PC-ISO

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 Printer, PC-ISO gives you parts that can be used for conceptual modeling, functional prototyping, and production parts.

Mechanical Properties[1]	Test Method	Value
Tensile Strength (Type 1, 0.125", 0.2"/min)	ASTM D638	57 MPa (8,300 psi)
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	2,000 MPa (289,800 psi)
Tensile Elongation (Type 1, 0.125", 0.2"/min)	ASTM D638	4% (4%)
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	90 MPa (13,100 psi)
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	2,100 MPa (310,400 psi)
IZOD Impact, notched (Method A, 23 °C)	ASTM D256	86 J/m (1.6 ft-lb/in)
IZOD Impact, un-notched (Method A, 23 °C)	ASTM D256	53 J/m (1 ft-lb/in)

Thermal Properties[2]	Test Method	Value
Heat Deflection (HDT) @ 66 psi	ASTM D648	133 °C (271 °F)
Heat Deflection (HDT) @ 264 psi	ASTM D648	127 °C (260 °F)
Glass Transition (Tg)	DMA (SSYS)	161 °C (322 °F)
Vicat Softening	ISO 306	139 °C (282 °F)
Melting Point	----------	Not Applicable[3] (Not Applicable[3])

Electrical Properties[4]	Test Method	Value Range
Volume Resistivity	ASTM D257	1.5x1014 - 8.0x1013 ohm-cm
Dielectric Constant	ASTM D150-98	3.0 - 2.8
Dissipation Factor	ASTM D150-98	.0009 - .0005
Dielectric Strength	ASTM D149-09, Method A	370 - 70 V/mil

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Other[2]	Test Method	Value
Specific Gravity	ASTM D792	1.2

System Availability	Layer Thickness Capability	Support Structure	Available Colors
Fortus 380mc™ Fortus 400mc™ Fortus 450mc™ Fortus 900mc™ F900™	0.013 inch (0.330 mm) 0.010 inch (0.254 mm) 0.007 inch (0.178 mm)	Breakaway	Translucent Natural White

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.

*It is the responsibility of the finished device manufacturer to determine the suitability of all the component parts and materials used in their finished products.

[1]Build orientation is on side long edge.

[2]Literature value unless otherwise noted.

[3]Due to amorphous nature, material does not display a melting point.

[4]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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