

Technical Data Sheet

PAHT CF by Innofil3D BV

Filament suitable for all commercially available leading brands 3D FDM/FFF printers

IDENTIFICATION OF THE MATERIAL

Trade name	PAHT Carbon Fiber
Chemical name	High temperature Polyamide with carbon fiber
Chemical family	Thermoplastic copolymer
Use	3D-Printing
Origin	Innofil3D BV

GUIDELINE FOR PRINT SETTINGS

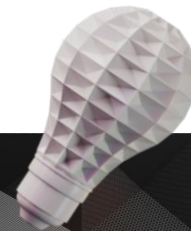
Nozzle temperature	260 – 280 °C
Bed temperature	>50 °C
Bed modification	Clean glass
Active cooling fan	0%
Layer height	Minimum of 0.2 mm
Shell thickness	1.2 mm
Print speed	40 – 60 mm/s
Additional information	Nozzle diameter 0.6 mm minimal

Settings are based on a 0.6 mm nozzle

MATERIAL PROPERTIES

		Test Method
Melt temperature	235 °C	ASTM D3418
Glass transition temperature	N/A	ASTM D3418
Melt Flow Rate ¹	70.9 g/10 min	ISO 1133
Melt Volume Rate ¹	66.6 cm ³ /10 min	ISO 1133
Density	1.18 g/cm ³	ASTM D1505
Odor	Very little odor	/
Water solubility	Insoluble	/

¹Test conditions: T = 280 °C ; m = 5 kg



MECHANICAL PROPERTIES*		Test Method
Tensile Strength	170 MPa	ISO 527
Elongation	2 %	ISO 527
E modulus	15 GPa	ISO 527
Charpy Impact Strength	47 kJ/m ²	ISO 179

* Data based on information obtained from the raw material supplier(s).

FILAMENT SPECIFICATIONS		Test Method
Diameter 1.75	1.75 ± 0.05 mm	Innofil3D
Diameter 2.85	2.85 ± 0.10 mm	Innofil3D
Max. roundness deviation 1.75	0.05 mm	Innofil3D
Max. roundness deviation 2.85	0.10 mm	Innofil3D
Net weight on reel	750 g ± 2%	Innofil3D

LIST OF COLORS AND CERTIFICATIONS**						
Colour	Code	RAL nr.	Certifications/approvals			
			10/2011 ¹	FDA ²	2011/65 ³	EN 71-3 ⁴
Black		N/A	-	-	-	-

** This overview is generated using information obtained from the raw material supplier(s).

Certifications/approvals	Description
¹ Regulation EU No 10/2011:	Union Guidelines on Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food (Europe)
² FDA:	Food and Drug administration approval (U.S.A.)
³ Directive 2011/65/EU:	The restriction of the use of certain hazardous substances in electrical and electronic equipment (Europe)
⁴ Directive 2009/48/EC; EN 71-3:	Safety of toys – Part 3: Migration of certain elements (Europe)