



P400 ABS 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 PROPERTIES¹

	Test Method	Imperial	Metric
Tensile Strength, Type 1, 2 in/min (51 mm/min) 0.125	ASTM D638	3,200 psi	22 MPa
Tensile Modulus, Type 1, 2 in/min (51 mm/min) 0.125	ASTM D638	236,000 psi	1,627 MPa
Tensile Elongation, Type 1, 2 in/min (51 mm/min) 0.125	ASTM D638	6%	6%
Flexural Delamination	ASTM D790	2,000 psi	14 MPa
Flexural Strength	ASTM D790	6,000 psi	41 MPa
Flexural Modulus	ASTM D790	266,000 psi	1,834 MPa
IZOD Impact, notched, (Method A, 73° (23° C))	ASTM D256	2.0 ft-lb/in	106 J/m

THERMAL PROPERTIES³

	Test Method	Imperial	Metric
Heat Deflection (HDT) @ 66 psi (0.5 MPa)	ASTM D648	195° F	90° C
Heat Deflection (HDT) @ 264 psi (1.8 MPa)	ASTM D648	169° F	76° C
Glass Transition (TG)	DMA (SSYS)	219° F	104° C
Melt Point		(NA) ²	(NA) ²

OTHER³

	Test Method	Value
Specific Gravity	ASTM D792	1.05
Vertical Burning Test	UL94	HB
Coefficient of Thermal Expansion	ASTM E831	5.60E-05 in/in/F
Dielectric Strength (kV / mm)	IEC 60112	32.0

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 white, blue, green yellow, black, red and steel gray

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SYSTEM AVAILABILITY

Dimension
Dimension BST 768
Dimension SST 768
Dimension BST 1200
Dimension SST 1200

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.

Product specifications are subject to change without notice.