

ABSplus™ -P430

Production-Grade Thermoplastic
for Dimension 3D Printers

ABSplus is a true production-grade thermoplastic that is durable enough to perform virtually the same as production parts. When combined with Dimension 3D Printers, ABSplus is the ideal solution to printing 3D models in an office environment.

Mechanical Properties ¹	Test Method	English	Metric
Tensile Strength (Type 1, 0.125", 0.2"/min)	ASTM D638	5,300 psi	37 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	330,000 psi	2,320 MPa
Tensile Elongation (Type 1, 0.125", 0.2"/min)	ASTM D638	3%	3%
Flexural Delamination	ASTM D790	4,500 psi	31 MPa
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	7,600 psi	53 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	320,000 psi	2,250 MPa
IZOD Impact, notched (Method A, 23°C)	ASTM D256	2.0 ft-lb/in	106 J/m

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)	DMA (SSYS)	226°F	108°C
Melt Point	-----	Not Applicable ³	Not Applicable ³
Coefficient of Thermal Expansion	ASTM E831	4.90E-05 in/in/°F	-----

Electrical Properties ⁴	Test Method	Value Range
Volume Resistivity	ASTM D257	3.0x10e14 - 6.0x10e13 ohms
Dielectric Constant	ASTM D150-98	2.9 - 2.6
Dissipation Factor	ASTM D150-98	.0053 - .0046
Dielectric Strength	ASTM D149-09, Method A	320 - 100 V/mm
Dielectric Strength	IEC 60112	28.0 kV/mm

ABSplus™ -P430

Other ²	Test Method	Value
Specific Gravity	ASTM D792	1.04
Flame Classification	UL94	HB (0.09", 2.50mm)
UL File Number	-----	E345258

System Availability	Layer Thickness Capability	Support Structure	Available Colors
uPrint SE	0.013 inch (0.330 mm)	Soluble Supports	■ Ivory ⁶
uPrint SE Plus	0.010 inch (0.254 mm)	Breakaway Supports (BST 1200es only)	□ White
Dimension Elite	0.007 inch (0.178 mm) ⁵		■ Black
Dimension SST 1200es			■ Dark Grey
Dimension BST 1200es			■ Red
			■ Blue
			■ Olive Green
			■ Nectarine
			■ Fluorescent Yellow

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 only. ⁶Ivory is the only color option for uPrint.

Stratasys | www.stratasys.com | info@stratasys.com

7665 Commerce Way

Eden Prairie, MN 55344

+1 888 480-3548 (US Toll Free)

+1 952 937-3000 (Intl)

+1 952 937-0070 (Fax)

2 Holtzman St.,

Science Park, PO Box 2496

Rehovot 76124, Israel

+972 74 745-4000

+972 74 745-5000 (Fax)

Local Street Address

City, State, Zip

Phone #

Fax #

©2013 Stratasys Inc. All rights reserved. Stratasys, Dimension, uPrint, Catalyst, FDM, Dimension BST, Dimension SST, WaveWash, and Ecoworks are registered trademarks of Stratasys Inc. FDM Technology, Fused Deposition Modeling, uPrint Plus, uPrint SE, uPrint SE Plus, ABSplus, Catalyst EX, and Smart Supports are trademarks of Stratasys, Inc. All other trademarks are the property of their respective owners, and Stratasys assumes no responsibility with regard to the selection, performance, or use of these non-Stratasys products. Product specifications subject to change without notice. Printed in the USA. DimABSplusP430MaterialSpecSheet-US-1013

