



AN EOS COMPANY



PA 603-CF

NYLON 12

33% Carbon-Fiber-Filled Nylon 12 optimized for a smooth surface finish without sacrificing feature details.

HIGHLIGHTS

- High-Detail Black Surface Finish
- Good Stiffness and Mechanical Properties
- Warping Resistance at Elevated Temperatures

APPLICATIONS

- High-performance impact sports equipment and racing applications
- Industrial applications with an HDT of ~177° C
- Wind tunnel model testing



HEADQUARTERS

ALM - Advanced Laser Materials

3115 Lucius McCelvey, Temple, TX 76504

P: 1.254.773.3080

FAX: 1.254.773.3084

E: info@advancedlasermaterials.com

AdvancedLaserMaterials.com

PA 603-CF



NYLON 12

Easy to process while maintaining good dimensional stability and strength.

TYPICAL PHYSICAL PROPERTIES			
PROPERTY	TEST METHOD	IMPERIAL	METRIC
Color/Appearance	Visual	Dark Gray	Dark Gray
Bulk Density	ASTM D1895	0.237 oz/in ³	0.41 g/cm ³
Average Particle Size (D50)	Laser Diffraction	0.002 inches	50 microns
Particle Size Range (D10-D90)	Laser Diffraction	0.001 - 0.004 inches	35 - 100 microns
Sintered Part Density	ASTM D792	0.634 oz/in ³	1.10 g/cm ³
Heat Deflection Temperature	ASTM D648	343°F at 264 psi	173°C at 1.82 MPa
Heat Deflection Temperature	ASTM D648	354°F at 66 psi	179°C at 0.45 MPa
Ultimate Tensile Strength (XY)	ASTM D638	12,328 psi	85 MPa
Tensile Modulus (XY)	ASTM D638	1,145,797 psi	7,900 MPa
Flexural Modulus (XY)	ASTM D790	1,329,995 psi	9,170 MPa
Elongation at Break (XY)	ASTM D638	4%	4%
Izod Impact Strength - Notched (XY)	ASTM D256	1.58 ft-lb/in	84 J/m
Izod Impact Strength - Unnotched (XY)	ASTM D256	3.03 ft-lb/in	161 J/m

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.