TECHNICAL DATA SHEET - PETG CARBON

IDENTIFICATION OF THE MATERIAL	
Trade name	PETG CARBON
Chemical name	Compound of Polyethylene terephthalate glycol-modified
Chemical family	Thermoplastic Copolymers
Use	3D printing
Brand	3dcolors

GUIDELINE FOR PRINT SETTINGS - Settings are based on a ≥ 0.4 mm nozzle	
Nozzle temperature	235 ± 10 °C
Bed temperature	0 - 60 °C
Bed modifications	Tape, glue or other adhesives
Active cooling fan	No/Yes (up to 100%)
Layer height	0.08 - 0.2 mm
Layer thickness	0.4 - 0.8 mm
Print speed	40 - 60 mm/s

THERMAL PROPERTIES		Test Method
Melting temperature	-	/
Printing temperature	235 ± 10 °C	/
Vicat softening temp.	80 °C	ISO 306

FILAMENT SPECIFICATIONS AND TOLERANCE	
Diameter 1.75	1.75 ± 0.05 mm
Roundness	95%
Net weight on reel	500 g ± 2%

Think it, make it!

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PHISICAL PROPERTIES	Typical value	Test Method
Specific gravity	1,19 g/cc	ISO 1183
MFR 300˚C (1.2 Kg)	-	ISO 1133
Tensile strength at yield	52,5 MPa	ISO 527
Strain at break	-	ISO 527
Tensile modulus	3800 MPa	ISO 527
Impact strength *Charpy notched 23˚C	3.8 kJ/m^2	ISO 179

PETG CARBON FEATURES:

- 20% Carbon fiber reinforced PET-G
- Extremely stiff
- Increased impact and heat resistance
- No warping and dimensionally stable
- Matt surface
- Abrasive (see * at additional info*)

LIST OF COLOURS:

Natural
RAL N/D

ADDITIONAL INFO:

Due to virtually no warping of PETG CARBON , this filament can also be printed without an heated bed.
If you have a heated bed the recommend temperature is ±35-60 °C.
* Please consider the use of a hardened steel or a MicroSwiss nozzle when printing with PETG CARBON.
The carbon fibers are abrasive and will result in fast wear of regular brass nozzles. PETG CARBON 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.

Think it, make it!