

Glass Fiber Polypropylene Filament

SKU: FL500PP-GF

Xtellar GF-PP filament is an engineering-grade composite made with glass fiber (GF) and is designed to provide robust impact strength performance while maintaining a high degree of printability for complex structures. This fiber reinforced filament provides engineering level performance without compromising any of PP's inherent properties which include light weight, water resistance (no drying needed), chemical resistance, and impact resistance.

Recommended Print Settings

Parameter	Units	Range
Extruder Temperature	°C	240 - 260
Nozzle Size (Material)	mm	≥0.6 (Hardened Nozzle)
Recommended Bed Temperature / Substrate ^a	°C / Type	80 / PP bed adhesive solution stick (water soluble)
Alternate Bed Temperature / Substrate ^b	°C / Type	20-40 / Multi-purpose adhesive spray
Printing Speed (First Layer)	mm/s	35 - 65 (60% speed)
Fan Speed	%	50 – 100
Extrusion Multiplier	–	0.90 – 1.10
Overlap Percentage	%	0 – 20
Brim	Layers	0 – 5
Support/Raft Air Gap	mm	0.2 or single layer thickness

Printed Part Properties

Parameter	Method	Units	Value
Density	D 792	g/cm ³	1.06
Hardness	D 2240	Shore D	63
Ultimate Tensile Strength*	D 638	MPa	46
Tensile Elongation at Break*	D 638	%	2.2
Young's Modulus *	D 638	GPa	5.2
Flexural Modulus – Chord Modulus *	D 790	GPa	4.1
Izod Impact Strength at 23°C *	D 256	J/m	189
Deflection Temperature at 0.455 MPa, 12.7mm	D 648	°C	154
Vicat Softening Temperature at 10 N	D 1525	°C	157

Notes

1. Recommended process conditions and printed part properties may be changed at any moment without previous communication from Xtellar.
2. Printed part properties obtained using test specimens printed in X-Y direction under the following conditions: printing temperature 230°C, bed temperature 20°C (90°C first layer) , print speed 20 mm/s, 100% of lines infill, 0 perimeter layers, 0.15 mm layer height, 0.4 mm brass nozzle.
3. Traditional bed adhesive solutions used for PLA & ABS (such as blue tape or hair spray) will not properly adhere PP, PE, or EVA to the build plate.
4. This resin does not contain the substance Bisphenol A (BPA, CAS: 80-05-7) in its composition.
5. For information on about safety, handling, individual protection, first aids and waste disposal, please see SDS. In case of questions regarding utilization or regulatory information, please contact our technical assistance area.