



COMPOSITE MATERIALS *for*  
ADVANCED INDUSTRIALS

## Nanovia PC CF :

*Carbon fiber reinforced*

Reinforced with carbon fibres, Nanovia PC CF boasts an important 87 Mpa tensile resistance. Able to withstand UV radiation and temperatures up to 120 °C, this 3D printer filament is suitable for the majority of applications. With its increased dimensional stability and rigidity, Nanovia PC CF is easier to print compared to a native polycarbonates.

### Advantages

- Rigid
- Good fire resistance
- High temperature resistance up to 135 °C
- Cold resistant up down to -100 °C

### Application recommendations

#### Storage

- Store in airtight container with desiccant, out of direct sunlight.
- Dehydrate for 6 h at 100 °C prior to printing after prolonged exposure to humidity.

#### Printing

- In order to protect your equipment we recommend using a nozzle adapted for abrasive materials

### Properties

#### 3D Printing

Extrusion temperature	270 – 290 °C	
Plate temperature	100 – 140 °C	
Enclosure temperature	> 100 °C	
Nozzle (minimal)	0.5 mm	
Diameter	1.75 & 2.85 mm	+/- 50 µm
Colours	black	

#### Mechanical properties

##### Physical

Density	1.26 g/cm <sup>3</sup>	ASTM D792
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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	6390 MPa	ISO 527-2/1A
Ultimate strength	87 MPa	ISO 527-2/1A
Ultimate strength elongation	2.7 %	ISO 527-2/1A

Health and safety

Printing

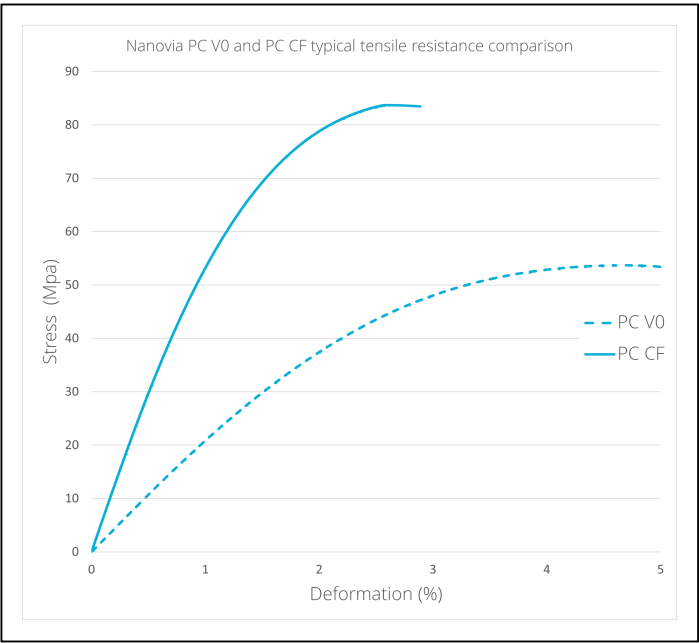
- We recommend printing Nanovia PC CF in a room equipped with air extraction or by using appropriate breathing equipment.
- A reinforced nozzle, suitable for abrasive materials is recommended.

Post treatment

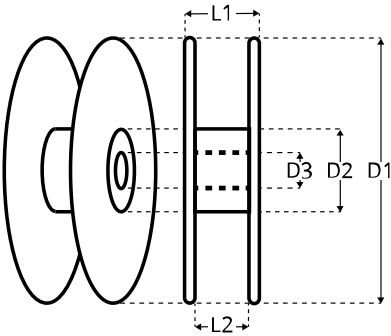
- Standard PPE recommended (dust mask, gloves)

Certifications

- Certification RoHS Nanovia PC CF :



Packaging



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

Other formats available on demand.

Thermal properties

Tg	120 °C	
HDT	144 °C	ASTN D648 at 4.6 kg/cm <sup>2</sup>
	133 °C	ASTN D648 at 18.6 kg/cm <sup>2</sup>

last updated : 25/04/2024

Spool	L1	L2	D1	D2	D3	Weight
500g	53	46	200	90	52	182 g
2kg	92	89	300	175	52	668 g

[www.nanovia.tech/ref/pc-cf](http://www.nanovia.tech/ref/pc-cf)