

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 | 1.5x10 ¹⁴ - 8.0x10 ¹³ 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 | <input type="checkbox"/> Translucent Natural <input type="checkbox"/> 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.

¹Build orientation is on side long edge.

²Literature value unless otherwise noted.

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

⁴All 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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