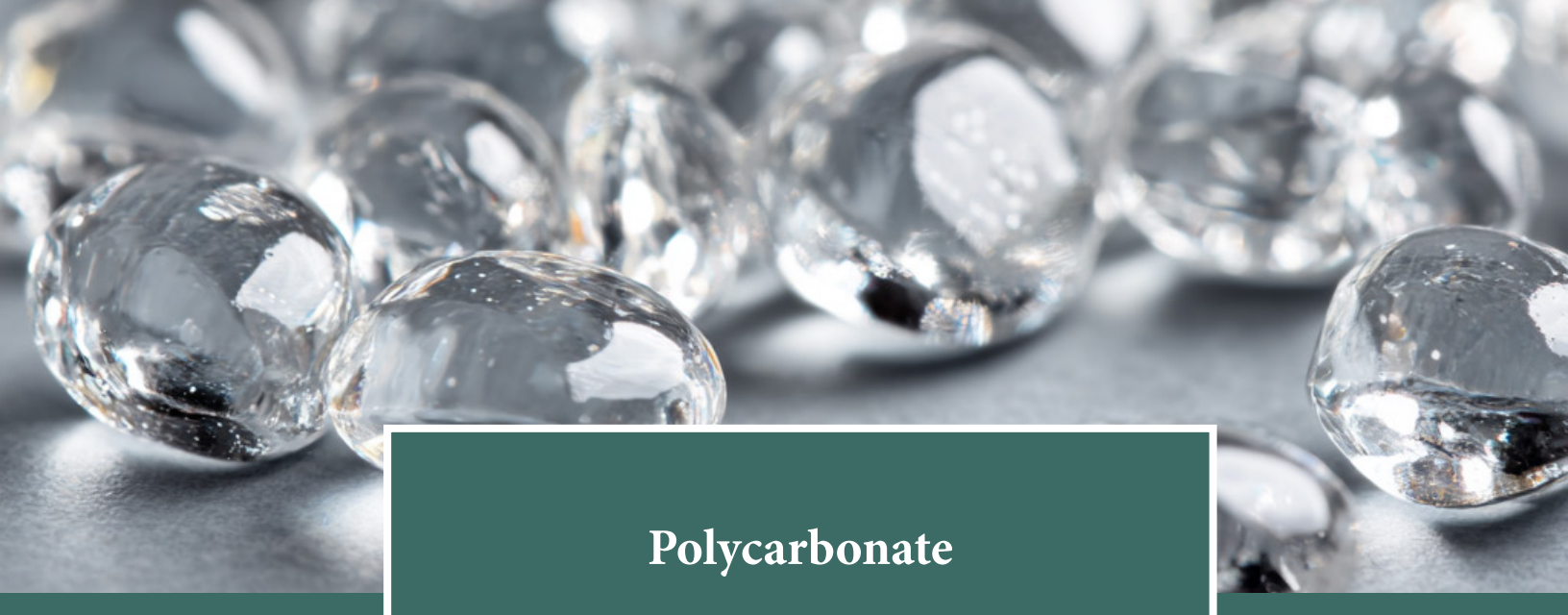




Polycarbonate

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Polycarbonate is a tough, transparent thermoplastic known for its exceptional impact resistance and optical clarity. It combines strength and design flexibility, making it ideal for demanding applications that require both durability and aesthetics.

What is Polycarbonate?

Polycarbonate is produced through the polymerization of bisphenol A (BPA) and phosgene. The resulting structure creates a material that is virtually unbreakable, with excellent heat resistance and dimensional stability. It can be molded, extruded, or thermoformed into complex shapes while maintaining clarity.

Common Applications

Polycarbonate is widely used in industries where safety and visibility are essential:

- Safety glasses, shields, and goggles
- Machine guards and protective panels
- Automotive lighting and glazing
- Medical device housings
- Electrical enclosures and connectors

Benefits

1. Outstanding impact resistance (250x stronger than glass)
2. Excellent optical clarity and transparency
3. High heat resistance and dimensional stability
4. Lightweight compared to glass and metals
5. Good electrical insulation properties

Limitations

1. Prone to scratching without protective coatings
2. Susceptible to stress cracking from certain chemicals
3. Lower UV resistance unless stabilized
4. Typically more expensive than acrylic