



XSTRAND® GF30-PC SETTING STANDARDS

Developed by Owens Corning, a world leader in Composites, XSTRAND® GF30-PC filament for 3D printing is a reinforced material designed to be compatible with most of standard Fused Filament Fabrication 3D printer (1.75 and 2.85 mm diameters available).

FOR 3D PRINTING

GLASS FIBER REINFORCED POLYCARBONATE | GF30-PC

Product Benefits

XSTRAND® GF30-PC is UL94-VO verified

- Flame retardant
- High stiffness and strength
- Good heat deflection temperature (up to 137°C)
- High dimensional stability
- UV resistant
- Electrical insulating
- Very low moisture absorption

Potential Applications

XSTRAND® GF30-PC is designed for functional prototyping and demanding applications such as mechanical engineering, electronics, and automotive.



MATERIAL

Physical Properties

	METRIC	IMPERIAL	STANDARD
Density (Measured on a 100% infill printed part)	1.17 g/cm ³	9.7 lb/gal	ISO 1183-A
Moisture Absorption	Very low (<0.1%)	Very low (<0.1%)	ISO 62 23°C/50% RH
Water Absorption	Very low (<0.1%)	Very low (<0.1%)	ISO 62 23°C/Sat
Color	Dark Grey (Non Transparent)		

Mechanical Properties

	METRIC	IMPERIAL	STANDARD
Tensile Modulus	5,400 MPa	787 ksi	ISO 527 1mm/min (0.04 inch/min)
Tensile Strength (Break)	65 MPa	9,600 psi	ISO 527 1mm/min (0.04 inch/min)
Elongation (Break)	2,5%	2,5%	ISO 527 1mm/min (0.04 inch/min)
Flexural Modulus	5,500 MPa	797 ksi	ISO 178 2 mm/min (0.08 inch/min)
Flexural Strength (Yield)	113 MPa	16,400 psi	ISO 178 2 mm/min (0.08 inch/min)

Thermal Properties

	METRIC	IMPERIAL	STANDARD
Heat Deflection Temperature	137°C	279°F	ISO 75 Method A (1.8 MPa)
Melting Point	270°C	518°F	ISO 11357
Glass transition temperature	145°C	293°F	DSC ISO 11357
CTE Coefficient of Thermal Expansion	In XY direction	2.62 x 10 ⁻⁵ K ⁻¹	ISO 11359-2
	In Z direction	7.74 x 10 ⁻⁵ K ⁻¹	

*Average from -40°C to -120°C.

Printer Setting

	METRIC	IMPERIAL
Nozzle Temperature	280°C - 330°C	536° F - 626° F
Bed Temperature	80°C - 110°C	176°F - 230°F
Printing Speed	30-60 mm/s	-
Nozzle Diameter	>0.4mm	-
Recommended Bed Type	Perforated plate - DimaFix - Magigoo PC glue	

PACKAGING

Package Specifications

	METRIC	IMPERIAL	STANDARD
Filament diameter	1,75 mm/2,85 mm	0,069 inch/0,122 inch	+/- 0,05 mm
Material weight	500 g/1000 g	1.1 lbs/2.2 lbs	Net weight
Spool (500 g/1.1lbs)	200/52/67 mm	7.9/2.0/2.7 inch	Øext/Øint/width
Spool (1000 g/2.2lbs)	200/52/67 mm	7.9/2.0/2.7 inch	Øext/Øint/width



GF30-PC

GF30-PC is a reinforced polycarbonate filament with 30% glass fiber content. GF30-PC delivers superior strength and resilience to varying temperatures, and UV light. GF30-PC is flame retardant, and UL94-V0 verified.

Storage

XSTRAND® filaments must be stored in a dark, dry and temperate location. It is recommended that the product remain closed in its original packaging until use.

Warning

When melted, XSTRAND® filament can be abrasive due to its glass reinforcement. Printing with XSTRAND® may reduce brass nozzles and extruder driving wheels' lifetime. For a better experience, using hardened steel nozzles and extruder driving wheels is advised. Ensure sufficient ventilation in your 3D printing space and avoid inhaling extrusion fumes.



Contact

For any questions related to XSTRAND® 3D products, contact us at:

3dprinting@owenscorning.com

Or visit us at:

www.owenscorning.com/xstrand

Safety data sheet and more information available on our website.

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