LASER SINTERING MATERIAL SPECIFICATIONS

alm

AN EOS COMPANY

PA 620-MF

NYLON 12

25% Mineral-Filled Nylon 12 optimized for easy processing and as a drop-in replacement for comparable Fiber-Filled Nylon 12's.

HIGHLIGHTS

- → High-Detail Surface Finish
- → Thermal Resistance
- → Anisotropic Mechanical Properties

APPLICATIONS

- → Housings and enclosures
- → Rapid tooling applications
- → Aerospace and motor sports

HEADQUARTERS

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High stiffness properties for load bearing applications.

TYPICAL PHYSICAL PROPERTIES			
PROPERTY	**TEST METHOD**	**IMPERIAL**	**METRIC**
Color/Appearance	Visual	White	White
Bulk Density	ASTM D1895	0.266 oz/in^3	0.46 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	30 - 100 microns
Sintered Part Density	ASTM D792	0.694 oz/in^3	1.20 g/cm^3
Heat Deflection Temperature	ASTM D648	355°F at 264 psi	179°C at 1.82 MPa
Heat Deflection Temperature	ASTM D648	363°F at 66 psi	184°C at 0.45 MPa
Ultimate Tensile Strength (XY)	ASTM D638	7,350 psi	51 MPa
Ultimate Tensile Strength (Z)	ASTM D638	4,900 psi	34 MPa
Tensile Modulus (XY)	ASTM D638	831,000 psi	5,725 MPa
Tensile Modulus (Z)	ASTM D638	434,000 psi	3,000 MPa
Flexural Modulus (XY)	ASTM D790	660,000 psi	4,550 MPa
Flexural Modulus (Z)	ASTM D790	381,000 psi	2,825 MPa
Elongation at Break (XY)	ASTM D638	5%	5%
Elongation at Break (Z)	ASTM D638	3%	3%