

GLASS SPHERE FILLED

PA 617-GS

HIGHLIGHTS

- Black 50% glass filled nylon 12
- Parts exhibit excellent stiffness and mechanical properties
- Tightly controlled glass particle size for a higher detailed surface finish
- Powder flow optimized for most LS machines

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	0.387 oz/in ³	0.67 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	0.861 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	5,500 psi	38 MPa
Tensile Modulus (XY)	ASTM D638	857,172 psi	5,910 MPa
Flexural Modulus (XY)	ASTM D790	478,624 psi	3,300 MPa
Elongation at Break (XY)	ASTM D638	2%	2%
Izod Impact Strength - Notched (XY)	ASTM D256	1.8 ft-lb/in	96 J/m
Izod Impact Strength - Unnotched (XY)	ASTM D256	2.3 ft-lb/in	120 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.



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About RPS

RPS has been in operation over ten years and our engineers collectively have decades of experience working with stereolithography and laser sintering equipment. With proven experience in 3D printing, engineering, electronics, computer-aided engineering and more, we understand the technology and can offer advice on how it can suit your specific application.

We manufacture the **NEO800** stereolithography system, designed, developed and built by RPS engineers. We are also an HP Channel Partner of HP's Multi-Jet Fusion technology and offer a range of materials and software through our partnership with market-leading suppliers ALM, DSM Somos® and Materialise.

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