ABSplus™ is a true production-grade thermoplastic that is durable enough to perform virtually the same as production parts. When combined with Design Series 3D Printers, ABSplus is ideal for building 3D models and prototypes in an office environment.

### Mechanical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>English</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength, Ultimate (Type 1, 0.125&quot;, 0.2&quot;/min)</td>
<td>ASTM D638</td>
<td>4,700 psi</td>
<td>33 MPa</td>
</tr>
<tr>
<td>Tensile Strength, Yield (Type 1, 0.125&quot;, 0.2&quot;/min)</td>
<td>ASTM D638</td>
<td>4,550 psi</td>
<td>31 MPa</td>
</tr>
<tr>
<td>Tensile Modulus (Type 1, 0.125&quot;, 0.2&quot;/min)</td>
<td>ASTM D638</td>
<td>320,000 psi</td>
<td>2,200 MPa</td>
</tr>
<tr>
<td>Tensile Elongation at Break (Type 1, 0.125&quot;, 0.2&quot;/min)</td>
<td>ASTM D638</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>IZOD Impact, notched (Method A, 23°C)</td>
<td>ASTM D256</td>
<td>2.0 ft-lb/in</td>
<td>106 J/m</td>
</tr>
</tbody>
</table>

### Thermal Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>English</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat Deflection (HDT) @ 66 psi</td>
<td>ASTM D648</td>
<td>204°F</td>
<td>96°C</td>
</tr>
<tr>
<td>Heat Deflection (HDT) @ 264 psi</td>
<td>ASTM D648</td>
<td>180°F</td>
<td>82°C</td>
</tr>
<tr>
<td>Glass Transition Temperature (Tg)</td>
<td>DSC (SSYS)</td>
<td>226°F</td>
<td>108°C</td>
</tr>
<tr>
<td>Melting Point</td>
<td>- - - - -</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Coefficient of Thermal Expansion</td>
<td>ASTM E831</td>
<td>4.90x10^-5 in/in/°F</td>
<td>8.82x10^-3 mm/mm/°C</td>
</tr>
</tbody>
</table>
ABSpuls-P430
PRODUCTION-GRADE THERMOPLASTIC
FOR DESIGN SERIES 3D PRINTERS

ELECTRICAL PROPERTIES\(^4\) TEST METHOD VALUE RANGE

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>Value Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume Resistivity</td>
<td>ASTM D257</td>
<td>2.6x10(^{-15}) - 5.0x10(^{-16}) ohm-cm</td>
</tr>
<tr>
<td>Dielectric Constant</td>
<td>ASTM D150-98</td>
<td>2.3 - 2.85</td>
</tr>
<tr>
<td>Dissipation Factor</td>
<td>ASTM D150-98</td>
<td>0.0046 - 0.0053</td>
</tr>
<tr>
<td>Dielectric Strength</td>
<td>ASTM D149-09, Method A, XZ Orientation</td>
<td>130 V/mil</td>
</tr>
<tr>
<td>Dielectric Strength</td>
<td>ASTM D149-09, Method A, ZX Orientation</td>
<td>290 V/mil</td>
</tr>
</tbody>
</table>

OTHER\(^6\) TEST METHOD VALUE

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Gravity</td>
<td>ASTM D792</td>
<td>1.04</td>
</tr>
<tr>
<td>Flame Classification</td>
<td>UL94</td>
<td>HB (0.09&quot;, 2.50mm)</td>
</tr>
<tr>
<td>UL File Number</td>
<td>- - - - - - -</td>
<td>E345258</td>
</tr>
<tr>
<td>Rockwell Hardness</td>
<td>ASTM D785</td>
<td>109.5</td>
</tr>
</tbody>
</table>

SYSTEM AVAILABILITY

<table>
<thead>
<tr>
<th>Printer Type</th>
<th>Layer Thickness Capability</th>
<th>Support Structure</th>
<th>Available Structure</th>
<th>Available Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>uPrint SE™</td>
<td>0.013 inch (0.330 mm)</td>
<td>Soluble Supports</td>
<td></td>
<td>Ivory, White</td>
</tr>
<tr>
<td>uPrint SE Plus™</td>
<td>0.010 inch (0.254 mm)</td>
<td>Breakaway Supports</td>
<td>(BST 1200es only)</td>
<td>Black, Dark Grey</td>
</tr>
<tr>
<td>Dimension Elite™</td>
<td>0.007 inch (0.178 mm)</td>
<td></td>
<td></td>
<td>Red, Blue</td>
</tr>
<tr>
<td>Dimension SST 1200es™</td>
<td></td>
<td></td>
<td></td>
<td>Olive Green, Nectarine</td>
</tr>
<tr>
<td>Dimension BST 1200es™</td>
<td></td>
<td></td>
<td></td>
<td>Fluorescent Yellow</td>
</tr>
<tr>
<td>Fortus 250mc™</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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, color etc. Actual values will vary with build conditions. 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.

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 (sparse). 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. 0.007 inch (0.178 mm) layer thickness available on Dimension Elite and Fortus 250mc only. 5Ivory is the only color option for uPrintSE. The test data was collected using ABSplus Ivory (Natural) specimens. ABSplus colored materials will have similar properties, but can vary up to 10%.

Orientation: See Stratasys Testing white paper for more detailed description of build orientations.

XZ = X or “on edge”
XY = Y or “flat”
ZX = or “upright”

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