

# Nanovia PEI :

High thermal resistance

The Nanovia PEI filament, based on Ultem 1010 plastics, allows for high heat resistance and thermal stability. Nanovia PEI is resistant to autoclave operation, sterilisation cycles, and adapted for tooling able to resist high temperatures.



## Avantages :

Usable up to 200°C • Adapted for autoclave sterilization • Solvent resistant

### 3D Printing

Extrusion temperature	370 – 390 °C	Enclosure temperature	> 120 °C
Plate temperature	120 – 160 °C	Nozzle (minimum)	All

### Mechanical properties

	Physical				Flexural		
Density	1.35	g/cm <sup>3</sup>	ISO 1183	Young modulus	3300	MPa	ISO 527
Water absorption (24h)	1.25	%	ISO 62	Ultimate strength	160	MPa	ISO 527
	Traction				Impact		
Young modulus	3200	MPa	ISO 527	Izod (notched)	5	kJ/m <sup>2</sup>	ISO 180/1A
Ultimate strength	105	MPa	ISO 527				
Elongation at break	60	%	ISO 527				

### Thermal properties

HDT B (0,45 MPa)	200	°C	ISO 75/Be	Flammability	V0	1.5 mm	UL-94
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### Electrical properties

Volume resistivity	1.E+15	Ohm-cm	IEC 60093	Dissipation factor	0.0005	(50/60Hz)	IEC 60250
Dielectric strength (oil, 0.8mm)	33	kV/mm	IEC 60243-1		0.006	(1 MHz)	IEC 60250
Relative permittivity	2.9	(1 MHz)	IEC 60250		0.0025	(2450MHz)	IEC 60250
	2.9	(50/60Hz)	IEC 60250				



COMPOSITE MATERIALS for  
ADVANCED INDUSTRIALS

For additional information on this product, please visit :

[www.nanovia.tech/pei](http://www.nanovia.tech/pei)

# Application

## Storage

- Store Nanovia PEI in a dry and dark location, if possible with a desiccant.
- In order to guarantee good printing conditions, dehydrate Nanovia PEI at 110 °C for 4 hours or longer, when the spool has been exposed to moisture for an extended period.

# Health and safety

## Printing

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

## Post treatment

- Wearing standard safety equipment during the post treatment of prints made with Nanovia PEI is recommended.

# Packaging

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

- Spools are equipped with both a material traceability and a production series number.
- Spools are packed in individual boxes, sous-vide with desiccant.

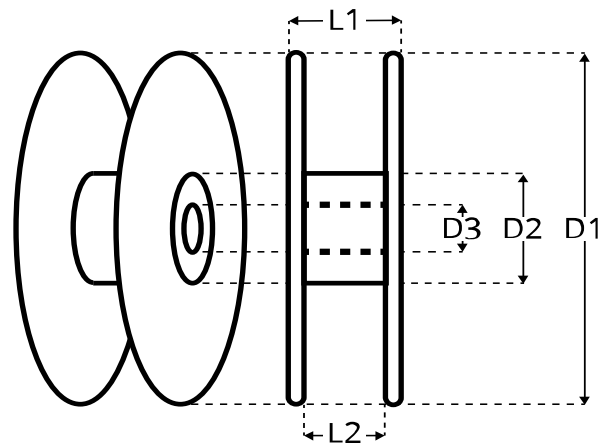


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