

TECHNICAL INFORMATION

POLYCARBONATE

Clear General Purpose

Physical Properties

A high impact resistant polycarbonate. 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.

Property	Method	Unit	Nominal Value*
Density	ASTM D-792	g/cm ³	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 ²	60 (no failure)
IZOD impact notched at 0.125"	ASTM D-256	ft-lbs/in ²	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	°F-1	tyyt
Coefficient of linear thermal expansion	ASTM D-696	in/in/°F	3.75 x 10 ⁻⁵
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 ¹⁵
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
Light transmission - Bronze or Gray	ASTM D-1003	%	50
Light transmission - Dark Gray	ASTM D-1003	%	18
Haze	ASTM D-1003	%	< 1.0
Refractive index at 72°F	ASTM D-542		1.586
UL94 Clear at 0.220"	UL - 94		V0

*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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