



# PROFESSIONAL PLASTICS

## Polycarbonate Material Data Sheet General Purpose, Glazing Grade

### Typical Properties

Property	Test Method	Units	Values
<b>PHYSICAL</b>			
Specific Gravity	ASTM D 792	–	1.2
Refractive Index	ASTM D 542	–	1.586
Light Transmission, Clear @ 0.118"	ASTM D 1003	%	86
Light Transmission, I30 Gray @ 0.118"	ASTM D 1003	%	50
Light Transmission, K09 Bronze @ 0.118"	ASTM D 1003	%	50
Light Transmission, I35 Dark Gray @ 0.118"	ASTM D 1003	%	18
Water Absorption, 24 hours	ASTM D 570	%	0.15
Poisson's Ratio	ASTM E 132	–	0.38
<b>MECHANICAL</b>			
Tensile Strength, Ultimate	ASTM D 638	psi	9,500
Tensile Strength, Yield	ASTM D 638	psi	9,000
Tensile Modulus	ASTM D 638	psi	340,000
Elongation	ASTM D 638	%	110
Flexural Strength	ASTM D 790	psi	13,500
Flexural Modulus	ASTM D 790	psi	345,000
Compressive Strength	ASTM D 695	psi	12,500
Compressive Modulus	ASTM D 695	psi	345,000
Izod Impact Strength, Notched @ 0.125"	ASTM D 256	ft·lbs/in	18
Izod Impact Strength, Unnotched @ 0.125"	ASTM D 256	ft·lbs/in	60 (no failure)
Instrumented Impact @ 0.125"	ASTM D 3763	ft·lbs	>47
Shear Strength, Ultimate	ASTM D 732	psi	10,000
Shear Strength, Yield	ASTM D 732	psi	6,000
Shear Modulus	ASTM D 732	psi	114,000
Rockwell Hardness	ASTM D 785	–	M70 / R118
<b>THERMAL</b>			
Coefficient of Thermal Expansion	ASTM D 696	in/in/°F	3.75 x 10 <sup>-5</sup>
Coefficient of Thermal Conductivity	ASTM C 177	BTU·in/hr·ft <sup>2</sup> ·°F	1.35
Heat Deflection Temperature @ 264 psi	ASTM D 648	°F	270
Heat Deflection Temperature @ 66 psi	ASTM D 648	°F	280
Brittleness Temperature	ASTM D 746	°F	-200
Shading Coefficient, clear @ 0.236"	NFRC 100-2010	–	0.97
Shading Coefficient, Gray or Bronze @ 0.236"	NFRC 100-2010	–	0.77
U factor @ 0.236" (summer, winter)	NFRC 100-2010	BTU/hr·ft <sup>2</sup> ·°F	0.85, 0.92
U factor @ 0.375" (summer, winter)	NFRC 100-2010	BTU/hr·ft <sup>2</sup> ·°F	0.78, 0.85

<b>ELECTRICAL</b>			
Dielectric Constant @ 10 Hz	ASTM D 150	-	2.96
Dielectric Constant @ 60 Hz	ASTM D 150	-	3.17
Volume Resistivity	ASTM D 257	Ohm-cm	8.2 x 10 <sup>16</sup>
Dissipation Factor @ 60 Hz	ASTM D 150	-	0.0009
<b>Arc Resistance</b>			
Stainless Steel Strip electrode	ASTM D 495	Seconds	10
Tungsten Electrodes	ASTM D 495	Seconds	120
Dielectric Strength, in air @ 0.125"	ASTM D 149	V/mil	380
<b>FLAMMABILITY</b>			
Horizontal Burn, AEB	ASTM D 635	in	<1
Ignition Temperature, Self	ASTM D 1929	°F	1022
Ignition Temperature, Flash	ASTM D 1929	°F	824
Flame Class @ 0.060"	UL 94	-	HB

\*Typical properties are not intended for specification purposes.

\*\*Some properties characterized using non-textured sheet.

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