Stratasys PC-ABS

Polycarbonate + ABS

Stratasys

Message:

Production-Grade Thermoplastic for Fortus 3D Production Systems
PC-ABS (polycarbonate-ABS) is one of the most widely used industrial thermoplastics. PC-ABS offers the most desirable properties of both materials - the superior strength and heat resistance of PC and the flexibility of ABS. PC-ABS blends are commonly used in automotive, electronics and telecommunications applications. Additionally, a PC-ABS part manufactured on a Fortus® 3D Production System is 5-60 percent stronger than a part made on previous FDM® systems. When combined with a Fortus system, PC-ABS gives you Real Parts™ conceptual modeling, functional prototyping, manufacturing tools, and end-use-parts.

General Information	
Features	Durable
	Good Chemical Resistance
	Good Flexibility
	Good Sterilizability
	Good Strength
	High Heat Resistance
	High Impact Resistance
Uses	Automotive Applications
	Electrical/Electronic Applications
	Engineering Parts
	Industrial Applications
	Prototyping
	Telecommunications
	Tooling
UL File Number	E345258
Appearance	Black
Processing Method	3D Printing, Fused Filament Fabrication (FFF)

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.10	g/cm³	ASTM D792
Thickness - Layer Capability	127.0 to 330.2	µm	
Volume Resistance [1]	4.4E+13 to 2.0E+14	ohms	ASTM D257

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	110		ASTM D785

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus [2] (3.18 mm)	1920	MPa	ASTM D638
Tensile Strength [3] (3.18 mm)	40.7	MPa	ASTM D638
Tensile Elongation [4] (Break, 3.18 mm)	6.0	%	ASTM D638
Flexural Modulus [5]	1930	MPa	ASTM D790

Flexural Strength [6]	67.6	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	200	J/m	ASTM D256A
Unnotched Izod Impact (23°C)	480	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	110	°C	
1.8 MPa, Unannealed	96.1	°C	
Glass Transition Temperature	125	°C	DMA
Vicat Softening Temperature	112	°C	ASTM D1525
CLTE - Flow	7.4E-5	cm/cm/°C	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Dielectric Strength	3.5 to 13	kV/mm	ASTM D149
Dielectric Constant [7]	2.70 to 2.90		ASTM D150
Dissipation Factor [8]	3.2E-3 to 3.5E-3		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating	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.	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

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China