

GLASS SPHERE FILLED

**PA 840-GSL  
Black**

**HIGHLIGHTS**

- Crisp, melt mixed black material
- Best strength to weight ratio properties of any LS material
- Reduced monomer outgassing compared to other nylon 11's
- Excellent surface finish and detail

**APPLICATIONS**

- Aerospace/UAV components
- Rugged outdoor use
- Motor sports and racing
- Ideal for applications requiring a balance of strength, lighter weight, and ductility without sacrificing dimensional stability and surface finish

**TYPICAL PHYSICAL PROPERTIES**

| PROPERTY                       | TEST METHOD       | ENGLISH                  | METRIC                 |
|--------------------------------|-------------------|--------------------------|------------------------|
| Color/Appearance               | Visual            | Black                    | Black                  |
| Bulk Density                   | ASTM D1895        | 0.243 oz/in <sup>3</sup> | 0.42 g/cm <sup>3</sup> |
| Average Particle Size (D50)    | Laser Diffraction | 0.002 inches             | 50 microns             |
| Particle Size Range (D10-D90)  | Laser Diffraction | 0.001 - 0.003 inches     | 38 - 78 microns        |
| Sintered Part Density          | ASTM D792         | 0.503 oz/in <sup>3</sup> | 0.87 g/cm <sup>3</sup> |
| Ultimate Tensile Strength (XY) | ASTM D638         | 7,000 psi                | 48 MPa                 |
| Ultimate Tensile Strength (Z)  | ASTM D638         | 5,400 psi                | 37 MPa                 |
| Tensile Modulus (XY)           | ASTM D638         | 490,000 psi              | 3,378 MPa              |
| Tensile Modulus (Z)            | ASTM D638         | 310,000 psi              | 2,137 MPa              |
| Elongation at Break (XY)       | ASTM D638         | 4%                       | 4%                     |
| Elongation at Break (Z)        | ASTM D638         | 4%                       | 4%                     |

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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