Stratasys ABS-ESD7

Acrylonitrile Butadiene Styrene

Stratasys

Message:

Production-Grade Thermoplastic for Fortus 3D Production Systems
ABS-ESD7 (acrylonitrile butadiene styrene-electrostatic dissipative) is an ABS thermoplastic with static dissipative properties for applications where a static charge can damage products, impair their performance or cause an explosion. ABS-ESD7 prevents a buildup of static electricity, so it will not produce a static shock or cause other materials like powders, dust and fine particles to stick to it. Ideal for electronic products with circuit boards and for the transportation and industrial equipment industries. Most widely used to create jigs and fixtures for the assembly of electronic components, but it is also useful for building functional prototypes of fuel storage and delivery products, as well as cases, enclosures and packaging.

General Information	
Features	Durable
	Good Chemical Resistance
	Good Sterilizability
	High Heat Resistance
	High Impact Resistance
	Rapid Static Decay
	Statically Conductive
Uses	Containers
	Electrical Parts
	Electrical/Electronic Applications
	Housings
	Industrial Applications
	Industrial Parts
	Packaging
	Prototyping
Appearance	Black
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	177.8 to 254.0	µm	
Volume Resistance [1]	3.0E+9 to 4.0E+10	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)	3.0	%	ASTM D638
Flexural Modulus [5]	2410	MPa	ASTM D790

Flexural Strength [6]	60.7	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	110	J/m	ASTM D256A
Unnotched Izod Impact (23°C)	59	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**
Surface Resistivity [8]	1.0E+6 to 1.0E+9	ohms	ASTM D257
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (1.50 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.		

Recommended distributors for this material

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