

Data Sheet PPS CF

rev. 2.0 14/01/2019

SUGGESTED PRINT SETS (1)			
Suggested print sets	unit	value	test method
extruder temp	C°	305-320	internal
plate temp	C°	100	internal
min. nozzle diameter (2)	mm.	0.5	internal
fan	%	0	internal
print speed	mm/1°	35	internal
PROPERTY			
Physical			
Specific gravity	g/cm3	1,49	ISO 183
Water absorption	%	<0,05	23°C / 24 h
Linear mould shrinkage	%	0,2-0,5	DIN 16901
Mechanical at 23°C / 50% rh			
Tensile strength	MPa	125	ISO 527
Elongation	%	١,2	ISO 527
Modulus of elasticity	GPa	13	ISO 527
Flexural strength	MPa	175	ISO 178
Flexural elongation	%	1,5	ISO 178
Flexural modulus	GPa	10	ISO 178
Charpy impact strength	kJ/m²	19	ISO 179 I fu
Thermal			
Heat distortion temp.	°C	220	ISO 75
Continuous service temp.	°C	220	UL 746B
Maximum (short term) use temp.	°C	240	-
Coefficient of thermal expansion	10-5/K	3	DIN 53752
Electrical			
Insulation resistance	Ω	≤105	DIN/IEC 60167
Surface resistance	Ω	<103	DIN IEC 60093

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ADDITIONAL INFORMATIONS

In general filaments made with PPS Carbon can be processed on conventional 3D printer using FDM / FFF technology.

PPS Carbon is a polyphenylene carbon fiber reinforced developed for 3D printing and to obtain best results we recommend pre drying the filaments at 120° for 4-6 h. Increase drying time for spools up 1 kg.

Don't leave the filament stopped inside the nozzle more than 20 min. If that down the temperature under 230°, better stop the thermal control.

(1) Suggested print set merely represent a recommendation for general use . Every printer necessity a specific set , nozzle temp, bed temp, etc .

(2) 0.5 mm is the mininum diameter of the nozzle with carbon fibers reinforced. Carbon fibers are abrasive, we suggest to use a nozzle in hardened or tempered metal, like Widia, or wear resistance internal surface, like ceramics or other. NO tefloned surface!

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