

Main features

Low warpage

Impact resistance

Low water absorption

High-strength and stiffness parts with low creep

Physical properties	Test method	Specimen	Units	Typical value
Specific gravity	ISO 1183-3		g/cm ³	1.51
Water absorption	ISO 62	ISO 3167 A	%	<0,05

Mechanical Properties at 23°C

Tensile strength	ISO 527	ISO 3167 A	MPa	120
Tensile modulus	ISO 527	ISO 3167 A	GPa	11
Impact strength	ISO 179 1eU	80x10x4mm	kJ/m ²	22
Impact strength notched				
Flexural modulus	ISO 178	ISO 3167 A	GPa	9
Flexural strength	ISO 178	ISO 3167 A	MPa	170
Flexural elongation F. max.	ISO 178	ISO 3167 A	%	2
Elongation F. max.	ISO 527	ISO 3167 A	%	1.6

Thermal properties

Heat distortion temperature		ISO 75		°C	220
Continuous service temperature	20.000 h	IEC 60216	ISO 3167 A	°C	220

Electrical properties

Insulation resistance	Strip electrode R25	DIN EN 62631-3-3	ISO 3167 A	ohm	≤10 ⁶
-----------------------	---------------------	------------------	------------	-----	------------------

Disclaimer

The above information is provide in good fact .Treedfilaments is not responsible for any processing which may occur to product finished articles , packaging materials and other .

Further Treedfilaments makes no warranty or representation of any kind regarding the information given or the product described and expressly disclaims all implied warranties , representations and conditions , including without limitation all warranties and conditions of quality , merchantability and suitability or fitness for particular purpose .

SUGGESTED PRINT SETS (1)

Suggest 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/l°	35	Internal

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 minimum 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!

Disclaimer

The above information is provide in good fact .Treedfilaments is not responsible for any processing which may occur to product finished articles , packaging materials and other .

Further Treedfilaments makes no warranty or representation of any kind regarding the information given or the product described and expressly disclaims all implied warranties , representations and conditions , including without limitation all warranties and conditions of quality , merchantability and suitability or fitness for particular purpose .