



AN EOS COMPANY



# PA 650 Black

## PA12 Black

High mechanical and thermal loads resistance. Scratch resistance and less susceptibility to soiling, making it visually appealing in technical areas. Throughout Black part. Suitable for fully functional parts in design quality, often appearing better than white parts.

### HIGHLIGHTS

- A true black color out of the machine
- Easy to process across most laser sintering platforms
- Excellent detail and feature resolution

### APPLICATIONS

- Thin walled ducting components
- Automotive, consumer products and sporting goods
- Prototypes requiring durability, accuracy and end-use functionality
- Ideal for low to mid-volume rapid prototyping and manufacturing



### HEADQUARTERS

#### ALM - Advanced Laser Materials

3115 Lucius McCelvey, Temple, TX 76504  
P: 1.254.773.3080  
FAX: 1.254.773.3084  
E: [info@advancedlasermaterials.com](mailto:info@advancedlasermaterials.com)

[AdvancedLaserMaterials.com](http://AdvancedLaserMaterials.com)

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## UNFILLED PA11 AND PA12

TYPICAL PHYSICAL PROPERTIES			
PROPERTY	TEST METHOD	IMPERIAL	METRIC
Color/Appearance	Visual	White	White
Bulk Density	ASTM D1895	0.266 oz/in <sup>3</sup>	0.48 g/cm <sup>3</sup>
Average Particle Size (D50)	Laser Diffraction	0.002 inches	55 microns
Particle Size Range (D10-D90)	Laser Diffraction	0.001 - 0.004 inches	30 - 100 microns
Sintered Part Density	ASTM D792	0.590 oz/in <sup>3</sup>	0.98 g/cm <sup>3</sup>
Heat Deflection Temperature	ASTM D648	203° F @ 264 psi	95° C @ 1,82 MPa
Heat Detection Temperature	ASTM D648	356° F @ 66 psi	180° C @ 0,45 MPa
Ultimate Tensile Strength (XY)	ASTM D638	6,962 psi	48 MPa
Tensile Modulus (XY)	ASTM D638	247,000 psi	1,850 MPa
Flexural Modulus (XY)	ASTM D790	217,000 psi	1,500 MPa
Elongation at Break (XY)	ASTM D638	24%	24%
Izod Impact Strength - Notched (XY)	ASTM D256	0.6 ft-lb/in	32 J/m
Izod Impact Strength - Unnotched (XY)	ASTM D256	6.3 ft-lb/in	336 J/m
Dielectric Constant	ASTM D150	2,73 @ 1kHz	2,73 @ 1kHz
Hardness (Shore D)	ASTM D2240	75	75

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.