



SUGGESTED PRINT SETS (1)			
Suggested print sets	unit	value	test method
extruder temp	°C	230-250	internal
plate temp	°C	90-110	internal
min. nozzle diameter (2)	mm.	0.5	internal
fan	%	0-40	internal
print speed	mm/l°	40-50	internal
PROPERTY			
Physical			
Specific gravity	g/cm <sup>3</sup>	1.08	ISO 1183-3
Water absorption	%	<0,1	ISO 62
Mechanical at 23°C / 50% rh			
Tensile strength	MPa	120	ISO 527
Elongation at maximum force	%	5,3	ISO 527
Modulus of elasticity	GPa	9	ISO 527
Flexural strength	MPa	170	ISO 178
Flexural elongation at max. force	%	6,9	ISO 178
Flexural modulud	GPa	7.2	ISO 178
Charpy impact strength	kJ/m <sup>2</sup>	65	ISO 179 1eU
Charpy impact strength, notched	kJ/m <sup>2</sup>	18	ISO 179 1eA
Thermal			
Continuous service temp.	°C	93	IEC 60216
Service temp.	°C	140	-
Electrical			
Insulation resistance strip electrode	Ω	≤10 <sup>6</sup>	DIN IEC 60167
Surface resistance	Ω	<10 <sup>6</sup>	DIN IEC 60093

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### ADDITIONAL INFORMATIONS

In General filaments made with **CARBONIO** (nylon + carbon fiber) can be processed on conventional 3D printer using FDM / FFF technology.

**CARBONIO** (nylon + carbon fiber) is a special polyamide carbon fiber reinforced developed for 3D printing and to obtain best results we recommend pre drying the filaments at 75° for 6-10 h or at 105° for 4 h. Increase drying time for spools up 0,5 kg.

Don't leave the filament stopped inside the nozzle more than 20 min. If that down the temperature under 210°, 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!**

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