STORAGE

XSTRAND™ filaments must be stored in a dry and temperate location. The product should remain in its original packaging, preferably closed, until beginning of 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

Material Safety Data Sheet available upon request.

This information and data contained herein is offered solely as a guide in the selection of reinforcement. Rating contained in this publication is based on actual laboratory data, field test experience and observation of overall market use. We believe this information to be reliable, but do not guarantee its applicability to the user's process or assume any responsibility or liability arising out of its use or performance. The user agrees to be responsible for thoroughly testing any application to determine its suitability before committing to production. It is important for the user to determine the properties of its own commercial compounds when using this or any other reinforcement. Because of numerous factors affecting results, we make no warranty of any kind, express or implied, including those of merchantability and fitness for a particular purpose. Statements in this publication shall not be construed as representations or warranties or as inducements to infringe any patent or violate any law safety code or insurance regulation. Owens Corning reserves the right to modify this document without prior notice. Copyright © 2018 Owens Corning. All Rights Reserved. Pub. 10022732. XSTRAND™ 3D GF30-PP Technical datasheet Rev2 January 2018

Revision date: January 22nd, 2018

3D FILAMENT
GLASS FIBER REINFORCED POLYPROPYLENE
GF30-PP

MATERIAL DATASHEET

Physical Properties	Metric	Imperial	Standard
Density	0,94 g/cm³	7,85 lbs/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

Mechanical Properties	Metric	Imperial	Standard
Tensile Modulus	6 500 MPa	943 ksi	ISO 527 1 mm/min (0.04 inch/min)
Tensile Strength (Yield)	60 MPa	8,700 psi	ISO 527 1 mm/min (0.04 inch/min)
Tensile Strength (Break)	60 MPa	8,700 psi	ISO 527 1 mm/min (0.04 inch/min)
Elongation (Break)	1.6 %	1.6 %	ISO 527 1 mm/min (0.04 inch/min)
Flexural Modulus	4 300 MPa	624 ksi	ISO 178 2 mm/min (0.08 inch/min)
Flexural Strength (Yield)	83 MPa	12,000 psi	ISO 178 2 mm/min (0.08 inch/min)
Flexural Strength (Break)	78 MPa	11,300 psi	ISO 178 2 mm/min (0.08 inch/min)

Thermal Properties	Metric	Imperial	Standard
Heat Deflection Temperature	120 °C	248 °F	ISO 75 Method A (1.8 MPa)
Melting Point	167 °C	333 °F	ISO 11357

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Printer Settings	Nozzle	Bed	Recommended Bed Type
Temperature	220 °C - 280 °C	80 °C - 110 °C	1) Perforated plate 2) HDPE sheet 3) PP adhesive
Printing speed	30-100 mm/s	-	
Nozzle diameter	> 0.4 mm	-	

PACKAGING

Thermal Properties	Metric	Imperial	Standard
Filament diameter	1,75 mm / 2,85 mm	0,069 inch / 0,112 inch	+/- 0,05 mm
Material weight	500 g / 2200 g	1.1 lbs / 4.85 lbs	Net weight
Spool (500g / 1.1lbs)	200 / 52 / 55 mm	7.9 / 2.0 / 2.2 inch	Øext / Øint / width
Spool (2200g / 4.85 lbs)	300 / 52 / 102 mm	11.8 / 2.0 / 4.0 inch	Øext / Øint / width

DESCRIPTION

Developed by Owens Corning, a world leader in composite solutions, XSTRAND™ GF30-PP filament for 3D printing is a reinforced material designed to be compatible with any standard Fused Filament Fabrication 3D printer (1.75 and 2.85 mm diameters available).

BENEFITS & PERFORMANCES

- High stiffness and strength (up to +200% compare to ABS)
- Large operational temperature range (-20°C to 120°C)
- Very good chemical and UV resistance
- Very low moisture absorption
- Excellent layer adhesion
- Reduced warping effect compared to neat PP

POTENTIAL APPLICATIONS

XSTRAND™ GF30-PP is designed for functional prototyping and demanding applications such as industrial tooling, transportation, electronics, small appliances, sports & leisure...