TECHNICAL DATA SHEET

VERSION 1.2
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INNOVATEFIL®

PETG CF

Innovatefil PETG CF is a filament that combines PETG with carbon fiber, offering the durability of PETG along with the mechanical and thermal enhancements of carbon fiber.

This material maintains the advantages of PETG, such as stability and ease of printing, while providing greater strength and thermal performance. The result is parts with an excellent finish and improved properties.

Allow for all printers

Impact resistance

High industrial capacity

	VALUES		UNIT OF MEASUREMENT	STANDARD
PHYSICAL PROPERTIES				
Chemical name	Polyethylene terephthalate with carbon fiber			
Density	1,259		g/cm^3	ISO 1183
Melt Flow Index (270˚C; 2.16 kg)	3,01		g/10 min	ISO 1133-2:2011
MECHANICAL PROPERTIES[1]	**XY PLANE**	**XZ PLANE**		
Tensile strength	51,4	34,7	MPa	ISO 527
Traction module	3380,8	2529,2	MPa	ISO 527
Flexion strength	81,2	15,3	MPa	ISO 178
Flexion module	3260,6	1472,5	MPa	ISO 178
Elongation at maximum effort	-	-	%	ISO 527
Stretch traction at break	2,2	1,1	%	ISO 527
Elongation by flexion at break	5,7	0,9	%	ISO 178
Charpy Impact Force (non-notched)	-	-	kJ/m^2	ISO 179
Hardness	-		Shore D	ISO 7619-1
THERMAL PROPERTIES				
Glass transition temperature (Tg)	45,64		˚C	ISO 11357
VICAT B (50 N 50˚C/h)	77		˚C	ISO 306
HDT B (0,45 MPa)	81		˚C	ISO 75
PRINTING PROPERTIES				
Printing temperature	235 – 265		˚C	
Bed temperature	60 – 90		˚C	
Print speed	30 – 50		mm/s	
Layer fan	60 – 90		%	
Material flow	100		%	
Layer height	≥ 0,2		mm	
Nozzle recommendations	≥ 0,4 (Steel)		mm	

SIZE	NET WEIGHT	GROSS WEIGHT	DIAMETER	COLOR	PACKAGING
M	750 g	900 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.