

GLASS SPHERE FILLED

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
- Mold 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	ENGLISH	METRIC
Color/Appearance	Visual	Light Gray	Light Gray
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

The material properties provided herein are for reference purposes only. Actual values may vary significantly as they are dramatically affected by part geometry and process parameters. Material specifications are subject to change without notice.



AN EOS COMPANY

254.773.3080

www.alm-llc.com

info@alm-llc.com

@ALM_Global

www.linkedin.com/company/advanced-laser-materials

3115 Lucius McCelvey, Temple, TX 76504