

GLASS SPHERE FILLED

PA 614-GS

HIGHLIGHTS

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

APPLICATIONS

- Automotive engine components
- Mold and tooling applications
- Complex geometries requiring accuracy and feature resolution
- Ideal for rugged applications requiring stiffness at elevated temperatures

TYPICAL PHYSICAL PROPERTIES

| PROPERTY | TEST METHOD | ENGLISH | METRIC |
|---------------------------------------|-------------------|--|------------------------|
| Color/Appearance | Visual | Light Gray | Light Gray |
| Bulk Density | ASTM D1895 | 0.364 oz/in ³ | 0.63 g/cm ³ |
| Average Particle Size (D50) | Laser Diffraction | 0.002 inches | 55 microns |
| Particle Size Range (D10-D90) | Laser Diffraction | 0.001 - 0.004 inches | 35 - 100 microns |
| Sintered Part Density | ASTM D792 | 0.705 oz/in ³ | 1.22 g/cm ³ |
| Heat Deflection Temperature | ASTM D648 | 205° F @ 264 psi | 96° C @ 1.82 MPa |
| Heat Deflection Temperature | ASTM D648 | 315° F @ 66 psi | 157° C @ 0.45 MPa |
| Ultimate Tensile Strength (XY) | ASTM D638 | 7,397 psi | 51 MPa |
| Tensile Modulus (XY) | ASTM D638 | 464,120 psi | 3,200 MPa |
| Flexural Modulus (XY) | ASTM D790 | 420,609 psi | 2,900 MPa |
| Elongation at Break (XY) | ASTM D638 | 9% | 9% |
| Izod Impact Strength - Notched (XY) | ASTM D256 | 1.5 ft-lb/in | 65 J/m |
| Izod Impact Strength - Unnotched (XY) | ASTM D256 | 3.2 ft-lb/in | 144 J/m |
| Dielectric Constant | ASTM D150 | 3.7 | 3.7 |
| Chemical Resistance | | Alkalines, hydrocarbons, fuels, solvents | |

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