

# Technical Data Sheet

# XSTRAND GF30-PC Ultrafuse PC GF30

Date / Revised: 22.01.2021

Version No.: 1.0

## General information

### Components

Polycarbonate based filament filled with 30% glass fibers for Fused Filament Fabrication.

### Product Description

Ultrafuse PC GF30 is a Polycarbonate, reinforced with 30% glass fiber content. The fibers in this compound are specially designed for 3D-printing filaments and are compatible with a wide range of standard FFF 3D-printers. Ultrafuse PC GF30 is designed for functional prototyping and demanding applications such as industrial tooling, transportation, electronics, small appliances, sports & leisure.

### Delivery form and warehousing

Ultrafuse PC GF30 filament should be stored at 15 - 25°C in its originally sealed package in a clean and dry environment. If the recommended storage conditions are observed the products will have a minimum shelf life of 12 months.

### Product safety

Recommended: Process materials in a well ventilated room, or use professional extraction systems. For further and more detailed information please consult the corresponding material safety data sheets.

### Notice

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

### Recommended 3D-Print processing parameters

Nozzle Temperature	280 – 330 °C / 536 – 626 °F
Build Chamber Temperature	-
Bed Temperature	80-110 °C / 68 – 104 °F
Bed Material	Perforated plate, DimaFix or Magigoo PC glue
Nozzle Diameter	≥ 0.4 mm
Print Speed	30 – 60 mm/s

### Drying Recommendations

Drying recommendations to ensure printability	80 °C in a hot air dryer or vacuum oven for 4 to 16 hours
---	---

Please note: To ensure constant material properties the material should always be kept dry.

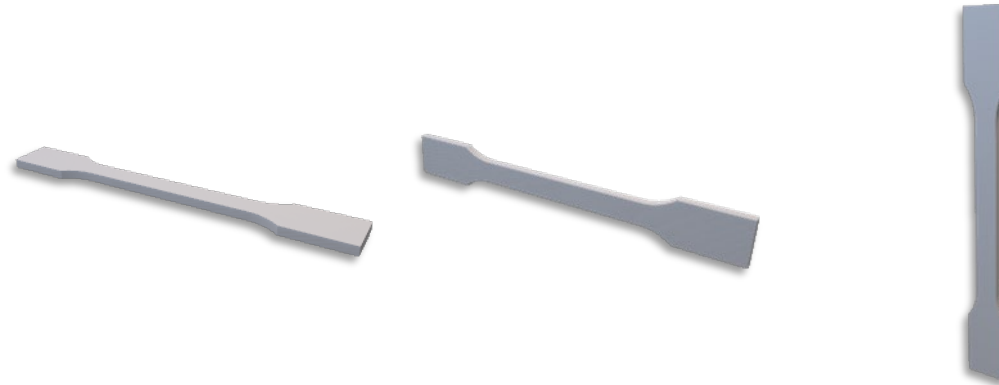
### General Properties

		Standard
Printed Part Density	1170kg/m <sup>3</sup> / 9.76 lb/ft <sup>3</sup>	ISO 1183-1
Moisture absorption	Very Low (<0.1%)	ISO 62
Water Absorption	Very Low (<0.1%)	ISO 62
Flammability	V0 at 3mm thickness	UL94

### Thermal Properties

		Standard
HDT at 1.8 MPa	137 °C / 279 °F	ISO 75-2
Melting Temperature	270 °C / 518 °F	ISO 11357-3
Glass Transition Temperature	145 °C / 293 °F	ISO 11357-2
Coefficient of Thermal Expansion (CTE)	XY direction: 2.62 x 10 <sup>-5</sup> K <sup>-1</sup> Z direction: 7.74 x 10 <sup>-5</sup> K <sup>-1</sup>	ISO 11359-2

## Mechanical Properties



Print direction	Standard	XY Flat	XZ On its edge	ZX Upright
Tensile strength	ISO 527	65 MPa / 9600 psi	-	-
Elongation at Break	ISO 527	2.5 %	-	-
Young's Modulus	ISO 527	5400 MPa / 787 ksi	-	-
Flexural Strength	ISO 178	113 MPa / 16.400 psi	-	-
Flexural Modulus	ISO 178	5500 MPa / 797 ksi	-	-
Flexural Strain at Break	ISO 178	-	-	-
Impact Strength Charpy (notched)	ISO 179-2	-	-	-
Impact Strength Charpy (unnotched)	ISO 179-2	-	-	-
Impact Strength Izod (notched)	ISO 180	-	-	-
Impact Strength Izod (unnotched)	ISO 180	-	-	-