



COMPOSITE MATERIALS *for*
ADVANCED INDUSTRIALS

Nanovia PETG CF :

Carbon fiber reinforced

Very easy to 3D print, Nanovia PETG CF is printable without a heated enclosure and allows for the creation of functional parts useable up to 80 °C, suitable for an outdoor usage. Thanks to the incorporation of carbon fibers, this FFF 3D printer filament allows for good mechanical properties, rigidity, and dimensional control during the realization of technical parts.



Advantages

- Good mechanical properties
- Good dimensional control
- Ideal for structural pieces
- Easy to print



Application recommendations

Storage

- Store in airtight container with desiccant, out of direct sunlight.
- Dehydrate for 4h at 60°C prior to printing after prolonged exposure to humidity.

Printing

- A reinforced nozzle, suitable for abrasive materials is recommended.

Post treatment

- For an outdoor usage, it's recommended either paint or apply a protective UV coating.

Properties

3D Printing

Extrusion temperature	220 – 240 °C	
Plate temperature	80 – 90 °C	
Enclosure temperature	20 °C	
Nozzle (minimal)	0.5 mm	
Printing Speed	20 – 60 mm/s	
Diameter	1.75 & 2.85 mm	+/- 50 µm
Colour	Black	

Mechanical properties

Density	1.35 g/cm ³	ISO 1183
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Tensile

Test performed at 1mm/min on 3D printed test specimens at 0°, along with the tension stress.

Young's modulus	5800 MPa	ISO 527-2/1A
Ultimate strength	57 MPa	ISO 527-2/1A
Elongation ultimate strength	2.3 %	ISO 527-2/1A

Health and safety

Printing

- We recommend printing Nanovia PETG CF in a room equipped with air extraction or by using appropriate breathing equipment.

Post traitement

- Standard PPE recommended (dust mask, gloves)

Certifications

- Certification RoHS Nanovia PETG CF :



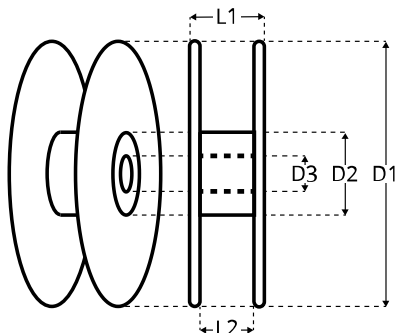
Links

- Ultimaker Cura slicer material profile : [Link](#)

Packaging

Vacuum packed spools, with desicant, packed in individual boxes and engraved serial number.

Other formats available on demand.



Spool	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	Tare (g)
500 g	55	49	200	115	57	194
2 kg	95	87	300	195	57	502
4.5 kg	100	92	300	110	57	430

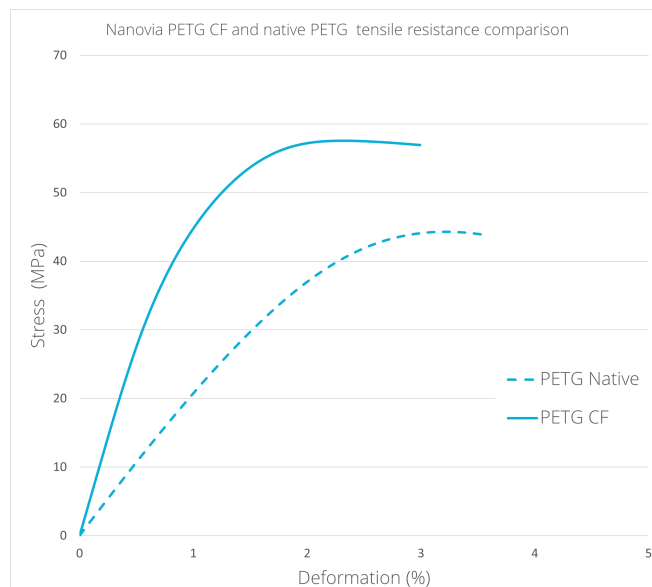
www.nanovia.tech/ref/petg-cf

Test performed at 1mm/min on 3D printed test specimens successively at 45° and -45° per layer.

Young's modulus	4150 MPa	ISO 527-2/1A
Ultimate strength	50 MPa	ISO 527-2/1A
Elongation ultimate strength	2.7 %	ISO 527-2/1A

Test performed at 1mm/min on 3D printed test specimens at 90°, oposite to the tension stress.

Young's modulus	2280 MPa	ISO 527-2/1A
Ultimate strength	28 MPa	ISO 527-2/1A
Elongation ultimate strength	1.6 %	ISO 527-2/1A



Impact

Charpy (notched)	20 kJ/m ²
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Thermal properties

Tg	80 °C
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last updated : 08/03/2023