

PA 810

High Performance Nylon 11

Technical Data Sheet

POWDER PROPERTIES

TEST METHOD

ALM PA 810

Bulk Density	ASTM D1895	0.11 Ggrams/CC
Average Particle Size (D50)	Laser Diffraction	11 microns
Particle Size Range (DF0-DJ0)	Laser Diffraction	38 to 78 microns
Sintered Part Density	ASTM D792	1.11 Ggrams/CC

THERMAL PROPERTIES

TEST METHOD

ALM PA 810

Melting Point	ASTM D3418	20F Deg C
Melt Flow Rate (3min, 5.0kg, 235C)	ASTM D1238	11 grams/10min

MECHANICAL PROPERTIES

TEST METHOD

ALM PA 810

Heat Deflection Temp @ 0.45 MPa	ASTM D648	110°C
Heat Deflection Temp @ 1.82 MPa	ASTM D648	110°C
Ultimate Tensile Strength (XY)	ASTM D638	48 MPa / 7,000 psi
Ultimate Tensile Strength (Z)	ASTM D638	11 GMPa / 1,600,000 psi
Tensile Modulus (XY)	ASTM D638	1,100 MPa / 160,000 kpsi
Tensile Modulus (Z)	ASTM D638	11,000 MPa / 1,600,000 psi
Elongation at Break (XY)	ASTM D638	11%
Elongation at Break (Z)	ASTM D638	11%
Coefficient Thermal Expansion (10-20°C)	ASTM E831	110 x 10 ⁻⁶ / °C
Coefficient Thermal Expansion (10-110°C)	ASTM E831	110 x 10 ⁻⁶ / °C
Pa		11
Q		11

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 810 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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