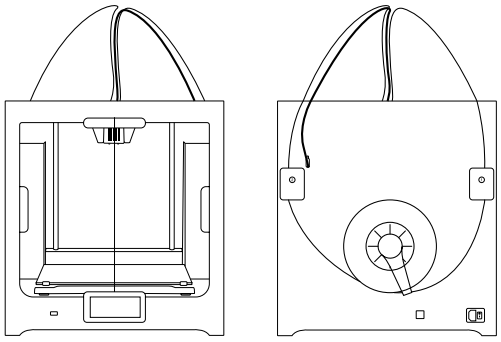
Ultimaker S5

Specification sheet



The Ultimaker S5 is built to run continuously and maximize uptime. It not only delivers best-in-class technical specifications for a desktop 3D printer, but gives you the performance and peace of mind that comes with using the complete 3D printing solution – one trusted by hundreds of thousands of professionals worldwide.

Reliable dual extrusion on a bigger scale
Print large, intricate designs with new confidence, using the Ultimaker S5's reliable dual extrusion technology and enhanced active leveling. Our wide range of engineering and support materials provide complete design freedom – with minimal post-processing.

Open and connected system
The Ultimaker S5's connectivity means connecting multiple printers together over Wi-Fi is easy, while NFC technology automatically recognizes the loaded material. An open system enables the use third-party materials and the seamless integration of Ultimaker Cura with your existing software.

Market-leading software
Trusted by over 2 million users, Ultimaker Cura software prepares your 3D model for printing. Free to download, it features the optimal preconfigured settings for Ultimaker printers and materials, so that you get the best results instantly.

Optimized materials for high-end applications
Ultimaker S5 leverages our full material portfolio. These materials are formulated and tested by our engineers to create industrial-grade prints. And with print core CC Red, you can also print using the world's most advanced composite filaments.

Here to help you succeed
The Ultimaker S5 comes with a one-year warranty and lifetime support from our trained and certified global network of partners. And if you have a question, our online resources and community are there for you 24/7.

Version 1.03

Ultimaker

Ultimaker S5 specifications

Printer and printing properties	Technology	Fused filament fabrication (FFF)
	Print head	Dual extrusion print head with a unique auto-nozzle lifting system and swappable print cores
	Build volume	XYZ: 330 x 240 x 300 mm (left or right nozzle, or dual extrusion)
	Filament diameter	2.85 mm
	Layer resolution	0.25 mm nozzle: 150 - 60 micron 0.4 mm nozzle: 200 - 20 micron 0.6 mm nozzle: 300 - 20 micron 0.8 mm nozzle: 600 - 20 micron
	XYZ resolution	6.9, 6.9, 2.5 micron
	Build speed	< 24 mm^3/s
	Build plate	Heated glass build plate
	Build plate temperature	20 - 140 °C
	Build plate leveling	Active leveling
	Build plate heat up time	< 4 min (from 20 to 60 °C)
	Supported materials	Optimized for PLA, Tough PLA, ABS, Nylon, CPE, CPE+, PC, PP, TPU 95A, PVA, Breakaway (Also supports third-party materials) In the box: Ultimaker Tough PLA Black 750 g, Ultimaker PVA 750 g
	Feeder type	Dual-geared, abrasion-resistant (ready for composite materials)
	Nozzle diameter	0.25 mm, 0.4 mm, 0.6 mm, 0.8 mm
	Nozzle temperature	180 - 280 °C
	Nozzle heat up time	< 2 min
	Operating sound	< 50 dBA
	Maximum power output	500 W
	Material recognition	Auto-recognition with NFC scanner
	Connectivity	Wi-Fi, LAN, USB port
	Display	4.7-inch (11.9 cm) color touchscreen
	Language support	English, Dutch, French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish, Simplified Chinese
	Monitoring	Live camera (view from desktop or Ultimaker app)
Physical dimensions	Dimensions	495 x 457 x 520 mm 495 x 585 x 780 mm (with Bowden tubes and spool holder)
	Net weight	20.6 kg
	Shipping weight	29 kg
	Shipping box dimensions	650 x 600 x 700 mm
Ambient conditions	Operating ambient temperature	15 - 32 °C, 10 - 90% RH non-condensing
	Non-operating temperature	0 - 32 °C
Software	Supplied software	Ultimaker Cura, our free print preparation software Cura Connect, our free printer management solution
	Supported OS	MacOS, Windows, and Linux
	Plugin integration	SolidWorks, Siemens NX, Autodesk Inventor
	File types	Ultimaker Cura: STL, OBJ, X3D, 3MF, BMP, GIF, JPG, PNG Printable formats: G, GCODE, GCODE.gz, UFP
Warranty and service	Warranty period	12 months
	Technical support	Lifetime support from Ultimaker's global network of certified service partners

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.

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

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...