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Acrylic is a transparent thermoplastic known for its excellent optical clarity, weatherability, and versatility. Lightweight yet strong, it is a preferred alternative to glass in many applications where safety, durability, and aesthetics are key.

Acrylic

What is Acrylic?

Acrylic, also known as PMMA, is a synthetic polymer derived from methacrylate monomers. It combines outstanding light transmission with resistance to UV radiation and environmental exposure. Unlike glass, acrylic does not shatter easily, making it safer and easier to fabricate into custom shapes.

Common Applications

- Exceptional optical clarity (transmits up to 92% of visible light)
- Strong resistance to UV exposure and weathering
- Lightweight compared to glass
- Good surface hardness and scratch resistance
- Easy to machine, thermoform, and bond

Benefits

1. Exceptional optical clarity (transmits up to 92% of visible light)
2. Strong resistance to UV exposure and weathering
3. Lightweight compared to glass
4. Good surface hardness and scratch resistance
5. Easy to machine, thermoform, and bond

Limitations

1. More brittle than polycarbonate under high impact
2. Prone to stress cracking with certain solvents
3. Lower heat resistance than some engineering plastics