



ABSplus-P430

PRODUCTION-GRADE THERMOPLASTIC FOR 3D PRINTERS

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

| MECHANICAL PROPERTIES ¹ | TEST METHOD | ENGLISH | METRIC |
|--|-------------|--------------|-----------|
| | | XZ Axis | XZ Axis |
| Tensile Strength, Ultimate (Type 1, 0.125", 0.2"/min) | ASTM D638 | 4,700 psi | 33 MPa |
| Tensile Strength, Yield (Type 1, 0.125", 0.2"/min) | ASTM D638 | 4,550 psi | 31 MPa |
| Tensile Modulus (Type 1, 0.125", 0.2"/min) | ASTM D638 | 320,000 psi | 2,200 MPa |
| Tensile Elongation at Break (Type 1, 0.125", 0.2"/min) | ASTM D638 | 6% | 6% |
| Tensile Elongation at Yield (Type 1, 0.125", 0.2"/min) | ASTM D638 | 2% | 2% |
| IZOD Impact, notched (Method A, 23 °C) | ASTM D256 | 2.0 ft-lb/in | 106 J/m |

| MECHANICAL PROPERTIES | TEST METHOD | ENGLISH | | METRIC | |
|--|-------------|-------------|-------------|-----------|-----------|
| | | XZ Axis | ZX Axis | XZ Axis | ZX Axis |
| Flexural Strength (Method 1, 0.05"/min) | ASTM D790 | 8,450 psi | 5,050 psi | 58 MPa | 35 MPa |
| Flexural Modulus (Method 1, 0.05"/min) | ASTM D790 | 300,000 psi | 240,000 psi | 2,100 MPa | 1,650 MPa |
| Flexural Strain at Break (Method 1, 0.05"/min) | ASTM D790 | 4% | 4% | 2% | 2% |

| THERMAL PROPERTIES ² | TEST METHOD | ENGLISH | METRIC |
|-----------------------------------|-------------|---------------------------------|---------------------------------|
| Heat Deflection (HDT) @ 66 psi | ASTM D648 | 204 °F | 96 °C |
| Heat Deflection (HDT) @ 264 psi | ASTM D648 | 180 °F | 82 °C |
| Glass Transition Temperature (Tg) | DSC (SSYS) | 226 °F | 108 °C |
| Melting Point | ----- | Not Applicable ³ | Not Applicable ³ |
| Coefficient of Thermal Expansion | ASTM E831 | 4.90x10 ⁻⁰⁵ in/in/°F | 8.82x10 ⁻⁰⁵ mm/mm/°C |

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| ELECTRICAL PROPERTIES ⁴ | TEST METHOD | VALUE RANGE |
|------------------------------------|--|--|
| Volume Resistivity | ASTM D257 | 2.6x10 ¹⁵ - 5.0x10 ¹⁶ ohm-cm |
| Dielectric Constant | ASTM D150-98 | 2.3 - 2.85 |
| Dissipation Factor | ASTM D150-98 | 0.0046 - 0.0053 |
| Dielectric Strength | ASTM D149-09, Method A, XZ Orientation | 130 V/mil |
| Dielectric Strength | ASTM D149-09, Method A, ZX Orientation | 290 V/mil |

| OTHER ² | TEST METHOD | VALUE |
|--------------------|-------------|-------|
| Specific Gravity | ASTM D792 | 1.04 |
| Rockwell Hardness | ASTM D785 | 109.5 |

| SYSTEM AVAILABILITY | LAYER THICKNESS CAPABILITY | SUPPORT STRUCTURE | AVAILABLE COLORS |
|---------------------|--|-------------------|--|
| uPrint SE Plus™ | 0.013 inch (0.330 mm) 0.010 inch (0.254 mm) 0.007 inch (0.178 mm) ⁵ | Soluble Support | <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> ■ Ivory⁶ ■ White </div> <div style="width: 50%;"> ■ Black ■ Dark Grey </div> <div style="width: 50%;"> ■ Red ■ Blue </div> <div style="width: 50%;"> ■ Olive Green ■ Nectarine </div> <div style="width: 50%;"> ■ Fluorescent Yellow </div> </div> |



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.

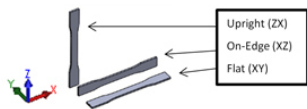
¹Build orientation is on side long edge. ²Literature value unless otherwise noted. ³Due to amorphous nature, material does not display a melting point. ⁴All Electrical Property values were generated from the average of test plaques built with default part density (sparse). Test plaques were 4.0 x 4.0 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. ⁵0.007 inch (0.178 mm) layer thickness available on Dimension Elite and Fortus 250mc only. ⁶Ivory 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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