CARBON-P

CARBON-P is our 15% carbon fiber reinforced PET-G based filament. The result is a more than twice as stiff filament as PET-G with increased impact and heat resistance (Vicat) to 75˚C. This, together with other features, such as a matt surface, no warp, dimensionally stable and extremely forgiving to print, makes CARBON-P suitable for a very wide variety of applications besides the typically mentioned RC parts, drones, automotive and more

Material features:

- 15% Carbon fiber reinforced PET-G
- Extremely stiff
- Increased impact and heat resistance
- No warping and dimensionally stable
- Matt surface
- Abrasive (see * at additional info)

Filament specs.		
Size	**Ø tolerance**	**Roundness**
1,75mm	± 0,05mm	≥ 95%
2,85mm	± 0,10mm	≥ 95%

Material properties		
Description	**Testmethod**	**Typical value**
Specific gravity	ISO 1183	1,31 g/cc
MFI 200°C/5 kg	ISO 1133	3,8 g/10min
Tensile strength at yield	ISO 527	101 MPa
Tensile strength at break	ISO 527	100 MPa
Elongation strain at yield	ISO 527	2,7%
Elongation strain at break	ISO 527	3,7%
Tensile (E) modulus	ISO 527	9930 MPa
Impact strength - Charpy notched 23˚C	ISO 179 1eA	7 kJ/m2
Printing temp.	Internal method	240±10°C
Vicat softening temp.	ISO 306	75˚C
Heat deflection temp.	ISO 75	78,6°C

Additional info:

We recommend to print with a heated bed, the recommend temperature is 70-90°C.
*Please consider the use of a hardened steel nozzle when printing with CARBON-P. The carbon fibers are abrasive and will result in fast wear of regular brass nozzles. Less active cooling is required, which leads to less thermal shock in a print and increased material stability. CARBON-P can be used on all common desktop FDM or FFF technology 3D printers.
Storage: Cool and dry (15-25˚C) and away from UV light. This enhances the shelf life significantly.

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