

PC-ABS (polycarbonate-ABS) is one of the most widely used industrial thermoplastics. PC-ABS offers the most desirable properties of both materials - the superior strength and heat resistance of PC and the flexibility of ABS. PC-ABS blends are commonly used in automotive, electronics and telecommunications applications. Additionally, a PC-ABS part manufactured by Protofacturing 3D Production is 5-60 percent stronger than a part made on previous FDM systems. When combined with a Protofacturing 3D Production, PC-ABS gives you real parts conceptual modeling, functional prototyping, manufacturing tools, and end-use-parts.



Mechanical Properties ¹	Test Method	English	Metric
Tensile Strength (Type 1, 0.125", 0.2"/min)	ASTM D638	5,900 psi	41 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	278,000 psi	1,917 MPa
Tensile Elongation (Type 1, 0.125", 0.2"/min)	ASTM D638	6%	6%
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	9,800 psi	68 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	280,000 psi	1,931 MPa
IZOD Impact, notched (Method A, 23°C)	ASTM D256	3.7 ft-lb/in	196 J/m
IZOD Impact, un-notched (Method A, 23°C)	ASTM D256	9 ft-lb/in	481 J/m

Thermal Properties ³	Test Method	English	Metric
Heat Deflection (HDT) @ 66 psi	ASTM D648	230°F	110°C
Heat Deflection (HDT) @ 264 psi	ASTM D648	205°F	96°C
Vicat Softening	ASTM D1525	234°F	112°C
Coefficient of Thermal Expansion	-----	4.10 E -05 in/in/°F	-----
Glass Transition Temp (Tg)	DMA (SSYS)	257°F	125°C
Melt Point	-----	Not Applicable ²	Not Applicable ²

Other ³	Test Method	Value
Specific Gravity	ASTM D792	1.20
Density	ASTM D792	0.0397 lb/in ³
Flame Classification	UL94	HB (0.0335", 0.85 mm)
Rockwell Hardness	ASTM D785	R110
Dielectric Strength	IEC 60112	35.0 kV/mm
Dielectric Constant @ 100 Hz	IEC 60250	3.1
Dielectric Constant @ 1 Mhz	IEC 60250	3.0

► See reverse for color options and system availability.

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. Tested parts were built on a 400mc @ 0.010" (0.254 mm) slice. Product specifications are subject to change without notice.

¹ Build orientation is on side long edge. ² Due to amorphous nature, material does not display a melting point. ³ Literature value unless otherwise noted.



System Availability	Layer Thickness Capability	Support Structure	Available Colors
400mc	0.013 inch (0.330 mm) 0.010 inch (0.254 mm) 0.007 inch (0.178 mm) 0.005 inch (0.127 mm) ²	Soluble Supports	■ Black

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For more information about Protofacturing 3D production, materials and applications, call **514.448.4220** or visit www.protofacturing.com

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