

UNFILLED PA 11 AND PA 12

PA 850-Black

HIGHLIGHTS

- Sleek, melt mixed black surface finish nylon 11
- Parts exhibit excellent mechanical properties
- Easy to process on most laser sintering platforms
- Specially formulated for properties to be achieved using a single scan

APPLICATIONS

- Cleated footwear devices
- Highly functional end use parts
- Automotive housings, enclosures, and connectors
- Ideal for applications requiring rigorous functionality and testing

TYPICAL PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	ENGLISH	METRIC
Color/Appearance	Visual	Black	Black
Bulk Density	ASTM D1895	0.289 oz/in ³	0.50 g/cm ³
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	0.595 oz/in ³	1.03 g/cm ³
Heat Deflection Temperature	ASTM D648	118° F @ 264 psi	48° C @ 1.82 MPa
Heat Deflection Temperature	ASTM D648	370° F @ 66 psi	188° C @ 0.45 MPa
Ultimate Tensile Strength (XY)	ASTM D638	6,961 psi	48 MPa
Ultimate Tensile Strength (Z)	ASTM D638	6,092 psi	42 MPa
Tensile Modulus (XY)	ASTM D638	213,931 psi	1,475 MPa
Tensile Modulus (Z)	ASTM D638	206,969 psi	1,427 MPa
Elongation at Break (XY)	ASTM D638	51%	51%
Flexural Modulus	ASTM D790	190,000 psi	1,310 MPa
Izod Impact Strength - Notched	ASTM D256	1.4 ft-lb/in	74 J/m
Hardness (Shore D)	ASTM D2240	74	74

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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