

## POLYCARBONATE



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## PHYSICAL PROPERTIES

A high impact abrasion resistant polycarbonate. This polycarbonate sheet offers glass-like surface hardness. The resin used for this product provides superior ratings in many classifications, esp. flammability. This resin is used to manufacture various premium grades of polycarbonate including abrasion-resistant and ballistic grade sheet. Polyzone polycarbonate satisfies major building code requirements and is UV stable. Ideal for high abuse glazing areas. A/R polycarbonate is not formable due to its abrasion resistant coating.

Property	Method	Unit	Nominal Value*
Density	ASTM D-792	g/cm <sup>3</sup>	1.2
Tensile strength at yield	ASTM D-638	psi	9000
Tensile modulus	ASTM D-638	psi	345,000
Elongation at yield	ASTM D-638	%	110
Flexural modulus	ASTM D-790	psi	345,000
Izod impact unnotched at 0.125"	ASTM D-256	ft-lbs/in <sup>2</sup>	60 (no failure)
IZOD impact notched at 0.125"	ASTM D-256	ft-lbs/in <sup>2</sup>	12.0 - 16.0
Compressive modulus	ASTM D-695	psi	345,000
Compressive deformation	ASTM D-621	% at 1000 psi	n/a
Hardness	ASTM D-2240	Shore D	118
Impact brittleness temperature	ASTM D-746	°F	-200
Melting point	ASTM D-3417	°F	n/a
Coefficient of linear thermal expansion	ASTM D-696	in/in/°F	3.75 x 10 <sup>-5</sup>
Heat deflection temperature, 66 psi	ASTM D-648	°F	280
Heat deflection temperature, 264 psi	ASTM D-648	°F	270
Max. operating temp.		°F	n/a
Volume Resistivity	ASTM D-257	Ohm-cm	8.2 x 10 <sup>16</sup>
Water absorption 24hrs.	ASTM D-570	%	0.15
Horizontal burn, AEB .125"	ASTM D-635	inches	<1.0
Horizontal burn, ATB .125"			
Flash ignition temperature	ASTM D-1929	°F	870
Self ignition temperature	ASTM D-1929	°F	1070
Light transmission - Clear 0.125"	ASTM D-1003	%	86
Taber Abrasion, Delta Haze	ASTM D-044	%	1.0 - 2.0
Refractive index at 72°F	ASTM D-542		1.586
UL94 Clear at 0.118"	UL - 94		V1

\*All values are determined on specimens prepared according to ASTM 1248-84 "Standard Specifications for Polyethylene Plastic Molding and Extrusion Materials". Nominal values should not be interpreted as specifications.

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