MATERIAL SPECIFICATIONS

PA 840-GSL

HIGHLIGHTS

- Crisp, melt mixed black material
- Best strength to weight ratio properties of any LS material
- Reduced monomer outgassing compared to other nylon 11's
- Excellent surface finish and detail

APPLICATIONS

- Aerospace/UAV components
- Rugged outdoor use
- Motor sports and racing
- Ideal for applications requiring a balance of strength, lighter weight, and ductility without sacrificing dimensional stability and surface finish

TYPICAL PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	U.S. Standard	METRIC
Color/Appearance	Visual	Black	Black
Bulk Density	ASTM D1895	0.243 oz/in^3	0.42 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	38 - 78 microns
Sintered Part Density	ASTM D792	0.503 oz/in^3	0.87 g/cm^3
Ultimate Tensile Strength (XY)	ASTM D638	7,000 psi	48 MPa
Ultimate Tensile Strength (Z)	ASTM D638	5,400 psi	37 MPa
Tensile Modulus (XY)	ASTM D638	490,000 psi	3,378 MPa
Tensile Modulus (Z)	ASTM D638	310,000 psi	2,137 MPa
Elongation at Break (XY)	ASTM D638	4%	4%
Elongation at Break (Z)	ASTM D638	4%	4%

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 640-GSL 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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