



(248) 836-2099

ASA
Production - Grade Thermoplastic

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Now you can build consistently high-quality parts, with exceptional UV stability and the best aesthetics of any FDM® thermoplastic. Matching or exceeding the mechanical properties of ABS, ASA may be your new favorite general prototyping material. Its UV-resistance makes it especially suited in end-use parts for outdoor commercial and infrastructure use. And its wide selection of colors and matte finish makes it ideal for attractive prototypes in consumer sporting goods, tools and automotive components and accessories.

MECHANICAL PROPERTIES

TEST METHOD	STANDARD	ENGLISH		METRIC	
		XZ ORIENTATION	ZX ORIENTATION	XZ ORIENTATION	ZX ORIENTATION
Tensile Strength, Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	4,200 psi	3,850 psi	29 MPa	27 MPa
Tensile Strength, Ultimate (Type 1, 0.125", 0.2"/min)	ASTM D638	4,750 psi	4,300 psi	33 MPa	30 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	290,000 psi	280,000 psi	2,010 MPa	1,950 MPa
Elongation at Break (Type 1, 0.125", 0.2"/min)	ASTM D638	9%	3%	9%	3%
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	8,700 psi	6,900 psi	60 MPa	48 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	270,000 psi	240,000 psi	1,870 MPa	1,630 MPa
Flexural Strain at Break (Method 1, 0.05"/min)	ASTM D790	No Break	4%	No Break	4%

THERMAL PROPERTIES ²	TEST METHOD	ENGLISH	METRIC
Heat Deflection (HDT) @ 66 psi	ASTM D648	208°F	98°C
Heat Deflection (HDT) @ 264 psi	ASTM D648	196°F	91°C
Vicat Softening Temperatre (Rate B/50)	ASTM D1525	217°F	103°C
Glass Transition Temperature (Tg)	DMA (SSYS)	226°F	108°C
Coefficient of Thermal Expansion (flow)	ASTM E831	4.90E-06 in/in/°F	8.79E-06 mm/mm/°C
Coefficient of Thermal Expansion (xflow)	ASTM E831	4.60E-06 in/in/°F	8.28E-06 mm/mm/°C

ELECTRICAL PROPERTIES	TEST METHOD	ORIENTATION	VALUE RANGE
Volume Resistivity	ASTM D257	XZ	1.0E14 - 1.0E15 ohm-cm
Dielectric Constant	ASTM D150-98	XZ	2.97 - 3.04
Dissipation Factor	ASTM D150-98	XZ	0.009
Dielectric Strength	ASTM D149-09, Method A	XZ	329 V/mil
Dielectric Strength	ASTM D149-09 Method A	ZX	414 V/mil



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.

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MECHANICAL PROPERTIES

TEST METHOD	STANDARD	ENGLISH	METRIC
Notched Impact, XZ orientation (Method A, 23°C)	ASTM D256	1.2 ft-lb/in	64 J/m
Unnotched Impact, XZ orientation (Method A, 23°C)	ASTM D256	6 ft-lb/in	321 J/m

OTHER	TEST METHOD	VALUE
Specific Gravity	ASTM D792	1.05
Flame Classification	UL94	HB
Rockwell Hardness	ASTM D785	82
UL File Number	-----	345258

SYSTEM AVAILABILITY	LAYER THICKNESS CAPABILITY	SUPPORT STRUCTURE	AVAILABLE COLORS ²
Fortus 360mc	0.013 inch (0.330 mm)	Soluble Support	■ Black ■ Dark Blue
Fortus 380mc	0.010 inch (0.254 mm)		■ Dark Gray ■ Green
Fortus 400mc	0.007 inch (0.178 mm)		■ Light Gray ■ Yellow
Fortus 450mc	0.005 inch (0.127 mm)		□ White ■ Orange
Fortus 900mc ³			□ Ivory ■ Red
Stratasys F123 Series			