Stratasys PC-ISO

Polycarbonate

Stratasys

Message:

Production-Grade Thermoplastic for Fortus 3D Production Systems
PC-ISO (polycarbonate-ISO), an industrial thermoplastic, which in its raw state, is biocompatible (ISO 10993 USP Class VI) and can be gamma or EtO sterilized. PC-ISO is commonly used in food and drug packaging and medical device manufacturing because of the material's strength and medical compatibility. When combined with a Fortus® 3D Production system, PC-ISO gives you Real Parts™ that can be used for conceptual modeling, functional prototyping, and end-use parts.

General Information	
Features	Biocompatible
	Durable
	Ethylene Oxide Sterilizable
	Good Chemical Resistance
	Good Strength
	High Heat Resistance
	High Impact Resistance
	Radiation Sterilizable
Uses	Food Packaging
	Medical Devices
	Medical Packaging
	Medical/Healthcare Applications
	Packaging
	Prototyping
	Thermoforming Applications
Agency Ratings	USP Class VI
Appearance	Natural Color
	Translucent
	White
Processing Method	3D Printing, Fused Filament Fabrication (FFF)

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm³	ASTM D792
Thickness - Layer Capability	177.8 to 330.2	µm	
Volume Resistance [1]	8.0E+13 to 1.5E+14	ohms	ASTM D257

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus [2] (3.18 mm)	2000	MPa	ASTM D638
Tensile Strength [3] (3.18 mm)	57.2	MPa	ASTM D638

Tensile Elongation [4] (Break, 3.18 mm)	4.0	%	ASTM D638
Flexural Modulus [5]	2140	MPa	ASTM D790
Flexural Strength [6]	90.3	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	85	J/m	ASTM D256A
Unnotched Izod Impact (23°C)	53	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	133	°C	
1.8 MPa, Unannealed	127	°C	
Glass Transition Temperature	161	°C	DMA
Vicat Softening Temperature	139	°C	ISO 306
Electrical	**Nominal Value**	**Unit**	**Test Method**
Dielectric Strength	2.8 to 15	kV/mm	ASTM D149
Dielectric Constant [7]	2.80 to 3.00		ASTM D150
Dissipation Factor [8]	5.0E-4 to 9.0E-4		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

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