

Polycarbonate (PC) - Black

Polycarbonate is an engineering thermoplastic that offers excellent dimensional stability over an extensive range of service temperatures. It is commonly used for structural applications when clarity and high impact strength are necessary. Moreover, it can be used for numerous types of electrical applications since it has low moisture absorption, good insulating properties, and an excellent flammability rating.

Applications

Typical applications consist of viewing windows, impact shields, fluid handling components, manifolds, and housings and covers.

Key Product Benefits

- Good Strength and Stiffness
- Excellent Impact Resistance and Dimensional Stability
- Low Moisture Absorption
- Flame Resistance
- Electrically Insulating
- Machinability
- Easy to Fabricate, Paint and Glue

Properties

Property	Test Method	Value
Flexural Modulus	ASTM D790	328,000-338,000 psi
Flexural Strength @ Yield	ASTM D790	13,100-14,100 psi
Rockwell Hardness (M Scale)	ASTM D785	70-77
Rockwell Hardness (R Scale)	ASTM D785	118
Izod Impact, Notched	ASTM D256	17.0 ft-lb/in
Elongation @ Break	ASTM D638	140%
Elongation @ Yield	ASTM D638	6.0-7.0%
Tensile Strength @ Break	ASTM D638	9,860-11,600 psi
Tensile Strength @ Yield	ASTM D638	8,990 psi
Coefficient of Thermal Linear Expansion	ASTM D696	3.8×10^{-5} in/in/°F
Flammability	UL 94	V-0

Property (Continued)	Test Method (Continued)	Value (Continued)
Heat Deflection Temperature @ 66 psi	ASTM D648	275-288°F
Heat Deflection Temperature @ 264 psi	ASTM D648	255-268°F
Thermal Conductivity	ASTM C177	1.3 BTU-in/hr/ft ² /°F
Dielectric Constant @ 60 Hz	ASTM D150	2.95-3.17
Dielectric Constant @ 1 MHz	ASTM D150	2.90-2.96
Dielectric Strength	ASTM D149	380-760 V/mil
Haze	ASTM D1003	0.5-2.0%
Specific Gravity	ASTM D792	1.20
Water Absorption @ 24 hours	ASTM D570	0.15-0.20%
Water Absorption @ Equilibrium	ASTM D570	0.35%