PA 850-Nat

High Performance Nylon 11 Material

Technical Data Sheet

POWDER PROPERTIES	TEST METHOD	ALM PA 850-Nat
Bulk Density	ASTM D1895	0.52 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	1.01 grams/CC

THERMAL PROPERTIES	TEST METHOD	ALM PA 850-Nat
Melting Point	ASTM D3418	189 Deg C
Melt Flow Rate (3min, 5.0kg, 235C)	ASTM D1238	26 grams/10min

MECHANICAL PROPERTIES	TEST METHOD	ALM PA 850-Nat
Heat Deflection Temp @ 0.45 MPa	ASTM D648	188 Deg C
Heat Deflection Temp @ 1.82 MPa	ASTM D648	48 Deg C
Ultimate Tensile Strength (XY)	ASTM D638	48 MPa / 6,961 psi
Yield Tensile Strength (XY)	ASTM D638	37 MPa / 5,366 psi
Tensile Modulus (XY)	ASTM D638	1,517 MPa / 220 kpsi
Flexural Modulus (XY)	ASTM D790	2,137 MPa / 5,400 psi
Elongation at Break (XY)	ASTM D638	47%
Ultimate Flexural Strength (XY)	ASTM D790	46 MPa / 6,672 psi)
Volume Resistivity	ASTM D257	1.3 x 10^13 ohm-cm
Surface Resistivity	ASTM D257	4.9 x 10^12 ohm
Dielectric Strength	ASTM D149	18.5 kV/mm

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 850-Nat 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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