



COMPOSITE MATERIALS *for*  
ADVANCED INDUSTRIALS

## Nanovia PETG GF UV :

### Glass fiber reinforced

Nanovia PETG GF is a FFF filament suitable for the production of structural and technical objects for outdoor applications. Water and temperature resistant up to 80 °C, it's enriched with UV resistant additives. Its glass fibre reinforced matrix makes it 40% more resistant than native PETG. These glass fibers, in addition to facilitating the 3D printing process, also increase part rigidity.

### Advantages

- UV and water resistant
- Rigid
- Easy to print
- Insulating

### 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.

### 3D Printing

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

### Health and safety

### Printing

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

### Post treatment

- Standard PPE recommended (dust mask, gloves).

### Properties

#### 3D Printing

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

#### Mechanical properties

##### Physical

Density	1.42 g/cm <sup>3</sup>	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	4284 MPa	ISO 527-2/1A
Ultimate strength	63 MPa	ISO 527-2/1A
Elongation ultimate strength	2.3 %	ISO 527-2/1A

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

Young's modulus	2810 MPa	ISO 527-2/1A
Ultimate strength	42 MPa	ISO 527-2/1A

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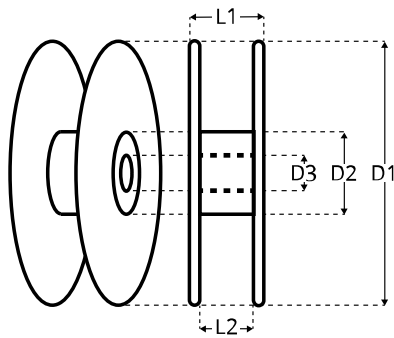
[contact@nanovia.tech](mailto:contact@nanovia.tech)

- Certification RoHS Nanovia PETG GF UV :



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## Packaging



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

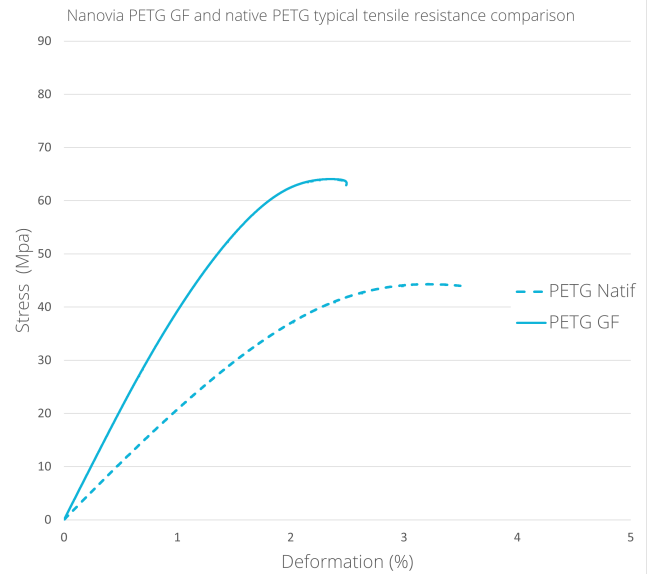
Other formats available on demand.

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/petg-gf-uv](http://www.nanovia.tech/ref/petg-gf-uv)

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

Young's modulus	2313 MPa	ISO 527-2/1A
Ultimate strength	27 MPa	ISO 527-2/1A
Elongation ultimate strength	1.5 %	ISO 527-2/1A



## Thermal properties

Tg	80 °C
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last updated : 08/03/2023