

## Clear Polycarbonate

### Description:

392022 is a polished surface, UV stabilized, transparent polycarbonate. It features outstanding impact strength, superior dimensional stability, high temperature resistance, and high clarity.

### Typical Physical Properties

Specification	Test Method	Typical Results
Specific Gravity	ASTM D792	1.2
Refractive Index	ASTM D542	1.586
Light Transmission @ 0.118"	ASTM D1003	86%
Water Absorption, 24 hrs	ASTM D570	0.15%
Poisson's Ratio	ASTM E132	0.38
Tensile Strength, Ultimate	ASTM D638	9,500 psi
Tensile Strength, Yield	ASTM D638	9,000 psi
Tensile Modulus	ASTM D638	340,000 psi
Elongation	ASTM D638	110%
Flexural Strength	ASTM D790	13,500 psi
Flexural Modulus	ASTM D790	345,000 psi
Compressive Strength	ASTM D695	12,500 psi
Compressive Modulus	ASTM D695	345,000 psi
Izod Impact Strength, Notched @ 0.125"	ASTM D256	18 ft·lbs/in
Izod Impact Strength, Unnotched @ 0.125"	ASTM D256	60 ft·lbs/in No failure
Instrumented Impact @ 0.125"	ASTM D3763	>47 ft·lbs
Shear Strength, Ultimate	ASTM D732	10,000 psi
Shear Strength, Yield	ASTM D732	6,000 psi
Shear Modulus	ASTM D732	114,000 psi
Rockwell Hardness	ASTM D785	M70/R118
Coefficient of Thermal Expansion	ASTM D696	$3.75 \times 10^{-5}$ in/in/°F
Coefficient of Thermal Conductivity	ASTM C177	1.35 BTU·in/hr·ft <sup>2</sup> ·°F
Heat Deflection Temperature @ 264 psi	ASTM D648	270°F
Heat Deflection Temperature @ 66 psi	ASTM D648	280°F
Brittleness Temperature	ASTM D746	-200°F
Shading Coefficient, clear @ 0.236"	NFRC 100-2010	0.97
U factor @ 0.236" (summer, winter)	NFRC 100-2010	0.85, 0.92 BTU/hr·ft <sup>2</sup> ·°F
U factor @ 0.375" (summer, winter)	NFRC 100-2010	0.78, 0.85 BTU/hr·ft <sup>2</sup> ·°F
Dielectric Constant @ 10 Hz	ASTM D150	2.96
Dielectric Constant @ 60 Hz	ASTM D150	3.17
Volume Resistivity	ASTM D257	$8.2 \times 10^{16}$ Ohm·cm



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**Typical Physical Properties**

Specification	Test Method	Typical Results
Dissipation Factor @ 60 Hz	ASTM D150	0.0009
Arc Resistance <i>Stainless Steel Strip Electrode</i> <i>Tungsten Electrodes</i>	ASTM D495	10 seconds 120 seconds
Dielectric Strength, in air @ 0.125"	ASTM D149	380 V/mil
Horizontal Burn, AEB	ASTM D635	<1 in
Ignition Temperature, Self	ASTM D1929	1022°F
Ignition Temperature, Flash	ASTM D1929	824°F
Flame Class  @ 0.060" @ 0.394"	UL94	HB V-0

**Regulatory Code Compliance and Certifications**

ICC-ES Evaluation Report ESR-2728
Miami-Dade NOA #12-0605.05
CPSC 16 CFR 1201 Category I and Category II: Safety Standard for Architectural Glazing Materials
ANSI Z97.1-2004: American National Standard for Safety Glazing Materials Used in Buildings Safety Performance Specifications and Methods of Test. Class A
UL 972: Burglary Resistant Glazing Materials, UL File #BP2126
UL 94: Flammability, UL File #E351891

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