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POLYCARBONATE - PC1000

Characteristics

- * Excellent Impact Resistance, Toughness and Elongation Properties
- * Heat Resistant to 250° F (120° C) Continuous Use
- * Transparent
- * Good Dielectric Properties
- * Economical Thermal Properties

Description

PC 1000 Machining Grade Polycarbonate is a transparent amorphous thermoplastic which offers very high impact strength and high modulus of elasticity. The material has a 290° F (145° C) heat deflection temperature at 264 psi, absorbs very little moisture and resists acidic solutions. These properties, in addition to good electrical characteristics, make PC 1000 machine grade polycarbonate stock shapes an excellent choice for electrical / electronic applications. Its strength, impact resistance and transparency also make it an ideal material for transparent structural applications such as sight glasses and windows.

PC 1000 Machining Grade Polycarbonate is stress relieved making it ideal for close tolerance machined parts. Stock shapes are produced from polycarbonate resins which meet the requirements of ASTM-D-3935.

Forms Available

ROD	.062 to 6.00 " diameter, Lengths to 12 feet
TUBE	Custom produced as requested
PLATE	.250" to 3.000" thick, Widths to 24", Lengths to 48"
COLOR	Clear

Typical Property Values

MECHANICAL @ 73°F

Specific Gravity	
Tensile Strength	psi
Tensile Modulus of Elasticity	psi
Tensile Elongation (at Break)	%
Flexural Strength	psi
Flexural Modulus of Elasticity	psi
Shear Strength	psi
Compressive Strength, 10% Deformation	psi
Compressive Modulus of Elasticity	psi
Rockwell Hardness	M Scale
Izod Impact Strength, Notched	ft-lbs/in. of notch
Coefficient of Friction, Dynamic (Dry vs. Steel)	
Limiting PV (4 :1 Safety Factor Applied)	ft.lbs/in. ² min
Wear Factor	in ³ -min/ft.lbs. hr.
Water Absorption 24 hrs	% by wt.

THERMAL

Coefficient of Linear Expansion (-40°F to 300°F)	in./in./°F
Heat Deflection Temperature @264 psi	°F
Tg-Glass Transition (amorphus)	°F
Continuous Service Temperature in Air	°F
Thermal Conductivity	°F

ELECTRICAL

Dielectric Strength, Short Term	Volts/mil
Surface Resistivity	Ohms/Sq.
Dielectric Constant	1 MHz
Dissipation Factor	1 MHz

Polycarbonate PC-1000

1.20
10,500
320,000
100
13,000
350,000
9,200
11,500
300,000
75
1.50
0.20
3.9 x 10 ⁻⁵
290
293
250
1.30
400
>10 ¹³
3.17
0.0009

(Properties listed above are provided for reference only, they should not be used for design specifications or quality control)

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