MATERIAL SPECIFICATIONS

PA 415-GS

HIGHLIGHTS

- Highly recyclable 40% glass filled nylon 12
- Parts exhibit excellent stiffness and mechanical properties
- Tightly controlled particle size for a higher detailed surface finish
- Excellent long term wear resistance

APPLICATIONS

- Consumer sporting goods
- Mould and tooling applications
- Form, fit, or functional prototypes requiring stiffness
- Ideal for applications requiring thermal testing at elevated temperatures

TYPICAL PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	U.S. STANDARD	METRIC
Colour/Appearance	Visual	Light Grey	Light Grey
Bulk Density	ASTM D1895	0.393 oz/in^3	0.68 g/cm^3
Average Particle Size (D50)	Laser Diffraction	0.002 inches	47 microns
Particle Size Range (D10-D90)	Laser Diffraction	0.001 - 0.003 inches	35 - 66 microns
Sintered Part Density	ASTM D792	0.861 oz/in^3	1.49 g/cm^3
Heat Deflection Temperature	ASTM D648	273°F @ 264 psi	134°C @ 1.82 MPa
Heat Deflection Temperature	ASTM D648	354°F @ 66 psi	179°C @ 0.45 MPa
Ultimate Tensile Strength (XY)	ASTM D638	5,801 psi	40 MPa
Tensile Modulus (XY)	ASTM D638	391,601 psi	2,700 MPa
Flexural Modulus (XY)	ASTM D790	450,487 psi	3,106 MPa
Elongation at Break (XY)	ASTM D638	3%	3%
Elongation at Break (Z)	ASTM D638	2%	2%
Izod Impact Strength - Notched (XY)	ASTM D256	0.8 ft-lb/in	41 J/m
Dielectric Constant	ASTM D150	3.7	3.7

For reference use only. Actual properties may vary significantly from those listed above based on processing parameters, operating conditions and end use applications. The above properties were based on virgin ALM PA 415-GS using normal processing parameters on a 2500+ platform as outlined in the ALM Material Processing Guide. Advanced Laser Materials, LLC makes no warranties of materials for any application, nor does it make a warranty of any type, expressed or implied, but not limited to, the

RPS

RP Support Ltd.
14 Bridgegate Business Park
Gatehouse Way
Aylesbury
Buckinghamshire
HP19 8XN
United Kingdom
☎ +44 (0)1296 425665
+44 (0)1296 425665
support@rpsupport.co.uk

alm