

Ultrafuse® PP GF30

Printing with a High Level of Reinforcement

PP is one of the most preferred thermoplastics in different industries, especially in the automotive sector. However, a high level of reinforcement was always a problem in filament making, until now. Ultrafuse® PP GF30 contains 30% of special glass fibers that are designed for filament making and 3D printing. PP has an inherently lower moisture uptake than PA. In combination with its high level of glass fiber reinforcement, Ultrafuse® PP GF30 is a preferred filament for exceptional working environments. Thanks to its UV resistance it is more suitable than any other PP-based filament for applications directly exposed to sunlight.

Benefits at a Glance

- Excellent chemical resistance
- Low density
- Low moisture uptake
- High heat resistance
- Improved UV resistance

Example Applications

- Automotive / transportation
- Operational prototyping
- Jigs and fixtures

Material Properties

Tensile Strength (MPa)	15.9 (ZX), 41.7 (XY)
Flexural Modulus (MPa)	1671 (ZX), 4026 (XZ), 3507 (XY)
Elongation at Break	0.8% (ZX), 4.4% (XY)
Impact Strength Izod notched (kJ/m²)	1.4 (ZX), 6.2 (XZ), 5.6 (XY)
Impact Strength Izod unnotched (kJ/m²)	2.6 (ZX), 2.4 (XZ), 20.5 (XY)
HDT @ 0.45 MPa	127 °C

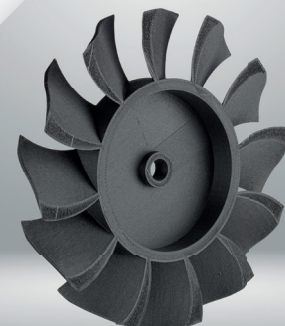
Printing Guidelines

Nozzle Temperature	240-260 °C
Nozzle**	≥ 0.6 mm diameter
Bed Temperature	20-40 °C (tape) 70-90 °C (adhesive)
Fan Speed	up to 50 %
Bed Modification***	Fiber reinforced PP tape (Scotch) or PPGF adhesive
Print Speed	30-80 mm / sec
Top/Bottom Thickness	0.6 mm (3 layers)
Shell Thickness	1.2-1.8 mm
Layer Height	0.2-0.4 mm

* The product data is provided in good faith and represents typical properties based on our current knowledge and experience; these data are not to be construed as specification limits or minimum values. Product properties may be changed without notice. This document does not create any liability, warranty or guarantee of product performance. It is the buyer's responsibility to determine the suitability of Ultrafuse products for the intended application.

** Ultrafuse® PP GF30 is an abrasive material. A hardened nozzle (steel of ruby) 0.6 mm is advised to prevent clogging.

*** For adhesion to the bed we advise applying a layer of strapping tape to the print surface. We achieved the best results with Scotch® Extreme strapping tape.



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