FDM Nylon 6

PRODUCTION-GRADE THERMOPLASTIC FOR FORTUS 3D PRINTERS

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

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At the core:
Advanced FDM Technology

FDM® (fused deposition modeling) technology works with engineering-grade thermoplastics to build strong, long-lasting and dimensionally stable parts with the best accuracy and repeatability of any 3D printing technology. These parts are tough enough to be used as advanced conceptual models, functional prototypes, manufacturing tools and production parts.

Meet production demands

FDM systems are as versatile and durable as the parts they produce. Advanced FDM 3D Printers boast the largest build envelopes and material capacities in their class, delivering longer, uninterrupted build times, bigger parts and higher quantities than other additive manufacturing systems, delivering high throughput, duty cycles and utilization rates.

Opening the way for new possibilities

FDM 3D Printers streamline processes from design through manufacturing, reducing costs and eliminating traditional barriers along the way. Industries can cut lead times and costs, products turn out better and get to market faster.

No special facilities needed

FDM 3D Printers are easy to operate and maintain compared to other additive fabrication systems because there are no messy powders or resins to handle and contain, and no special venting is required because FDM systems don't produce noxious fumes, chemicals or waste.

THERMAL PROPERTIES[1]	TEST METHOD	ENGLISH	METRIC
Heat Deflection (HDT) @ 264 psi	ASTM D648	199 °F	93 °C

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.

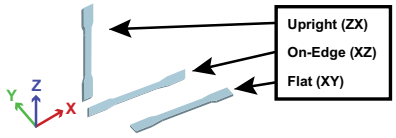
[1]Literature value unless otherwise noted.

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

XZ = X or "on edge"

XY = Y or "flat"

ZX = or "upright"



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