

ALM PA 605-A Filled Nylon 12 Prototyping Polymer

Category : Polymer , Rapid Prototyping Polymer , Thermoplastic , Nylon , Nylon 12

Material Notes:

50% Aluminum filled nylon 12 that can produce accurate parts with excellent part strength and surface detail. Drop in replacement for other commercially available 50% aluminum filled materials with an increase in recyclability. Improved heat transfer, good dimensional stability and pleasant gray metallic part appearance. Easy to post process; good machinability and can be sanded. Information provided by Advanced Laser Materials (ALM).

Order this product through the following link:

http://www.lookpolymers.com/polymer_ALM-PA-605-A-Filled-Nylon-12-Prototyping-Polymer.php

Physical Properties	Metric	English	Comments
Bulk Density	0.670 g/cc	0.0242 lb/in ³	ASTM D1895
Density	1.47 g/cc	0.0531 lb/in ³	Sintered; ASTM D792
Particle Size	55 µm	55 µm	D50
	35 - 100 µm	35 - 100 µm	D10-D90
Melt Flow	40 g/10 min @Load 5.00 kg, Temperature 235 °C	40 g/10 min @Load 11.0 lb, Temperature 455 °F	3 min; ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	37.0 MPa	5370 psi	Z; ASTM D638
	43.0 MPa	6240 psi	XY; ASTM D638
Elongation at Break	3.3 %	3.3 %	XY; ASTM D638
Tensile Modulus	3.709 GPa	537.9 ksi	XY; ASTM D638
Flexural Modulus	3.517 GPa	510.1 ksi	XY; ASTM D790
Izod Impact, Notched	0.587 J/cm	1.10 ft-lb/in	ASTM D256
Izod Impact, Unnotched	1.30 J/cm	2.44 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
Melting Point	181 °C	358 °F	ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	180 °C	356 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	137 °C	279 °F	ASTM D648

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.60e+13 ohm-cm	1.60e+13 ohm-cm	ASTM D257
Surface Resistance	6.00e+12 ohm	6.00e+12 ohm	ASTM D257
Dielectric Constant	14.5	14.5	ASTM D150

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