

MATERIAL SPECIFICATIONS

PA 802-CF

HIGHLIGHTS

- Melt mixed black carbon fiber filled nylon 11
- Excellent 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	U.S. STANDARD	METRIC
Colour/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	0.642 oz/in ³	1.11 g/cm ³
Heat Deflection Temperature	ASTM D648	354°F @ 264 psi	179°C @ 1.82 MPa
Heat Deflection Temperature	ASTM D648	367°F @ 66 psi	186°C @ 0.45 MPa
Ultimate Tensile Strength (XY)	ASTM D638	10,152 psi	70 MPa
Ultimate Tensile Strength (Z)	ASTM D638	5,946 psi	41 MPa
Tensile Modulus (XY)	ASTM D638	926,501 psi	6,388 MPa
Tensile Modulus (Z)	ASTM D638	210,740 psi	1,453 MPa
Elongation at Break (XY)	ASTM D638	11%	11%
Elongation at Break (Z)	ASTM D638	7%	7%
Flexural Modulus (XY)	ASTM D790	721,998 psi	4,978 MPa
Flexural Strength (XY)	ASTM D790	17,985 psi	124 MPa

For reference use only. Actual properties may vary significantly from those listed above based on processing parameters, operating conditions and end use applications. The above properties were based on virgin ALM PA 802-CF using normal processing parameters on a 2500+ platform as outlined in the ALM Material Processing Guide. Advanced Laser Materials, LLC makes no warranties of materials for any application, nor does it make a warranty of any type, expressed or implied, but not limited to, the warranties of merchantability for a particular purpose.



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