

## MATERIAL DATA SHEET



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. PC-ABS parts are ideal for conceptual modeling, functional prototyping, manufacturing tools and end-use-parts.

MECHANICAL PROPERTIES	TEST METHOD	ENGLISH		METRIC	
		XZ AXIS	ZX AXIS	XZ AXIS	ZX AXIS
Tensile Strength, Yield [Type 1, 0.125", 0.2"/min]	ASTM D638	4,250 psi	4,000 psi	29 MPa	28 MPa
Tensile Strength, Ultimate [Type 1, 0.125", 0.2"/min]	ASTM D638	5,000 psi	4,300 psi	34 MPa	30 MPa
Tensile Modulus [Type 1, 0.125", 0.2"/min]	ASTM D638	260,000 psi	250,000 psi	1,810 MPa	1,720 MPa
Tensile Elongation at Break [Type 1, 0.125", 0.2"/min]	ASTM D638	5%	2%	5%	2%
Tensile Elongation at Yield [Type 1, 0.125", 0.2"/min]	ASTM D638	2%	2%	2%	2%
Flexural Strength [Method 1, 0.05"/min]	ASTM D790	8,500 psi	6,000 psi	59 MPa	41 MPa
Flexural Modulus [Method 1, 0.05"/min]	ASTM D790	250,000 psi	225,000 psi	1,740 MPa	1,550 MPa
Flexural Strain at Break [Method 1, 0.05"/min]	ASTM D790	4%	3%	4%	3%

MECHANICAL PROPERTIES	TEST METHOD	ENGLISH - XZ AXIS	METRIC - XZ AXIS
IZOD impact - notched [Method A, 23 °C]	ASTM D256	4 ft-lb/in	235 J/m
IZOD impact - unnotched [Method A, 23 °C]	ASTM D256	12 ft-lb/in	642 J/m

THERMAL PROPERTIES	TEST METHOD	ENGLISH	METRIC
Heat Deflection (HDT) @ 66 psi	ASTM D648	280 °F	138 °C
Heat Deflection (HDT) @ 264 psi	ASTM D648	261 °F	127 °C
Vicat Softening Temperature [Rate B/50]	ASTM D1525	282 °F	139 °C
Glass Transition Temperature [Tg]	DMA (SSYS)	322 °F	161 °C
Coefficient of Thermal Expansion [flow]	ASTM E831	4.10 <sup>-05</sup> in/in/° F	7.38 <sup>-05</sup> mm/mm/°C
Melting Point	-----	Not Applicable	Not Applicable



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<b>ELECTRICAL PROPERTIES</b>	<b>TEST METHOD</b>	<b>ORIENTATION</b>	<b>VALUE RANGE</b>
Volume Resistivity	ASTM D257	XZ Axis	3.7E15 - 1.8E16 ohm-cm
Dielectric Constant	ASTM D150-98	XZ Axis	2.78 - 2.83
Dissipation Factor	ASTM D150-98	XZ Axis	0.0048 - 0.0054
Dielectric Strength	ASTM D149-09, Method A	XZ Axis	130 V/mil
Dielectric Strength	ASTM D149-09, Method A	XZ Axis	320 V/mil

<b>OTHER</b>	<b>TEST METHOD</b>	<b>VALUE</b>
Specific Gravity	ASTM D792	1.10
Density	ASTM D792	0.03397 lb/in <sup>3</sup>
Flame Classification	UL94	HB
Rockwell Hardness	ASTM D785	R110
UL File Number	-----	E345258

