FR 106

Fire Retardant Nylon 11 Laser Sintering Material

Technical Data Sheet

POWDER PROPERTIES	TEST METHOD	ALM FR 106
Bulk Density	ASTM D1895	0.45 grams/CC
Average Particle Size (D50)	Laser Diffraction	95 microns
Particle Size Range (D10-D90)	Laser Diffraction	45 to 151 microns
Sintered Part Density	ASTM D792	1.07 grams/CC

THERMAL PROPERTIES	TEST METHOD	ALM FR 106
Melting Point	ASTM D3418	189 Deg C
Melt Flow Rate (3min, 5.0kg, 235C)	ASTM D1238	9 grams/10min

MECHANICAL PROPERTIES	TEST METHOD	ALM FR 106
Heat Deflection Temp @ 0.45 MPa	ASTM D648	186 Deg C
Heat Deflection Temp @ 1.82 MPa	ASTM D648	70 Deg C
Ultimate Tensile Strength (XY)	ASTM D638	46 MPa / 6,700 psi
Ultimate Tensile Strength (Z)	ASTM D638	39 MPa / 5,700 psi
Tensile Strength Yield (XY)	ASTM D638	26 MPa / 3,800 psi
Tensile Strength Yield (Z)	ASTM D638	21 MPa / 3,000 psi
Flexural Modulus	ASTM D790	1,345 MPa / 195 kpsi
Elongation at Break (XY)	ASTM D638	38%
Elongation at Break (Z)	ASTM D638	21%
Flammability 12 Second Burn	FAR 25.853	Pass
Flammability 60 Second Burn	FAR 25.853	Pass
Smoke Density		Pass

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 FR-106 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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