



A true industrial thermoplastic, PC (polycarbonate) is widely used in automotive, aerospace, medical and many other applications. PC offers accuracy, durability and stability, creating strong parts that withstand functional testing. A PC part manufactured on a Fortus® 3D Production System is 5 to 60 percent stronger than a part made with FDM systems. It also has superior mechanical properties to ABS and a number of other thermoplastics. When combined with a Fortus 3D Production System, PC gives you strong parts for conceptual modeling, functional prototyping, manufacturing tools, and end-use parts.

MECHANICAL PROPERTIES ¹	TEST METHOD	ENGLISH		METRIC	
		XZ AXIS	ZX AXIS	XZ AXIS	ZX AXIS
Tensile Strength, Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	5,800 psi	4,300 psi	40 MPa	30 MPa
Tensile Strength, Ultimate (Type 1, 0.125", 0.2"/min)	ASTM D638	8,300 psi	6,100 psi	57 MPa	42 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	282,000 psi	284,000 psi	1,944 MPa	1,958 MPa
Tensile Elongation at Break (Type 1, 0.125", 0.2"/min)	ASTM D638	4.8%	2.5%	4.8%	2.5%
Tensile Elongation at Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	2.2%	2%	2.2%	2%
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	13,000 psi	9,900 psi	89 MPa	68 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	291,000 psi	261,000 psi	2,006 MPa	1,800 MPa
Flexural Strain at Break (Method 1, 0.05"/min)	ASTM D790	No break	4%	No break	4%
IZOD Impact, notched (Method A, 23°C)	ASTM D256	1.4 ft-lb/in	0.5 ft-lb/in	73 J/m	28 J/m
IZOD Impact, un-notched (Method A, 23°C)	ASTM D256	16.4 ft-lb/in	3.5 ft-lb/in	877 J/m	187 J/m
Compressive Strength, Yield (Method 1, 0.05"/min)	ASTM D695	10,000 psi	9,200 psi	69 MPa	64 MPa
Compressive Strength, Ultimate (Method 1, 0.05"/min)	ASTM D695	28,000 psi	9,400 psi	193 MPa	65 MPa
Compressive Modulus (Method 1, 0.05"/min)	ASTM D695	1,100,000 psi	227,000 psi	7,564 MPa	1,565 MPa

THERMAL PROPERTIES ²	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	ASTM D1525	282°F	139°C
Glass Transition (Tg)	DMA (SSYS)	322°F	161°C
Melting Point	-----	Not Applicable ³	Not Applicable ³



ELECTRICAL PROPERTIES ⁴	TEST METHOD	VALUE RANGE
Volume Resistivity	ASTM D257	6.0x10 ⁸ - 2.0x10 ¹⁰ ohm-cm
Dielectric Constant	ASTM D150-98	2.8 - 3.0
Dissipation Factor	ASTM D150-98	.0005 - .0006
Dielectric Strength	ASTM D149-09, Method A	80 - 360 V/mil

OTHER ²	TEST METHOD	VALUE
Specific Gravity	ASTM D792	1.2
Flame Classification	UL94	HB
Coefficient of Thermal Expansion	ASTM E831	3.8x10 ⁻⁵ in/in/°F
Rockwell Hardness	ASTM D785	R115
UL File Number	-----	E345258