



Polycarbonate Tubing - Extruded

For the clarity of glass and the impact resistance of metal, specify Excelon™ PC tubing. Excelon PC provides extraordinary design and fabrication opportunities

Made from FDA-approved materials, UL rated, Superior clarity, High Tensile Strength over wide temperature range, High impact strength - even at low temperatures Excellent high temperature resistance, Flame-resistant, Self-extinguishing, Can be machined, drilled, cut and sawed. Easily joined with solvents or adhesives. Polycarbonate Tubes can be ordered from stock in 1/4" - 3 3/4" I.D., in 8 ft. lengths. Custom orders are also available in sizes up to 8" O.D. and in a variety of wall thicknesses. Specific formulations are available for tints and colors with performance additives for ultraviolet stabilization, flame retardant (94VO) and radiation resistance

Typical Properties			
Property	Test Method	Units	Values
PHYSICAL			
Specific Gravity	ASTM D792	-	1.2
Refractive Index	ASTM D542	-	1.586
Light Transmission, Clear @ 0.125"	ASTM D1003	%	86
Light Transmission, Gray, Bronze	ASTM D1003	%	50
Light Transmission, Dark Gray	ASTM D1003	%	18
Water Absorption, 24 hrs	ASTM D570	%	0.15
Poisson's Ratio	ASTM E132	-	0.38
MECHANICAL			
Tensile Strength, Ultimate	ASTM D638	psi	9,500
Tensile Strength, Yield	ASTM D638	psi	9,000
Tensile Modulus	ASTM D638	psi	340,000
Elongation	ASTM D638	%	110
Flexural Strength	ASTM D790	psi	13,500
Flexural Modulus	ASTM D790	psi	345,000
Compressive Strength	ASTM D695	psi	12,500
Compressive Modulus	ASTM D695	psi	345,000
Izod Impact Strength, Notched @ 0.125"	ASTM D256	ft-lbs/in	18
Izod Impact Strength, Unnotched @ 0.125"	ASTM D256	ft-lbs/in	60 (no failure)
Instrumented Impact, 0.125"	ASTM D3763	ft-lbs	>45
Shear Strength @ Yield	ASTM D732	psi	6,000
Shear Strength, Ultimate	ASTM D732	psi	10,000
Shear Modulus	ASTM D732	psi	114,000
Rockwell Hardness	ASTM D785	-	M70/R118

THERMAL			
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	3.75 x 10 ⁻⁶
Coefficient of Thermal Conductivity	ASTM C177	BTU-in/hr-ft ² -°F	1.35
Heat Deflection Temperature @ 264 psi	ASTM D648	°F	270
Heat Deflection Temperature @ 66 psi	ASTM D648	°F	280
Brittleness Temperature	ASTM D746	°F	-200
Shading Coefficient, Clear 0.125"	ASHRAE	-	1.02
Shading Coefficient, Gray, Bronze 0.125"	ASHRAE	-	0.70
U factor 0.25" (summer gain, winter loss)	ASTM D1363	BTU/hr-ft ² -°F	0.90, 0.96
ELECTRICAL			
Dielectric Constant, @10Hz	ASTM D150	-	2.96
Dielectric Constant @ 60Hz	ASTM D150	-	3.17
Volume Resistivity	ASTM D257	Ohm-cm	8.2 x 10 ¹⁴
Dissipation Factor @ 60 Hz	ASTM D150	-	0.0009
Arc Resistance			
Stainless Steel Strip Electrodes	ASTM D495	Seconds	10-11
Tungsten Electrodes	ASTM D495	Seconds	120
Dielectric Strength, in air @ 0.125"	ASTM D149	V/mil	380
FLAMMABILITY			
Horizontal Burn, AEB	ASTM D635	in	<1
Ignition Temperature, Self	ASTM D1929	°F	1070
Ignition Temperature, Flash	ASTM D1929	°F	870
Flame Class, Clear @ 0.060"	UL 94	-	V2
Flame Class, Clear @ 0.212"	UL 94	-	V0

Call Professional Plastics at **(888) 995-7767** or
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