

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

#### Features

- 15% Carbon fiber reinforced PET-G
- Extremely stiff
- Increased impact and heat resistance
- No warping and dimensionally stable
- Matt surface
- Abrasive

#### 1. Identification of the material

Trade name:	HotOrange3D
Chemical name:	Carbonfill
Use:	3D printing
Origin:	HotOrange3D – Netherlands

*Disclaimer: The technical data contained on this data sheet is furnished without charge or obligation and accepted at the recipient's sole risk. This data should not be used to establish specifications limits or used alone as the basis of design. The data provided is not intended to substitute any testing that may be required to determine fitness for any specific use.*

## 2. Printer settings

Printer:	Desktop FFF printer
Heated bed:	>60 °C
Nozzle:	Hardened steel required
Cooling:	Less active cooling

## 3. Material properties

Specific gravity:	1,31	g/cc	ISO 1183
MFR 200°C/5 kg:	3,8	g/10min	ISO 1183
Tensile Strength at Yield:	101	MPa	ISO 527
Tensile Strength at Break:	100	MPa	ISO 527
Elongation-Strain at Yield :	2,7	%	ISO 527
Elongation-Strain at Break :	3,7	%	ISO 527
Tensile modulus:	9930	MPa	ISO 527
Impact strength - Charpy notched 23°C :	7	kJ/m <sup>2</sup>	ISO 179
Printing temp.:	240±10	°C	Internal method
Vicat softening temperature:	75	°C	ISO 306
Heat deflection temperature :	78,6	°C	ISO 306

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