P430 ABSplus Material Properties

A true industrial thermoplastic, ABS is widely used throughout industry. When combined with Dimension 3D printers it becomes the ideal solution to printing 3D models in an office environment.

MECHANICAL PROPERTIES[1]

	Test Method	Imperial	Metric
Tensile Strength, Type 1, 2 in/min (51 mm/min) 0.125	ASTM D638	5,300 psi	37 MPa
Tensile Modulus, Type 1, 2 in/min (51 mm/min) 0.125	ASTM D638	330,000 psi	2,320 MPa
Tensile Elongation, Type 1, 2 in/min (51 mm/min) 0.125	ASTM D638	3%	3%
Flexural Delamination	ASTM D790	4,500 psi	31 MPa
Flexural Strength	ASTM D790	7,600 psi	53 MPa
Flexural Modulus	ASTM D790	320,000 psi	2250 MPa
IZOD Impact, notched, (Method A, 73° (23° C))	ASTM D256	2.0 ft-lb/in	106 J/m

THERMAL PROPERTIES[3]

	Test Method	Imperial	Metric
Heat Deflection (HDT) @ 66 psi (0.5 MPa)	ASTM D648	204° F	96° C
Heat Deflection (HDT) @ 264 psi (1.8 MPa)	ASTM D648	180° F	82° C
Glass Transition (TG)	DMA (SSYS)	226° F	108° C
Melt Point		(NA)[2]	(NA)[2]

OTHER[3]

	Test Method	Value
Specific Gravity	ASTM D792	1.04
Vertical Burning Test	UL94	HB
Coefficient of Thermal Expansion	ASTM E831	4.90E-05 in/in/F
Dielectric Strength (kV / mm)	IEC 60112	28.0

[1] Build orientation is on side edge except for flexural delamination which is upright.

[2] Not applicable (NA) due to amorphous nature. Material does not display a melting point.

[3] Literature value unless otherwise noted.

APPEARANCE

Standard colors include natural, black, dark gray red, blue, nectarine (orange), florescent yellow and olive green.

SYSTEM AVAILABILITY

Dimension Elite
Dimension BST 1200es
Dimension SST 1200es

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