

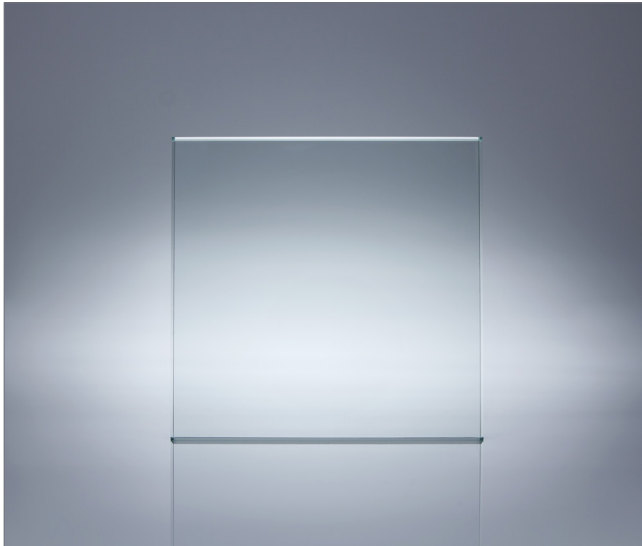


THAMES
STOCKHOLDERS

Polycarbonate (PC)

ENGINEERING PLASTIC

Page: 1 of 1



Product Overview

Polycarbonate (PC) is an amorphous transparent material that combines good electrical and mechanical properties.

It represents a material grade that lends itself well to various industrial applications. As well as being fully recyclable, Polycarbonate benefits from good machinability and can be accurately processed to close working tolerances. An enhanced Polycarbonate (PC GF 20) offers improved tensile strength and stiffness with lower coefficient thermal expansion.

Polycarbonate is also machinable to close tolerances.

Key Features

- High impact strength and heat resistance
- Good electrical insulation characteristics
- Fracture resistant
- Transparent with good dimensional stability

Applications

- Manifolds
- Automotive parts
- Safety glasses, impact guards
- Packaging

Typical Properties

| Property | Units | Test Method | PC | PC GF 20 |
|--------------------------------------|----------|-------------|-------------------|------------------------|
| Specific Gravity | - | ASTM D 792 | 1.2 | 1.35 |
| Water Absorption 24 hrs | % | ASTM D 570 | 0.15 | 0.16 |
| Water Absorption Saturation | % | ASTM D 570 | 0.35 | 0.29 |
| Flammability | - | UL 94 | HB | HB |
| Tensile Strength | psi | ASTM D 638 | 10,000 | 16,000 |
| Elongation | % | ASTM D 638 | 75 | 6 |
| Modulus | psi | ASTM D 638 | 320,000 | 860,000 |
| Flexural Strength | psi | ASTM D 790 | 13,000 | 19,000 |
| Modulus | psi | ASTM D 790 | 340,000 | 800,000 |
| Notched Izod | ft-lb/in | ASTM D 256 | 10 | 2 |
| Rockwell Hardness | - | ASTM D 785 | M75 | M91 |
| HDT @ 264 psi | °F | ASTM D 648 | 280 | 295 |
| Coefficient Linear thermal expansion | in/in/°F | ASTM D 696 | 3.80 x 10 | 1.5 x 10 ⁶⁵ |
| Dielectric Strength | V / mil | ASTM D 149 | 380 | 490 |
| Volume Resistivity | ohm-cm | ASTM D 257 | >10 ¹³ | 10 ¹⁷ |
| Dielectric Constant | - | ASTM D 150 | 3.2 | 3.13 |



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