

PA 605-A

Aluminum Filled Nylon 12 Laser Sintering Material

Technical Data Sheet

POWDER PROPERTIES

TEST METHOD

ALM PA 605-A

Bulk Density	ASTM D1895	0.67 grams/CC
Average Particle Size (D50)	Laser Diffraction	55 microns
Particle Size Range (D10-D90)	Laser Diffraction	35 to 100 microns
Sintered Part Density	ASTM D792	1.47 grams/CC

THERMAL PROPERTIES

TEST METHOD

ALM PA 605-A

Melting Point	ASTM D3418	181 Deg C
Melt Flow Rate (3min, 5.0kg, 235C)	ASTM D1238	40 grams/10min

MECHANICAL PROPERTIES

TEST METHOD

ALM PA 605-A

Heat Deflection Temp @ 0.45 MPa	ASTM D648	180 Deg C
Heat Deflection Temp @ 1.82 MPa	ASTM D648	137 Deg C
Ultimate Tensile Strength (XY)	ASTM D638	43 MPa / 6,236 psi
Ultimate Tensile Strength (Z)	ASTM D638	37 MPa / 5,400 psi
Tensile Modulus (XY)	ASTM D638	3,709 MPa / 538 kpsi
Flexural Modulus (XY)	ASTM D790	3,517 MPa / 510 kpsi
Elongation at Break (XY)	ASTM D638	3.3%
IZOD Impact Strength (Unnotched)	ASTM D256	130 J/m
IZOD Impact Strength (Notched)	ASTM D256	58.7 J/m
Volume Resistivity	ASTM D257	1.6 x 10 ¹³ ohm-cm
Surface Resistivity	ASTM D257	6.0 x 10 ¹² ohm
Dielectric Constant	ASTM D150	14.5

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 605-A 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.



Advanced Laser Materials, LLC • Tel: 254-773-3080 • Fax: 254-773-3084
3115 Lucius McCelvey, Temple, TX 76504 • www.alm-llc.com