



# FDM Nylon 12

## PRODUCTION-GRADE THERMOPLASTIC FOR FORTUS 3D PRODUCTION SYSTEMS

FDM Nylon 12™ is the first material in Stratasys' new family of nylon offerings, complementing the current portfolio of FDM® materials and enabling new applications requiring: repetitive snap fits, high fatigue resistance, strong chemical resistance and press (friction) fit inserts. Nylon 12 is primarily used in aerospace, automotive and consumer goods industries to take on everything from tooling, jigs and fixtures to covers, panels and vibration resistant components. For use with Fortus 360mc™, 380mc™, 400mc™, 450mc™ and 900mc™ 3D Production Systems, FDM Nylon 12 offers unparalleled toughness and a simple, clean process – free of powders.

CONDITIONED*					
MECHANICAL PROPERTIES¹	TEST METHOD	ENGLISH		METRIC	
		XZ AXIS	ZX AXIS	XZ AXIS	ZX AXIS
Tensile Strength, Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	4,600 psi	4,100 psi	32 MPa	28 MPa
Tensile Strength, Ultimate (Type 1, 0.125", 0.2"/min)	ASTM D638	6,650 psi	5,600 psi	46 MPa	38.5 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	186,000 psi	165,000 psi	1,282 MPa	1,138 MPa
Elongation at Break (Type 1, 0.125", 0.2"/min)	ASTM D638	30%	5.4%	30%	5.4%
Elongation at Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	2.4%	2.7%	2.4%	2.7%
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	9,700 psi	8,800 psi	67 MPa	61 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	185,000 psi	171,000 psi	1,276 MPa	1,180 MPa
Flexural Strain at Break	ASTM D790	No Break	>10%	No Break	>10%
IZOD impact - notched (Method A, 23°C)	ASTM D256	2.5 ft-lb/in	1 ft-lb/in	135 J/m	53 J/m
IZOD impact - unnotched (Method A, 23°C)	ASTM D256	31 ft-lb/in	3.7 ft-lb/in	1,656 J/m	200 J/m
Compressive Strength, Yield (Method 1, 0.05"/min)	ASTM D695	7,400 psi	7,900 psi	51 MPa	55 MPa
Compressive Strength, Ultimate (Method 1, 0.05"/min)	ASTM D695	24,200 psi	800 psi	167 MPa	6 MPa
Compressive Modulus (Method 1, 0.05"/min)	ASTM D695	730,000 psi	155,000 psi	5,033 MPa	1,069 MPa

UNCONDITIONED (DRY)**					
MECHANICAL PROPERTIES	TEST METHOD	ENGLISH		METRIC	
		XZ AXIS	ZX AXIS	XZ AXIS	ZX AXIS
Tensile Strength, Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	7,700 psi	6,900 psi	53 MPa	48 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	190,000 psi	180,000 psi	1,310 MPa	1,241 MPa
Elongation at Break (Type 1, 0.125", 0.2"/min)	ASTM D638	9.5%	5%	9.5%	5%
Elongation at Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	6.5%	5%	6.5%	5%
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	10,000 psi	8,600 psi	69 MPa	60 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	190,000 psi	180,000 psi	1,300 MPa	1,250 MPa
Flexural Strain at Break	ASTM D790	No Break	>10%	No Break	>10%
IZOD impact - notched (Method A, 23°C)	ASTM D256	2.8 ft-lb/in	0.9 ft-lb/in	150 J/m	50 J/m
IZOD impact - unnotched (Method A, 23°C)	ASTM D256	>37.4 ft-lb/in	5.1 ft-lb/in	>2,000 J/m	275 J/m

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### At the core:

#### Advanced FDM Technology

Fortus 3D Production Systems are powered by FDM (fused deposition modeling) technology. FDM is the industry's leading additive manufacturing technology, and the only one that uses production-grade thermoplastics, enabling the most durable parts. Fortus® systems use a wide range of thermoplastics with advanced mechanical properties so your parts can endure high heat, caustic chemicals, sterilization and high-impact applications.

#### No special facilities needed

You can install a Fortus 3D Production System just about anywhere. No special venting is required because Fortus systems don't produce noxious fumes, chemicals or waste.

#### No special skills needed

Fortus 3D Production Systems are easy to operate and maintain compared to other additive fabrication systems because there are no messy powders to handle and contain. They're so simple, an operator can be trained to operate a Fortus system in less than 30 minutes.

#### Get your benchmark on the future of manufacturing

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THERMAL PROPERTIES <sup>1</sup>	TEST METHOD	ENGLISH	METRIC
Heat Deflection (HDT) @ 66 psi annealed	ASTM D648	207°F	97°C
Heat Deflection (HDT) @ 66 psi unannealed	ASTM D649	167°F	75°C
Heat Deflection (HDT) @ 264 psi annealed	ASTM D650	180°F	82°C
Heat Deflection (HDT) @ 264 psi unannealed	ASTM D651	131°F	55°C
Melting Point	-----	352°F	178°C

OTHER	TEST METHOD	VALUE
Specific Gravity	ASTM D792	1.00
Flame Classification	UL94	HB
UL File Number	-----	E345258



SYSTEM AVAILABILITY	LAYER THICKNESS CAPABILITY	SUPPORT MATERIAL	COLOR
Fortus 360mc	0.013 inch (0.330 mm)	SR-110	■ Black
Fortus 380mc	0.010 inch (0.254 mm)		
Fortus 400mc	0.007 inch (0.178 mm)		
Fortus 450mc			
Fortus 900mc			

<sup>1</sup>Conditioned = 20°C and 50% RH for 72 hours

<sup>2</sup>Unconditioned (Dry) = Direct from FDM system

— Annealed = 2 hours @ 140°C

— Unannealed = direct from FDM system

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.

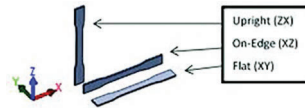
<sup>1</sup>Literature value unless otherwise noted.

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"



# stratasys®

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ISO 9001:2008 Certified

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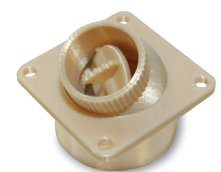
# ULTEM™ 9085

## PRODUCTION-GRADE THERMOPLASTIC FOR FORTUS 3D PRODUCTION SYSTEMS

ULTEM™ 9085 resin is a flame-retardant high-performance thermoplastic for digital manufacturing and rapid prototyping. It is ideal for the transportation industry due to its high strength-to-weight ratio and its FST (flame, smoke and toxicity) rating. This unique material's certifications make it an excellent choice for the commercial transportation industry – especially aerospace, marine and ground vehicles. Combined with a Fortus® 3D Production System, ULTEM 9085 resin allows design and manufacturing engineers to produce fully functional parts that are ideal for advanced functional prototypes or end use without the cost or lead time of traditional tooling.

MECHANICAL PROPERTIES <sup>1</sup>	TEST METHOD	ENGLISH		METRIC	
		XZ ORIENTATION	ZX ORIENTATION	XZ ORIENTATION	ZX ORIENTATION
Tensile Strength, Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	6,800 psi	4,800 psi	47 MPa	33 MPa
Tensile Strength, Ultimate (Type 1, 0.125", 0.2"/min)	ASTM D638	9,950 psi	6,100 psi	69 MPa	42 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	312,000 psi	329,000 psi	2,150 MPa	2,270 MPa
Tensile Elongation at Break (Type 1, 0.125", 0.2"/min)	ASTM D638	5.8%	2.2%	5.8%	2.2%
Tensile Elongation at Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	2.2%	1.7%	2.2%	1.7%
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	16,200 psi	9,900 psi	112 MPa	68 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	331,000 psi	297,000 psi	2,300 MPa	2,050 MPa
Flexural Strain at Break (Method 1, 0.05"/min)	ASTM D790	No break	3.7%	No break	3.7%
IZOD Impact, notched (Method A, 23°C)	ASTM D256	2.2 ft-lb/in	0.9 ft-lb/in	120 J/m	48 J/m
IZOD Impact, un-notched (Method A, 23°C)	ASTM D256	14.6 ft-lb/in	3.2 ft-lb/in	781 J/m	172 J/m
Compressive Strength, Yield (Method 1, 0.05"/min)	ASTM D695	14,500 psi	12,700 psi	100 MPa	87 MPa
Compressive Strength, Ultimate (Method 1, 0.05"/min)	ASTM D695	26,200 psi	13,100 psi	181 MPa	90 MPa
Compressive Modulus (Method 1, 0.05"/min)	ASTM D695	1,030,000 psi	251,000 psi	7,012 MPa	1,731 MPa

THERMAL PROPERTIES <sup>2</sup>	TEST METHOD	ENGLISH	METRIC
Heat Deflection (HDT) @ 264 psi, 0.125" unannealed	ASTM D648	307°F	153°C
Glass Transition Temperature (T <sub>g</sub> )	DSC (SSYS)	367°F	186°C
Coefficient of Thermal Expansion	ASTM E831	3.67x10 <sup>-6</sup> in/(in·°F)	65.27 µm/(m·°C)
Melting Point	-----	Not Applicable <sup>3</sup>	Not Applicable <sup>3</sup>



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THE 3D PRINTING SOLUTIONS COMPANY



# ULTEM™ 9085

## PRODUCTION-GRADE THERMOPLASTIC FOR FORTUS 3D PRODUCTION SYSTEMS

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#### Advanced FDM Technology

Fortus systems are based on FDM® (fused deposition modeling) technology. FDM is the industry's leading additive manufacturing technology, and the only one that uses production-grade thermoplastics, enabling the most durable parts.

Fortus systems use a wide range of thermoplastics with advanced mechanical properties so your parts can endure high heat, caustic chemicals, sterilization and high-impact applications.

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ELECTRICAL PROPERTIES	TEST METHOD	VALUE RANGE
<a href="#">Volume Resistivity</a>	ASTM D257	4.9 x10 <sup>15</sup> - 8.2x10 <sup>15</sup> ohm-cm
<a href="#">Dielectric Constant</a>	ASTM D150-98	3 - 3.2
<a href="#">Dissipation Factor</a>	ASTM D150-98	.0026 - .0027
<a href="#">Dielectric Strength</a>	ASTM D149-09, Method A	110 - 290 V/mil

OTHER <sup>2</sup>	TEST METHOD	VALUE
<a href="#">Specific Gravity</a>	ASTM D792	1.34
<a href="#">Rockwell Hardness</a>	ASTM D785	---
<a href="#">Flame Classification</a>	UL94	V-0 (1.5 mm, 3 mm)
<a href="#">Oxygen Index</a>	ASTM D2863	0.49
<a href="#">OSU Total Heat Release (2 min test, .060" thick)</a>	FAR 25.853	16 kW min/m <sup>2</sup>
<a href="#">UL File Number</a>	-----	E345258
<a href="#">Outgassing</a>		
Total Mass Loss (TML)	ASTM E595	0.41% (1.00% maximum)
Collected Volatile Condensable Material (CVCM)	ASTM E595	-0.1% (0.10% maximum)
Water Vapor Recovered (WVR)	ASTM E595	-0.37% (report)
<a href="#">Fungus Resistance (Method 508.6)</a>	MIL-STD-810G	Passed
<a href="#">Burn Testing</a>		
Horizontal Burn (15 sec)	14 CFR/FAR 25.853	Passed (0.060" thick)
Vertical Burn (60 sec)	14 CFR/FAR 25.853	Passed (0.060" thick)
Vertical Burn (12 sec)	14 CFR/FAR 25.853	Passed (0.060" thick)
45° Ignition	14 CFR/FAR 25.853	Passed (0.060" thick)
<a href="#">Heat Release</a>	14 CFR/FAR 25.853	Passed (0.060" thick)
<a href="#">NBS Smoke Density (flaming)</a>	ASTM F814/E662	Passed (0.060" thick)
<a href="#">NBS Smoke Density (non-flaming)</a>	ASTM F814/E662	Passed (0.060" thick)



# ULTEM™ 9085

## PRODUCTION-GRADE THERMOPLASTIC FOR FORTUS 3D PRODUCTION SYSTEMS

SYSTEM AVAILABILITY	LAYER THICKNESS CAPABILITY	SUPPORT STRUCTURE	AVAILABLE COLORS
Fortus 400mc™ Fortus 450mc™ Fortus 900mc™	0.013 inch (0.330 mm) 0.010 inch (0.254 mm)	Breakaway	 Tan (Natural)  Black

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.

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<sup>1</sup>Build orientation is on side long edge.

<sup>2</sup>Literature value unless otherwise noted.

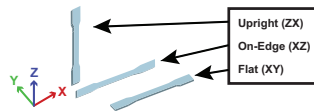
<sup>3</sup>Due to amorphous nature, material does not display a melting point.

<sup>4</sup>All Electrical Property values were generated from the average of test plaques built with default part density (solid). Test plaques were 4.0 x 4.0 x 0.1 inches (102 x 102 x 2.5 mm) and were built both in the flat and vertical orientation. The range of values is mostly the result of the difference in properties of test plaques built in the flat vs. vertical orientation.

XZ = X or "on edge"

XY = Y or "flat"

ZX = or "upright"





# ULTEM™ 9085

**PRODUCTION-GRADE THERMOPLASTIC FOR  
FORTUS 3D PRODUCTION SYSTEMS**

**stratasys**

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ISO 9001:2008 Certified

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# PC (polycarbonate)

## PRODUCTION-GRADE THERMOPLASTIC FOR FORTUS 3D PRODUCTION SYSTEMS

A true industrial thermoplastic, PC (polycarbonate) is widely used in automotive, aerospace, medical and many other applications. PC offers accuracy, durability and stability, creating strong parts that withstand functional testing. A PC part manufactured on a Fortus® 3D Production System is 5 to 60 percent stronger than a part made on previous FDM® systems. It also has superior mechanical properties to ABS and a number of other thermoplastics. When combined with a Fortus 3D Production System, PC gives you strong parts for conceptual modeling, functional prototyping, manufacturing tools, and end-use parts. PC runs the Xtend 500 Fortus Plus option, which enables more than 400 hours of unattended build time.

MECHANICAL PROPERTIES <sup>1</sup>	TEST METHOD	ENGLISH		METRIC	
		XZ AXIS	ZX AXIS	XZ AXIS	ZX AXIS
Tensile Strength, Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	5,800 psi	4,300 psi	40 MPa	30 MPa
Tensile Strength, Ultimate (Type 1, 0.125", 0.2"/min)	ASTM D638	8,300 psi	6,100 psi	57 MPa	42 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	282,000 psi	284,000 psi	1,944 MPa	1,958 MPa
Tensile Elongation at Break (Type 1, 0.125", 0.2"/min)	ASTM D638	4.8%	2.5%	4.8%	2.5%
Tensile Elongation at Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	2.2%	2%	2.2%	2%
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	13,000 psi	9,900 psi	89 MPa	68 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	291,000 psi	261,000 psi	2,006 MPa	1,800 MPa
Flexural Strain at Break (Method 1, 0.05"/min)	ASTM D790	No break	4%	No break	4%
IZOD Impact, notched (Method A, 23°C)	ASTM D256	1.4 ft-lb/in	0.5 ft-lb/in	73 J/m	28 J/m
IZOD Impact, un-notched (Method A, 23°C)	ASTM D256	16.4 ft-lb/in	3.5 ft-lb/in	877 J/m	187 J/m
Compressive Strength, Yield (Method 1, 0.05"/min)	ASTM D695	10,000 psi	9,200 psi	69 MPa	64 MPa
Compressive Strength, Ultimate (Method 1, 0.05"/min)	ASTM D695	28,000 psi	9,400 psi	193 MPa	65 MPa
Compressive Modulus (Method 1, 0.05"/min)	ASTM D695	1,100,000 psi	227,000 psi	7,564 MPa	1,565 MPa

THERMAL PROPERTIES <sup>2</sup>	TEST METHOD	ENGLISH	METRIC
Heat Deflection (HDT) @ 66 psi	ASTM D648	280°F	138°C
Heat Deflection (HDT) @ 264 psi	ASTM D648	261°F	127°C
Vicat Softening	ASTM D1525	282°F	139°C
Glass Transition (Tg)	DMA (SSYS)	322°F	161°C
Melting Point	-----	Not Applicable <sup>3</sup>	Not Applicable <sup>3</sup>



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ELECTRICAL PROPERTIES <sup>4</sup>	TEST METHOD	VALUE RANGE
Volume Resistivity	ASTM D257	6.0x10 <sup>13</sup> - 2.0x10 <sup>14</sup> ohm-cm
Dielectric Constant	ASTM D150-98	2.8 - 3.0
Dissipation Factor	ASTM D150-98	.0005 - .0006
Dielectric Strength	ASTM D149-09, Method A	80 - 360 V/mil

OTHER <sup>2</sup>	TEST METHOD	VALUE
Specific Gravity	ASTM D792	1.2
Flame Classification	UL94	HB
Coefficient of Thermal Expansion	ASTM E831	3.8x10 <sup>-5</sup> in/in/°F
Rockwell Hardness	ASTM D785	R115
UL File Number	-----	E345258

SYSTEM AVAILABILITY	LAYER THICKNESS CAPABILITY	SUPPORT STRUCTURE	AVAILABLE COLORS
Fortus 360mc™	0.013 inch (0.330 mm)	Breakaway,	<input type="checkbox"/> White
Fortus 380mc™ Fortus 400mc™	0.010 inch (0.254 mm)	Soluble	
Fortus 450mc™	0.007 inch (0.178 mm)		
Fortus 900mc™	0.005 inch (0.127 mm) <sup>5</sup>		

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<sup>1</sup>Build orientation is on side long edge.

<sup>2</sup>Literature value unless otherwise noted.

<sup>3</sup>Due to amorphous nature, material does not display a melting point.

<sup>4</sup>All Electrical Property values were generated from the average of test plaques built with default part density (solid). Test plaques were 4.0 x 4.0 x 0.1 inches (102 x 102 x 2.5 mm) and were built both in the flat and vertical orientation. The range of values is mostly the result of the difference in properties of test plaques built in the flat vs. vertical orientation.

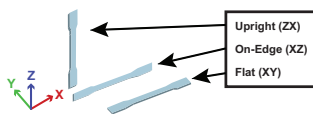
<sup>5</sup>PC can attain 0.005 inch (0.127mm) layer thickness when used with SR-100 soluble support. 0.005 inch layer thickness is not available on the Fortus 900mc.

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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# PC-ABS

Production-Grade Thermoplastic  
for Fortus 3D Production Systems



PC-ABS (polycarbonate-ABS) is one of the most widely used industrial thermoplastics. PC-ABS offers the most desirable properties of both materials — the superior strength and heat resistance of PC and the flexibility of ABS. PC-ABS blends are commonly used in automotive, electronics and telecommunications applications. PC-ABS parts are ideal for conceptual modeling, functional prototyping, manufacturing tools and end-use-parts.

Mechanical Properties	Test Method	English		Metric	
		XZ Axis	ZX Axis	XZ Axis	ZX Axis
Tensile Strength, Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	4,250 psi	4,000 psi	29 MPa	28 MPa
Tensile Strength, Ultimate (Type 1, 0.125", 0.2"/min)	ASTM D638	5,000 psi	4,300 psi	34 MPa	30 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	260,000 psi	250,000 psi	1,810 MPa	1,720 MPa
Tensile Elongation at Break (Type 1, 0.125", 0.2"/min)	ASTM D638	5%	2%	5%	2%
Tensile Elongation at Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	2%	2%	2%	2%
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	8,500 psi	6,000 psi	59 MPa	41 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	250,000 psi	225,000 psi	1,740 MPa	1,550 MPa
Flexural Strain at Break (Method 1, 0.05"/min)	ASTM D790	4%	3%	4%	3%

Mechanical Properties	Test Method	English	Metric
		XZ Axis	XZ Axis
IZOD Impact, notched (Method A, 23°C)	ASTM D256	4 ft-lb/in	235 J/m
IZOD Impact, un-notched (Method A, 23°C)	ASTM D256	12 ft-lb/in	642 J/m

Thermal Properties	Test Method	English	Metric
Heat Deflection (HDT) @ 66 psi	ASTM D648	230°F	110°C
Heat Deflection (HDT) @ 264 psi	ASTM D648	205°F	96°C
Vicat Softening Temperature (Rate B/50)	ASTM D1525	234°F	112°C
Glass Transition Temperature (Tg)	DMA (SSYS)	257°F	125°C
Coefficient of Thermal Expansion (flow)	ASTM E831	4.10 <sup>-05</sup> in/in/°F	7.38 <sup>-05</sup> mm/mm/°C
Melting Point	-----	Not Applicable <sup>2</sup>	Not Applicable <sup>2</sup>

# PC-ABS



Electrical Properties <sup>3</sup>	Test Method	Orientation	Value Range
Volume Resistivity	ASTM D257	XZ Axis	3.7E15 - 1.8E16 ohm-cm
Dielectric Constant	ASTM D150-98	XZ Axis	2.78 - 2.83
Dissipation Factor	ASTM D150-98	XZ Axis	0.0048 - 0.0054
Dielectric Strength	ASTM D149-09, Method A	XZ Axis	130 V/mil
Dielectric Strength	ASTM D149-09 Method A	ZX Axis	320 V/mil

Other	Test Method	Value
Specific Gravity	ASTM D792	1.10
Density	ASTM D792	0.0397 lb/in <sup>3</sup>
Flame Classification	UL94	HB
Rockwell Hardness	ASTM D785	R110
UL File Number	-----	E345258

System Availability	Layer Thickness Capability	Support Structure	Available Colors
Fortus 360mc™	0.013 inch (0.330 mm)	Soluble Supports	■ Black
Fortus 400mc™	0.010 inch (0.254 mm)		
Fortus 900mc™	0.007 inch (0.178 mm)		
	0.005 inch (0.127 mm) <sup>4</sup>		

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.

<sup>1</sup>Literature value unless otherwise noted.

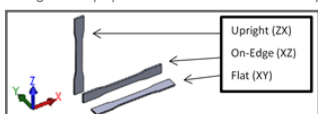
<sup>2</sup>Due to amorphous nature, material does not display a melting point.

<sup>3</sup>All Electrical Property values were generated from the average of test plaques built with default part density (solid). Test plaques were 4.0 x 4.0 x 0.1 inches (102 x 102 x 2.5 mm) and were built both in the flat and vertical orientation. The range of values is mostly the result of the difference in properties of test plaques built in the flat vs. vertical orientation.

<sup>4</sup>0.005 inch (0.127 mm) layer thickness not available for Fortus 900mc

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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## At the core:

### Advanced FDM Technology

Fortus systems are based on patented Stratasys® FDM® (fused deposition modeling) technology. FDM is the industry's leading additive manufacturing technology, and the only one that uses production-grade thermoplastics, enabling the most durable parts.

Fortus systems use a wide range of thermoplastics with advanced mechanical properties so your parts can endure high heat, caustic chemicals, sterilization and high-impact applications.

### No special facilities needed

You can install a Fortus 3D Production System just about anywhere. No special venting is required because Fortus systems don't produce noxious fumes, chemicals or waste.

### No special skills needed

Fortus 3D Production Systems are easy to operate and maintain compared to other additive fabrication systems because there are no messy powders to handle and contain. They're so simple, an operator can be trained to operate a Fortus system in less than 30 minutes.

### Get your benchmark on the future of manufacturing

Fine details. Smooth surface finishes. Accuracy. Strength. The best way to see the advantages of a Fortus 3D Production System is to have your own part built on a Fortus system. Get your free part at: [stratasys.com](http://stratasys.com).