

ALM PA 601-CF Filled Nylon 12 Prototyping Polymer

Category : Polymer , Rapid Prototyping Polymer , Thermoplastic , Nylon , Nylon 12 , Nylon 12, Carbon Fiber Filled

Material Notes:

Carbon fiber filled nylon 12 easy to process, strong light weight filled material. Low density, good dimensional stability while maintaining excellent mechanical properties. Fibers have been optimized to produce a smooth surface finish without sacrificing feature detail for tensile properties. Excellent choice for rugged industrial applications with an HDT of ~177° C. Information provided by Advanced Laser Materials (ALM).

Order this product through the following link:

http://www.lookpolymers.com/polymer_ALM-PA-601-CF-Filled-Nylon-12-Prototyping-Polymer.php

Physical Properties	Metric	English	Comments
Bulk Density	0.440 g/cc	0.0159 lb/in ³	ASTM D1895
Density	1.07 g/cc	0.0387 lb/in ³	Sintered; ASTM D792
Particle Size	50 µm	50 µm	D50
	35 - 100 µm	35 - 100 µm	D10-D90
Melt Flow	50 g/10 min @Load 5.00 kg, Temperature 235 °C	50 g/10 min @Load 11.0 lb, Temperature 455 °F	3 min; ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	66.0 MPa	9570 psi	XY; ASTM D638
Elongation at Break	3.6 %	3.6 %	XY; ASTM D638
Tensile Modulus	2.896 GPa	420.0 ksi	XY; ASTM D638
Flexural Modulus	3.447 GPa	499.9 ksi	XY; ASTM D790
Izod Impact, Notched	0.540 J/cm	1.01 ft-lb/in	ASTM D256
Izod Impact, Unnotched	1.10 J/cm	2.06 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
Melting Point	184 °C	363 °F	ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	178 °C	352 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	177 °C	351 °F	ASTM D648

Electrical Properties	Metric	English	Comments
Volume Resistivity	7.80e+14 ohm-cm	7.80e+14 ohm-cm	50% RH, 500V; ASTM D257
Surface Resistance	2.90e+14 ohm	2.90e+14 ohm	50% RH, 500V; ASTM D257

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