

# PA 840-GSL

High Performance Extremely Light Weight Nylon 11

## Technical Data Sheet

### POWDER PROPERTIES

### TEST METHOD

### ALM PA 840-GSL

Bulk Density	ASTM D1895	0.42 grams/CC
Average Particle Size (D50)	Laser Diffraction	50 microns
Particle Size Range (D10-D90)	Laser Diffraction	38 to 78 microns
Sintered Part Density	ASTM D792	0.87 grams/CC

### THERMAL PROPERTIES

### TEST METHOD

### ALM PA 840-GSL

Melting Point	ASTM D3418	200 Deg C
Melt Flow Rate (3min, 5.0kg, 235C)	ASTM D1238	13 grams/10min

### MECHANICAL PROPERTIES

### TEST METHOD

### ALM PA 840-GSL

Heat Deflection Temp @ 0.45 MPa	ASTM D648	Awaiting testing results
Heat Deflection Temp @ 1.82 MPa	ASTM D648	Awaiting testing results
Ultimate Tensile Strength (XY)	ASTM D638	48 MPa / 7,000 psi
Ultimate Tensile Strength (Z)	ASTM D638	37 MPa / 5,400 psi
Tensile Modulus (XY)	ASTM D638	3,378 MPa / 490 kpsi
Tensile Modulus (Z)	ASTM D638	2,137 MPa / 308 kpsi
Elongation at Break (XY)	ASTM D638	4.0%
Elongation at Break (Z)	ASTM D638	3.0%
Coefficient Thermal Expansion (25-100C)	ASTM E831	Awaiting testing results
Coefficient Thermal Expansion (100-170C)	ASTM E831	Awaiting testing results
Volume Resistance		Awaiting testing results
Surface Resistance		Awaiting testing results

Actual part properties may vary slightly from those listed above based on processing parameters, operating conditions, and material usage. The above properties were based on virgin ALM PA 840-GSL using nominal operating parameters on a 2500+ platform. Advanced Laser Materials, LLC makes no warranties of materials for any particular application, nor does it make a warranty of any type, expressed or implied, including, but not limited to, the warranties of merchantability for a particular purpose.



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