

FIBER FILLED

PA 803-CF

HIGHLIGHTS

- Melt mixed black carbon fiber filled nylon 11
- Superior stiffness and mechanical properties
- Parts produce an alluring black detailed surface finish
- Excellent resistance to warping at elevated temperatures

APPLICATIONS

- High impact sports equipment
- High performance racing applications
- Wind tunnel model testing
- Ideal for outdoor applications requiring strength and toughness

TYPICAL PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	ENGLISH	METRIC
Color/Appearance	Visual	Black	Black
Bulk Density	ASTM D1895	0.277 oz/in ³	0.48 g/cm ³
Average Particle Size (D50)	Laser Diffraction	0.002 inches	50 microns
Particle Size Range (D10-D90)	Laser Diffraction	0.001 - 0.003 inches	30 - 78 microns
Sintered Part Density	ASTM D792	0.676 oz/in ³	1.17 g/cm ³
Heat Deflection Temperature	ASTM D648	343° F @ 264 psi	182° C @ 1.82 MPa
Heat Deflection Temperature	ASTM D648	377° F @ 66 psi	186° C @ 0.45 MPa
Ultimate Tensile Strength (XY)	ASTM D638	12,781 psi	88 MPa
Ultimate Tensile Strength (Z)	ASTM D638	6,447 psi	45 MPa
Tensile Modulus (XY)	ASTM D638	1,191,000 psi	8,211 MPa
Tensile Modulus (Z)	ASTM D638	211,000 psi	1,453 MPa
Elongation at Break (XY)	ASTM D638	8%	8%
Elongation at Break (Z)	ASTM D638	4%	4%

The material properties provided herein are for reference purposes only. Actual values may vary significantly as they are dramatically affected by part geometry and process parameters. Material specifications are subject to change without notice.



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About RPS

RPS has been in operation over ten years and our engineers collectively have decades of experience working with stereolithography and laser sintering equipment. With proven experience in 3D printing, engineering, electronics, computer-aided engineering and more, we understand the technology and can offer advice on how it can suit your specific application.

We manufacture the **NEO800** stereolithography system, designed, developed and built by RPS engineers. We are also an HP Channel Partner of HP's Multi-Jet Fusion technology and offer a range of materials and software through our partnership with market-leading suppliers ALM, DSM Somos® and Materialise.

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