

MATERIAL SPECIFICATIONS

PA 620-MF

HIGHLIGHTS

- Anisotropic mechanical properties
- Excellent combination of strength, and temperature resistance
- Good surface finish and feature resolution
- High stiffness properties for load bearing applications

APPLICATIONS

- Housings and enclosures
- Rapid tooling applications
- Aerospace and motor sports
- Ideal for low to mid production parts requiring stiffness and durability at elevated temperatures

TYPICAL PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	U.S. STANDARD	METRIC
Colour/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 @ 264 psi	179°C @ 1.82 MPa
Heat Deflection Temperature	ASTM D648	363°F @ 66 psi	184°C @ 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
Elongation at Break (XY)	ASTM D638	5%	5%
Elongation at Break (Z)	ASTM D638	3%	3%
Flexural Modulus (XY)	ASTM D790	660,000 psi	4,550 MPa
Flexural Modulus (Z)	ASTM D790	381,000 psi	2,825 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 620-MF 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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