

ABSi

for Fortus 3D Production Systems



PARTS FOR PROTOTYPE AND PRODUCTION · ON DEMAND

Fortus® 3D Production Systems give engineers the ability to manufacture real industrial thermoplastic parts direct from digital files. Stratasys ABSi is an ideal material for conceptual modeling, functional prototyping and direct digital manufacturing. Its strength is superior to standard Stratasys ABS, and the translucent nature of ABSi is beneficial for monitoring material flow and light transmission, most commonly used for medical and automotive applications. When combined with a Fortus 3D production system, ABSi gives you Real Parts™ that are visually unique, dimensionally accurate, durable and hold their shape over time.



Mechanical Properties ¹	Test Method	English	Metric
Tensile Strength (Type 1, 0.125", 0.2"/min)	ASTM D638	5,400 psi	37 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	277,700 psi	1,920 MPa
Tensile Elongation (Type 1, 0.125", 0.2"/min)	ASTM D638	4.4%	4.4%
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	8,980 psi	62 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	278,000 psi	1,920 MPa
IZOD Impact, notched (Method A, 23°C)	ASTM D256	1.8 ft-lb/in	96.4 J/m
IZOD Impact, un-notched (Method A, 23°C)	ASTM D256	3.6 ft-lb/in	191.1 J/m

Thermal Properties ²	Test Method	English	Metric
Heat Deflection (HDT) @ 66 psi, 0.125" unannealed	ASTM D648	188°F	86°C
Heat Deflection (HDT) @ 264 psi, 0.125" unannealed	ASTM D648	163°F	73°C
Glass Transition Temperature (Tg)	DMA (SSYS)	240°F	116°C
Coefficient of Thermal Expansion	ASTM D696	6.7 E -06 in/in/°F	12.1 E -05 mm/mm/°C
Melt Point	-----	Not Applicable ³	Not Applicable ³

Electrical Properties ⁴	Test Method	Value Range
Volume Resistivity	ASTM D257	6.1x10e10 - 1.5x10e9 ohms
Dielectric Constant	ASTM D150-98	3.6 - 3.4
Dissipation Factor	ASTM D150-98	0.15 - 0.12
Dielectric Strength	ASTM D149-09, Method A	320 - 100 V/mm

Other ²	Test Method	Value
Specific Gravity	ASTM D792	1.08
Rockwell Hardness	ASTM D785	R108
Flame Classification	UL 94	HB (0.059", 1.5 mm)

System Availability	Layer Thickness Capability	Support Structure	Available Colors
Fortus 400mc	0.013 inch (0.330 mm) 0.010 inch (0.254 mm) 0.007 inch (0.178 mm) 0.005 inch (0.127 mm)	Soluble Supports	<input type="checkbox"/> Translucent Natural <input type="checkbox"/> Translucent Amber <input type="checkbox"/> Translucent Red

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.

¹Build orientation is on side long edge.

²Literature value unless otherwise noted.

³Due to amorphous nature, material does not display a melting point.

⁴All 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.



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