

ABS-M30

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ABS-M30 is up to 25-70 percent stronger than standard Stratasys ABS and is an ideal material for conceptual modeling, functional prototyping, manufacturing tools, and end-use-parts. ABS-M30 has greater tensile, impact, and flexural strength than standard ABS. Layer bonding is significantly stronger than that of standard ABS, for a more durable part. This results in more realistic functional tests and higher quality parts for end use. When combined with a Fortus® 3D Production System, ABS-M30 gives you Real Parts that are stronger, smoother, and with better feature detail.



Mechanical Properties ¹	Test Method	English	Metric
Tensile Strength (Type 1, 0.125", 0.2" / min)	ASTM D638	5,200 psi	36 MPa
Tensile Modulus (Type 1, 0.125", 0.2" / min)	ASTM D638	350,000 psi	2,400 MPa
Tensile Elongation (Type 1, 0.125", 0.2" / min)	ASTM D638	4%	4%
Flexural Strength (Method 1, 0.05" / min)	ASTM D790	8,800 psi	61 MPa
Flexural Modulus (Method 1, 0.05" / min)	ASTM D790	336,000 psi	2,300 MPa
IZOD Impact, notched (Method A, 23°C)	ASTM D256	2.6 ft-lb/in	139 J/m
IZOD Impact, un-notched (Method A, 23°C)	ASTM D256	5.3 ft-lb/in	283 J/m

Thermal Properties ²	Test Method	English	Metric
Heat Deflection (HDn@ 66 psi, 0.125" unannealed)	ASTM D648	204°F	96°C
Heat Deflection (HDn@ 264 psi, 0.125" unannealed)	ASTM D648	180°F	82°C
Vicat Softening Temperature (Rate B/50)	ASTM D1525	210°F	99°C
Glass Transition (Tg)	DSC (SSYS)	226°F	108°C
Coefficient of Thermal Expansion (flow)	ASTM E831	4.9E-05 in/in/oF	8.82E-05 mm/mm/oC
Coefficient of Thermal Expansion (xflow)	ASTM E831	4.7E-05 in/in/oF	8.46E-05 mm/mm/oC
Melt Point	-----	Not Applicable ²	Not Applicable ²

Electrical Properties ⁴	Test Method	Value Range
Volume Resistivity	ASTM D257	4.0x10e14- 5.0x10e13 ohms
Dielectric Constant	ASTM D150-98	2.9-2.7
Dissipation Factor	ASTM D150-98	.0052 - .0049
Dielectric Strength	ASTM D149-09, Method A	370-71 V/mm

Other ²	Test Method	Value
Specific Gravity	ASTM D792	1.04
Flame Classification	UL94	HB (0.09", 2.50 mm)
Rockwell Hardness	ASTM D785	109.5
UL File Number	-----	E345258

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.

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 0.7 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.

⁵0.005 inch (0.127 mm) layer thickness not available for Fortus 900.

About Proto3000

Proto3000 connects companies and individuals to the digital tools they need in order to achieve greater capability, scalability, and efficiency. We are a company rooted in providing solutions, and through the development of our product and service portfolio, we are committed to finding the one that is right for you. Having worked with thousands of companies, from various industries, we have gained an understanding of the digital demands required in research and development, product development, and manufacturing. Our suite of solutions have been carefully selected to ensure that you can meet these demands, while positioning your business for sustainable growth and a competitive advantage.

Our business operates in four international market segments; Product Development, Manufacturing, Engineering, and Dentistry. Our solutions include rapid prototyping, 3D printing, engineering design, laser scanning and digital dental products and services.