

CARBON FIBRE REINFORCED POLYPHTHALAMIDE

PPA-CF Filament

1.75 mm · 1 kg spool · ± 0.05 mm tolerance

Carbon fibre reinforced polyphthalamide for very strong, stiff parts that hold up at high temperatures.

✓ HDT 220 °C

✓ Tensile strength 108–112 MPa

✓ Hardened steel nozzle required

✓ Dry at 120 °C before use

Recommended Print Settings

Nozzle temperature	255–275 °C 270 °C recommended
Bed temperature	80–100 °C 90 °C recommended
Print speed	60–250 mm/s 200 mm/s recommended
Support material	PVA

📘 Use a hardened steel nozzle and an enclosed printer. Dry thoroughly before printing.

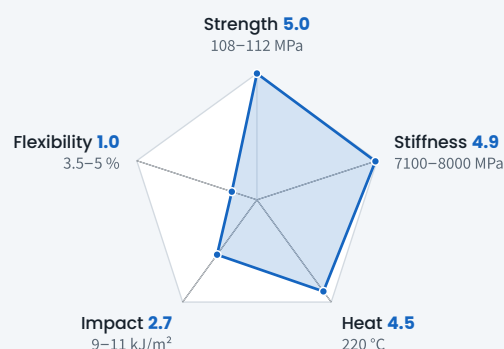
Filament Specifications

Material	Carbon fibre reinforced polyphthalamide
Diameter	1.75 mm
Diameter tolerance	± 0.05 mm
Net filament weight	1 kg

Spool & Packaging

Empty spool weight	150 g
Spool with filament	1.15 kg
Spool outer diameter	200 mm
Hub diameter	52 mm
Spool width	65 mm
Shipping weight	1.3 kg
Box dimensions	210 × 220 × 75 mm

Property Profile



Scores from 1 to 5 relative to the OzFDM filament range, based on the typical values in this sheet (stiffness and impact on a log scale).

Storage & Handling

Drying
120 °C for a minimum of 8 hours in a filament dryer or oven.

Storage
Airtight bag or container with desiccant in a cool, dark and dry area to prevent moisture absorption. For optimal long term storage we recommend drying the filament prior to sealing the filament spool in a vacuum bag with desiccant.

Annealing
Annealing finished parts at 80–100 °C for 1–3 hours is recommended.

Mechanical Properties

PROPERTY	TEST METHOD	TYPICAL VALUE
Tensile strength (X-Y)	ISO 527	108–112 MPa
Elongation at break (X-Y)	ISO 527	3.5–5 %
Tensile modulus (X-Y)	ISO 527	7100–8000 MPa
Flexural strength (X-Y)	ISO 178	210–221 MPa
Flexural strength (Z)	ISO 178	70–75 MPa
Flexural modulus (X-Y)	ISO 178	6500–7000 MPa
Flexural modulus (Z)	ISO 178	2520–2620 MPa
Impact strength (X-Y)	ISO 180	9–11 kJ/m ²
Impact strength (Z)	ISO 180	2.5–3 kJ/m ²

Physical Properties

PROPERTY	TEST METHOD	TYPICAL VALUE
Density	ISO 1183	1.21–1.23 g/cm ³
Melt flow rate (280 °C, 5 kg)	ISO 1133	35–40 g/10min
Moisture absorption (23 °C, 24 h)	ISO 62	<0.1 %

Thermal Properties

PROPERTY	TEST METHOD	TYPICAL VALUE
Heat deflection temperature (0.455 MPa)	ISO 75	220 °C
Continuous use temperature	IEC 60216	120 °C

Electrical Properties

PROPERTY	TEST METHOD	TYPICAL VALUE
Surface resistance	IEC 60093	≤10 ³ Ω

Available Colours 1



Carbon Fibre
Black

Swatches are indicative only. Colours vary between screens and with print settings.

NOTES

Values shown are typical results measured on test specimens and are provided for guidance only. They are not guaranteed specifications and should not be used as design limits. Printed part properties vary with printer, settings, print orientation and part geometry. Test your parts for suitability before use in critical applications.