

FDM Nylon 6



FDM Nylon 6™ combines strength and toughness superior to other FDM thermoplastics, for applications that require strong, customized parts and tooling that lasts longer and withstands rigorous functional testing.

Engineered with nylon 6, a popular thermoplastic for manufacturing, this material works with the Fortus 900mc™ to produce durable parts with a clean finish and high break resistance. FDM Nylon 6 is ideal for product manufacturers and development engineers in automotive, aerospace, consumer goods and industrial manufacturing.

CONDITIONED*			
Mechanical Properties ¹	Test Method	Value	
		XZ Axis	ZX Axis
Tensile Strength, Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	49.3 MPa (7,150 psi)	28.9 MPa (4,200 psi)
Tensile Strength, Ultimate (Type 1, 0.125", 0.2"/min)	ASTM D638	67.6 MPa (9,800 psi)	36.5 MPa (5,300 psi)
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	2,232 MPa (323,700 psi)	1,817 MPa (263,500 psi)
Elongation at Break (Type 1, 0.125", 0.2"/min)	ASTM D638	38% (38%)	3.2% (3.2%)
Elongation at Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	2.3% (2.3%)	1.7% (1.7%)
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	97.2 MPa (14,100 psi)	82 MPa (11,900 psi)
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	2,196 MPa (318,500 psi)	1,879 MPa (272,500 psi)
Flexural Strain at Break	ASTM D790	No Break (No Break)	No Break (No Break)
IZOD impact - notched (Method A, 23 °C)	ASTM D256	106 J/m (2.0 ft-lb/in)	43 J/m (0.8 ft-lb/in)
IZOD impact - unnotched (Method A, 23 °C)	ASTM D256	2,873 J/m (53.8 ft-lb/in)	192 J/m (3.6 ft-lb/in)

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Thermal Properties ¹	Test Method	Value
Heat Deflection (HDT) @ 264 psi	ASTM D648	93 °C (199 °F)

System Availability	Layer Thickness Capability	Support Material	Color
Fortus 900mc	0.010 inch (0.254 mm) 0.013 inch (0.330 mm)	SR-110	■ Black

*Conditioned = 20 °C and 50% RH for 40 hours

The information presented are typical values intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. End-use material performance can be impacted (+/-) by, but not limited to, part design, end-use conditions, test conditions, etc. Actual values will vary with build conditions. Tested parts were built on Fortus 400mc™ @ 0.010" (0.254 mm) slice. Product specifications are subject to change without notice.

The performance characteristics of these materials may vary according to application, operating conditions, or end use. Each user is responsible for determining that the Stratasys material is safe, lawful, and technically suitable for the intended application, as well as for identifying the proper disposal (or recycling) method consistent with applicable environmental laws and regulations. Stratasys makes no warranties of any kind, express or implied, including, but not limited to, the warranties of merchantability, fitness for a particular use, or warranty against patent infringement.

¹Literature value unless otherwise noted.

Orientation: See Stratasys Testing white paper for more detailed description of build orientations.

XZ = X or "on edge"

XY = Y or "flat"

ZX = or "upright"

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