

### Key Features

- High impact strength
- High dimensional stability
- High toughness even down to  $-20^{\circ}\text{C}$
- High mechanical retention up to  $140^{\circ}\text{C}$
- Good electrical insulation properties
- Not influence by water or temperature
- Good abrasion resistance
- Ability to withstand repeated steam sterilizations

### Common Applications

- Compact disc
- Safety helmets
- Bullet-proof glass
- Car headlamp lenses
- Baby feeding bottles
- Roofing
- Glazing

### Material Description

Polycarbonate (PC) is a transparent thermoplastic known for its exceptional impact resistance, clarity, and heat resistance. PC offers high impact strength, making it suitable for applications where durability and toughness are crucial, such as safety glasses, riot shields, and bulletproof windows. PC also offers good heat resistance, making it suitable for use in applications such as electrical enclosures and kitchenware. Additionally, PC can be easily molded, extruded, and thermoformed, allowing for the production of complex shapes and designs.

### Mechanical Properties

Ultimate Tensile Strength	8,700 – 10,500 PSI
Tensile Yield Strength	8,560 – 10,200 PSI
Hardness	17.7 – 21.7 HV
Elongation at Break	50 – 120%

### Physical Properties

Density	0.0434 lb/in <sup>3</sup> (1.2 g/cm <sup>3</sup> )
Thermal Conductivity	0.189 – 0.218 W/m.K
Modulus of Elasticity	290 – 354 KSI (2 – 2.244 GPa)
Melting Point	255 – 518°F (130 – 270 °C)

### Technical Assistance

Our knowledgeable staff, supported by our in-house team of expert metallurgists and engineers, is ready to assist you with any technical inquiries.

### InstaVoxel™ – On-Demand Manufacturing Expert

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