GF30-PP
3D FILAMENT GLASS FIBER REINFORCED POLYPROPYLENE

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
Printing speed	30-100 mm/s	-	2) HDPE sheet
Nozzle diameter	> 0.4 mm	-	3) PP adhesive

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 (500g / 1.1lbs)	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, XSTRANDTM 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

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

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