RAL ±9003
	Red	RAL ±3020
	Dark Blue	RAL ±5002

Any custom RAL colour can be produced.

Customized colours require a minimum order quantity of 40kg ±10%

FlexiFil™ is a BIO-performance TPC with a substantially reduced carbon footprint by the introduction of renewable carbon content.

FlexiFil™ Features

- Very Flexible
- Strong
- Long term heat resistant
- Good chemical resistance
- Excellent UV resistance

FlexiFil™ has excellent diameter and roundness properties established by fully automated laser control measurement throughout the entire production process.

Ø	Ø Tolerance	Roundness
1.75mm	± 0.05mm	≥ 95%
2.85mm	± 0.10mm	≥ 95%

Thermal Properties

Print temp.	±220-260°C	-
Melting temp.	±180°C	ISO 11357

Physical properties

Specific gravity	1.14 g/cc	ISO 1183
Melt Flow Index	39 cm ³ /10 min	SO 1133
Tensile strength	24 MPa	ISO 527
Elongation at break	530%	ISO 527
Tensile modulus	95 MPa	ISO 527
Impact Strength (Charpy method 23°C)	Notched No break	ISO 179
Shore D Hardness	45	ISO 868



FlexiFil™ is a BIO performance Thermoplastic Co-Polyester and is RoHS certified and REACH compliant.



Additional information

- The recommended printing temperature for printing with FlexiFil™ is approximately 210°C.
- The recommended heated bed temperature varies between ± 60°C and ± 100°C.
 - Various other options (also without heated bed) are possible depending on the type and size of the object to be printed.
- Because of its flexibility it is recommended to significantly lower your printing speed (compared to printing with PLA, or ABS) when printing with FlexiFil™.
- The flexibility/rubbery characteristics of FlexiFil™ can cause some friction in the printer's bowden tube, resulting in an unstable feeding process of the filament into the extruder. As a remedy one can use a tiny bit of lubricant – like WD40 – in one's bowden tube in order make sure there won't be any friction.
- For a good first layer adhesion one can use amongst others a glue stick, blue masking tape, a BuildTak plate, or ABS juice.