PA 601-CF

Carbon Fiber Filled Nylon 12 Laser Sintering Material

Technical Data Sheet

POWDER PROPERTIES	TEST METHOD	ALM PA 601-CF
Bulk Density	ASTM D1895	0.44 grams/CC
Average Particle Size (D50)	Laser Diffraction	50 microns
Particle Size Range (D10-D90)	Laser Diffraction	35 to 100 microns
Sintered Part Density	ASTM D792	1.07 grams/CC

THERMAL PROPERTIES	TEST METHOD	ALM PA 601-CF
Melting Point	ASTM D3418	184 Deg C
Melt Flow Rate (3min, 5.0kg, 235C)	ASTM D1238	50 grams/10min

MECHANICAL PROPERTIES	TEST METHOD	ALM PA 601-CF
Heat Deflection Temp @ 0.45 MPa	ASTM D648	178 Deg C
Heat Deflection Temp @ 1.82 MPa	ASTM D648	177 Deg C
Ultimate Tensile Strength (XY)	ASTM D638	66 MPa / 9,500 psi
Tensile Modulus (XY)	ASTM D638	2,896 MPa / 420 kpsi
Flexural Modulus (XY)	ASTM D790	3,447 MPa / 500 kpsi
Elongation at Break (XY)	ASTM D638	3.6%
IZOD Impact Strength (Unnotched)	ASTM D256	110 J/m
IZOD Impact Strength (Notched)	ASTM D256	54 J/m
Volume Resistivity (22C, 50%RH, 500V)	ASTM D257	7.8 x 10^14 ohm-cm
Surface Resistivity (22C, 50%RH, 500V)	ASTM D257	2.9 x 10^14 ohm

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 601-CF 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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