

## SELECTIVE LASER SINTERING

# PA 11 BLACK

Current Supplier's Material: PA 850 Black



## PRODUCT DESCRIPTION

PA 11 Black provides excellent ductility and temperature resistance without sacrificing tensile strength. It offers one of the highest elongation break thresholds in the nylon family.

## APPLICATIONS

The material is suited for functional, moving parts with features like snap fits and living hinges. Its black color makes it desirable for optical applications due to low reflectivity.



## KEY PRODUCT BENEFITS

- High elongation at break
- Flexibility
- Uniform black color

## PROPERTIES

PROPERTY	TEST METHOD	VALUE
Color	-	Black
Sintered Density*	ASTM D792	1.03 g/cm <sup>3</sup>
Water absorption, 20 °C, 50 % Relative Humidity	ASTM D570	0.3 ± 0.2%
Water absorption, 24 hrs. in boiling water		1.5 ± 0.2%
E-Module (x-y plane)	ASTM D638, test speed 10mm/min	1800 ± 200 MPa
E-Module (z plane)		1800 ± 200 MPa
Tensile strength (x-y plane)		52 ± 4 MPa
Tensile strength (z plane)		49 ± 4 MPa
Elongation at break (x-y plane)		30% ± 7%
Elongation at break (z plane)		18 +/- 7%
Heat deflection temperature @ 0.46 MPa*	ASTM D648	188 °C
Heat deflection temperature @ 1.82 MPa*		48 °C

\*From supplier data sheet

## TOLERANCES

For well-designed parts, tolerances of ±0.010 in. plus ±0.0015 in./in. for each additional inch can typically be achieved. Note that tolerances may change depending on part geometry.