TECHNICAL DATA SHEET

VERSION 1.2
REVIEW: 14/03/2024

INNOVATEFIL®

PP CF

INNOVATEFIL PP CF is a polypropylene-based filament reinforced with a high carbon fiber load, which considerably improves the dimensional stability of the final piece, achieving very good quality finishes.

Furthermore, thanks to the incorporation of these fibers, we obtain a material that is more rigid than PP without load, but with sufficient flexibility to provide high impact, mechanical and thermal resistance.





Allow for all printers



Impact resistance



Chemical resistance



High industrial capacity

	VALUES		UNIT OF MEASUREMENT	STANDARD
PHYSICAL PROPERTIES				
Chemical name	Polypropylene with carbon fiber			
Density	-		g/cm^3	ISO 1183
Flow index (230˚C; 2,16 kg)	-		g/10 min	ISO 1133-2_2011
MECHANICAL PROPERTIES[1]	**XY PLANE**	**XZ PLANE**		
Tensile strength	18,11	-	MPa	ISO 527
Traction module	-	-	MPa	ISO 527
Flexion strength	30,38	-	MPa	ISO 178
Flexion module	1510,5	-	MPa	ISO 178
Elongation at maximum effort	-	-	%	ISO 527
Elongation of traction at break	24,5	-	%	ISO 527
Elongation of flexion	13	-	%	ISO 178
Charpy Impact Force (non-notched)	20,83	-	kJ/m^2	ISO 179
Hardness	-		Shore D	ISO 7619-1
THERMAL PROPERTIES				
Glass transition temperature (Tg)	-		˚C	ISO 11357
VICAT B (50 N 50˚C/h)	68		˚C	ISO 306
HDT B (0,45 MPa)	-		˚C	ISO 75
PRINTING PROPERTIES				
Printing temperature	215 – 235		˚C	
Bed temperature	50 – 60		˚C	
Layer fan	60 – 80		%	
Material flow	110 – 120		%	
Layer height	≥ 0,2		mm	
Nozzle recommendations	≥ 0,4 (steel or brass)		mm	
Print speed	20 – 30		mm/s	

SIZE	NET WEIGHT	GROSS WEIGHT	DIAMETER	COLOR	PACKAGING
M	650 g	875 g	1,75 mm/2,85 mm	Natural (black)	Innovatefil Box

NOTICE: The information provided in the data sheets is intended for reference only. It should not be used as design or quality control values. Actual values may differ significantly depending on printing conditions. The final performance of printed components not only depends on materials, design and printing conditions are also important.