



AN EOS COMPANY



PA 640-GSL

NYLON 12

Hollow Glass-Sphere-Filled Nylon 12 optimized for stability, recyclability, and increased stiffness.

HIGHLIGHTS

- High-Detail Dark Grey Surface Finish
- Good Strength-to-Weight Ratio Properties
- ~10% Reduction of Material-Per-Build Compared to Similar Nylon 12s

APPLICATIONS

- Aerospace/UAV components
- Athletic equipment
- Motor sports and racing



HEADQUARTERS

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Good Z-direction properties for reduced weight and higher temperatures.

TYPICAL PHYSICAL PROPERTIES			
PROPERTY	TEST METHOD	IMPERIAL	METRIC
Color/Appearance	Visual	Dark Gray	Dark Gray
Bulk Density	ASTM D1895	0.214 oz/in ³	0.37 g/cm ³
Average Particle Size (D50)	Laser Diffraction	0.002 inches	55 microns
Particle Size Range (D10-D90)	Laser Diffraction	0.001 - 0.004 inches	35 - 100 microns
Sintered Part Density	ASTM D792	0.474 oz/in ³	0.82 g/cm ³
Heat Detection Temperature	ASTM D648	338°F at 264 psi	170°C at 1.82 MPa
Heat Detection Temperature	ASTM D648	356°F at 66 psi	180°C at 0.45 MPa
Ultimate Tensile Strength (XY)	ASTM D638	7,170 psi	49 MPa
Ultimate Tensile Strength (Z)	ASTM D638	4,835 psi	33 MPa
Tensile Modulus (XY)	ASTM D638	554,000 psi	3,816 MPa
Tensile Modulus (Z)	ASTM D638	282,000 psi	1,945 MPa
Elongation at Break (XY)	ASTM D638	3%	3%
Elongation at Break (Z)	ASTM D638	3%	3%
Flexural Modulus (XY)	ASTM D790	731,000 psi	5,040 MPa
Flexural Modulus (Z)	ASTM D790	626,000 psi	4,313 MPa

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.