

MULTI JET FUSION

# PA 12 BLACK

Current Supplier's Material: HP 3D High Reusability PA12

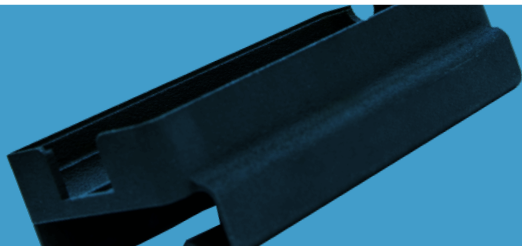


## PRODUCT DESCRIPTION

PA 12 Black is a high tensile strength nylon suitable for prototypes and end-use production parts. Final parts exhibit quality surface finishes, fine feature resolution, and more consistent mechanical properties when compared to processes like selective laser sintering.

## APPLICATIONS

Multi Jet Fusion's PA 12 black is often used to build housings, enclosures, and fixtures, and can work well for snap fits and hinges.



## KEY PRODUCT BENEFITS

- Near isotropic mechanical properties
- Water- and airproof without further treatment

## PROPERTIES

| PROPERTY                                       | TEST METHOD                    | VALUE                  |
|--|--------------------------------|------------------------|
| Color  | -                              | Black                  |
| Sintered Density*                              | ASTM D792                      | 1.01 g/cm <sup>3</sup> |
| Water absorption, 20 °C, 50% Relative Humidity | ASTM D570                      | 0.5 ± 0.2%             |
| Water absorption, 24 hrs. in boiling water     |                                | 2.0 ± 0.3%             |
| E-Module (x-y plane)                           | ASTM D638, test speed 10mm/min | 1900 MPa ± 200 MPa     |
| E-Module (z plane)                             |                                | 1900 MPa ± 200 MPa     |
| Tensile strength (x-y plane)                   |                                | 49 ± 4 MPa             |
| Tensile strength (z plane)                     |                                | 47 ± 4 MPa             |
| Elongation at break (x-y plane)                |                                | 12% ± 4%               |
| Elongation at break (z plane)                  | 9% ± 4%                        |                        |
| Heat deflection temperature @ 0.46 MPa*        | ASTM D648                      | 175 °C                 |
| Heat deflection temperature @ 1.82 MPa*        |                                | 95 °C                  |

\*From supplier data sheet

## TOLERANCES

For well-designed parts, tolerances of ±0.012 in. plus ±0.002 in./in. for each additional inch can typically be achieved. Note that tolerances may change depending on part geometry.