Stratasys ABS-M30

Acrylonitrile Butadiene Styrene

Stratasys

Message:

Production-Grade Thermoplastic for Fortus 3D Production Systems
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.

General Information	
Features	Durable Good Chemical Resistance Good Sterilizability Good Surface Finish High Heat Resistance High Impact Resistance High Strength
Uses	Decorative Parts Engineering Parts Modeling Material Prototyping Tooling
UL File Number	E345258
Appearance	Black Blue Dark Grey Ivory Red White
Processing Method	3D Printing, Fused Filament Fabrication (FFF)

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm³	ASTM D792
Thickness - Layer Capability	127.0 to 330.2	µm	
Volume Resistance [1]	5.0E+13 to 4.0E+14	ohms	ASTM D257

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness	110		ASTM D785

Mechanical	Nominal Value	Unit	Test Method

Tensile Modulus [2] (3.18 mm)	2410	MPa	ASTM D638
Tensile Strength [3] (3.18 mm)	35.9	MPa	ASTM D638
Tensile Elongation [4] (Break, 3.18 mm)	4.0	%	ASTM D638
Flexural Modulus [5]	2320	MPa	ASTM D790
Flexural Strength [6]	60.7	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	140	J/m	ASTM D256A
Unnotched Izod Impact (23°C)	280	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.18 mm	95.6	°C	
1.8 MPa, Unannealed, 3.18 mm	82.2	°C	
Glass Transition Temperature	108	°C	DSC
Vicat Softening Temperature	98.9	°C	ASTM D1525 [7]
CLTE			ASTM E831
Flow	8.8E-5	cm/cm/°C	
Transverse	8.5E-5	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	2.8 to 15	kV/mm	ASTM D149
Dielectric Constant [8]	2.70 to 2.90		ASTM D150
Dissipation Factor [9]	4.9E-3 to 5.2E-3		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating (2.50 mm)	HB		UL 94
NOTE			
1.	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.		
2.	Type I, 5.1 mm/min		
3.	Type I, 5.1 mm/min		
4.	Type I, 5.1 mm/min		
5.	Method I (3 point load), 1.3 mm/min		
6.	Method I (3 point load), 1.3 mm/min		
7.	Rate B (120°C/h), Loading 2 (50 N)		

8.	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.
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Recommended distributors for this material

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