Nylon Carbon Fiber

Property Data

Property	Test Method	Value	Comment
Density (gcm^{-3})	ASTM D792	1.01	Resin Manufacturer data
Heat Deflection Temperature/ °C *	ASTM D648 at 66 psi	147	
Tensile Strength at Yield/ psi *	ASTM D638, Type IV	8340	
Tensile Elongation/ % *	ASTM D638, Type IV	12	
Flexural Modulus/ kpsi *	ASTM D790	520	
Flexural Peak Stress / kpsi *	ASTM D790	16.0	
Notched Izod Impact/ Jm^{-1} *	ASTM D256	124	

* 3D printed test specimens using Ultimaker 2+; 100 % infill; y-axis orientation; tested in an independent lab

Recommended Printer Settings

Parameter	Value
Nozzle temperature*	255 °C
Heated bed temperature	70 °C
Speed**	30-150 mm/s
Infill	As needed, up to 100 %
Bed material	Adheres to a variety of standard bed materials, for best results: Glass or Garolite with glue sticks (PVA based)
Nozzles	Carbon fiber is abrasive, use hardened nozzles to avoid accelerated wear

*Nozzle temperature recommendations based on achieving better print definition. The recommendations given above leave about ±15°C depending on specific printers and other print settings.

**Higher print speeds might require higher nozzle temperatures

These processing conditions are general guidelines only. Each printer will likely have a unique set of printing parameters.