

PC - Specifications

Description

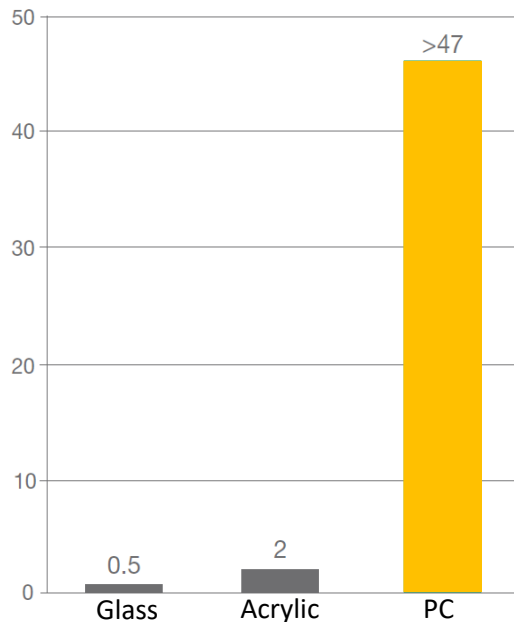
PC (Polycarbonate) has outstanding impact strength, superior dimensional stability, high temperature resistance, and high clarity. This material has good weldability and can be electroplated. It is resistant to very high impact loading and also has low distortion under mechanical loads.

Physical Properties*

Specific gravity ASTM D-792	1.2
Refractive index ASTM D-542	1.586
Water absorption, 24 hours ASTM D-570	0.15%
Poisson's ratio ASTM E-132	0.38

PC

Impact resistance**



**Instrumented impact per ASTM D-3763, sample thickness 0.125" nominal.

Mechanical Properties*

Tensile strength, Ultimate ASTM D-638	9,500 psi
Tensile strength, Yield ASTM D-638	9,000 psi
Tensile modulus ASTM D-638	340,000 psi
Elongation at break ASTM D-638	110%
Flexural strength ASTM D-790	13,500 psi
Flexural modulus ASTM D-790	345,000 psi
Compressive strength ASTM D-695	12,500 psi
Compressive modulus ASTM D-695	345,000 psi
Izod impact strength, Notched ASTM D-256	18 ft.-lb./in.
Shear strength, Ultimate ASTM D-732	10,000 psi
Shear modulus ASTM D-732	114,000 psi
Rockwell hardness ASTM D-785	M70/R118

*Typical properties are not intended for specification purposes.

Applications

- Machine guards
- Structural parts
- Thermoformed components
- Fabricated components

Flammability*

Horizontal burn, AEB ASTM D-635	< 1 in.
Ignition temperature, Self ASTM D-1929	1022°F
Ignition temperature, Flash ASTM D-1929	824°F
Flame class UL 94 @0.060" UL 94 @0.394"	HB V-0

Electrical Properties*

Dielectric constant ASTM D-150 @10Hz ASTM D-150 @60Hz	2.96 3.17
Volume resistivity ASTM D-257	8.2x10 ¹⁶ Ohm.cm
Dissipation factor ASTM D-150 @60Hz	0.0009
Dielectric strength ASTM D-149 @0.125"	380 V/mil

Thermal Properties*

Coefficient of thermal expansion ASTM D-696	3.75x10 ⁻⁵ in./in./°F
Coefficient of thermal conductivity ASTM C-177	1.35 BTU-in./ hr-ft.2-°F
Heat deflection temperature ASTM D-648 @264 psi	270°F
Brittleness temperature ASTM D-746	-200°F

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