

EON PC-CF

EON PC-CF has similar printing qualities to EON PC but the addition of the carbon fibers makes it even stronger, more resilient, more temperature resistant and dimensionally stable. Moreover, it also has a nice matte surface which grants a high-quality finish. Compared to other materials, EON PC-CF has good resistance to UV light and common chemicals. In summary, EON PC-CF is ideal for printing mechanical parts and heat-stressed components, for example, various gears and machine parts requiring heat resistance over 100°C.

Mechanical Properties	Horizontal	Vertical xz	Method
Tensile Yield Strength	64 ± 3 MPa	70 ± 3 MPa	ISO 527-1
Tensile Modulus	2,6 ± 0,1 GPa	3,2 ± 0,1 GPa	
Elongation at Yield Point	4,6 ± 0,4 %	3,7 ± 0,5 %	
Flexural Strength	94 ± 3 MPa	130 ± 2 MPa	ISO 178
Flexural Modulus	3,5 ± 0,2 GPa	4,2 ± 0,3 GPa	
Deflection at Flexural Strength	8,4 ± 0,3 mm	6,6 ± 0,1 mm	
Impact Strength Charpy (1)	32 ± 5 kJ/m²	35 ± 4 kJ/m²	ISO 179-1
Impact Strength Charpy Notched (2)	12 ± 1 kJ/m²	17 ± 2 kJ/m²	

Thermal Properties	Typical Value	Method
Heat Deflection Temperature (0,45 MPa)	114° C	ISO 75
Heat Deflection Temperature (1,80 MPa)	106° C	

Other Properties	Typical Value	Method
Moisture Absorption in 7 days (3)	0,11 %	ISO 62
Density	1,22 g/cm³	ISO 1183
Hardness	83	ISO 868

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Print Settings:

Print settings 0,20 mm FAST (layers 0,20 mm);

Solid Layers Top: 0 Bottom: 0;

Perimeters: 2;

Infill 100% rectilinear;

Infill Print Speed 200 mm/s;

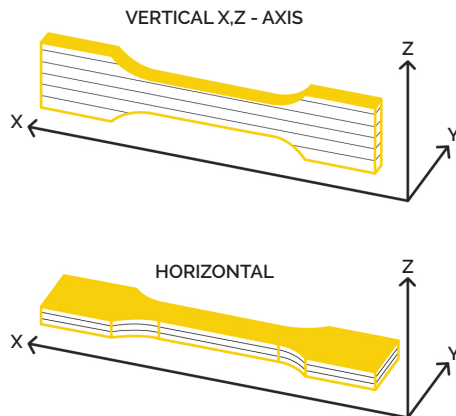
Nozzle Temperature 275 °C all layers;

Bed temperature 115 °C all layers;

Extrusion multiplier 1,034;

Print cooling off;

Other parameters are set as default.



Notes:

- 1) Charpy Unnotched – Edgewise direction of blow according to ISO 179-1
- 2) Charpy notched – Edgewise direction of blow according to ISO 179-1
- 3) 24° C; Humidity 22 %

Disclaimer:

The results presented in this data sheet are just for your information and comparison. Values are significantly dependent on print settings, operator experiences, and surrounding conditions. Everyone has to consider suitability and possible consequences of printed parts usage.