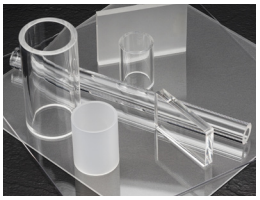
Acrylic

Strong, stiff, clear plastic available in a variety of brilliant colors



Acrylic is a transparent thermoplastic material with outstanding strength, stiffness, and optical clarity. Acrylic sheet is easy to fabricate, bonds well with adhesives and solvents, and is easy to thermoform. It has superior weathering properties compared to many other transparent plastics. Acrylic sheet exhibits glass-like qualities – clarity, brilliance, and transparency – but at half the weight and many times the impact resistance of glass. From durable signs and skylights, to eye-catching retail store fixtures, displays and shelves, acrylic provides outstanding versatility, durability, and aesthetic qualities.

Acrylic Material Options

Extruded Acrylic – Extruded acrylic sheet can be manufactured to any length, which often results in cost savings since yield loss can be minimized when parts are cut from custom sheet sizes. Extruded acrylic is also the easiest grade to thermoform and the easiest to bond using solvent cements.

Cast Acrylic – Cast acrylic sheet has better chemical resistance and superior machining characteristics compared with extruded acrylic.

Acrylic for Architectural Applications – Acrylic's clarity, light weight, impact resistance, and weather resistance, make this material a popular choice for architectural applications. Acrylic sheet is used in everything from windows and wall partitions to lighting fixtures and canopies.

Acrylic for Transportation Applications – Acrylic is used throughout the transportation industry in instrument panels, windows, windshields, and mirrors.

OPTIX® DA Acrylic for Digital Printing – OPTIX® DA is specifically designed to provide optimal adhesion of UV curing inks without the need for adhesion promoters.

OPTIX® LD Acrylic for Light Diffusion – OPTIX® LD light diffusing acrylic sheet provides superior diffusion properties and weatherability allowing for greater sign design flexibility with slim profile channel letters. Visible hot spots and luminance fluctuations are eliminated without affecting the light transmission properties. Offered in a wide variety of stock sizes, colors and patterns.

FDA Compliant Acrylic – Acrylic is available in FDA compliant grades.

Cut-to-Size Acrylic Sheet – Acrylic is available in "cut-to-size" or "run-to-size" sheet options. Gain the flexibility of buying acrylic how you need it - save time, eliminate scrap, improve your productivity, and reduce wear and tear on your equipment.

Acrylic Rods and Tubes – Acrylic rod and tube are available in a wide range of sizes. These materials are often used for point-of-purchase display applications.

Acrylic is widely used for:

- Indoor and outdoor signs
- POP displays and exhibits
- Architectural glazing, skylights
- LED diffusing lighting panels
- Transportation applications
- Brochure holders
- Shelves and retail fixtures
- Transparent manifolds

Performance characteristics:

- Strong, stiff, optically clear
- Easy to fabricate, machine, and thermoform
- Easy to solvent bond
- Good dimensional stability
- Good weathering

Common brands:

- OPTIX®
- Plexiglas®
- ACRYLITE®

Available in:

Sheet Rod Tube

TYPICAL PROPERTIES OF ACRYLIC

	UNITS	ASTM TEST	CONTINUOUSLY PROCESSED ACRYLIC SHEET
Tensile strength	psi	D638	10,000
Flexural modulus	psi	D790	480,000
Izod impact (notched)	ft-lbs/in of notch	D256	0.4
Heat deflection temperature @ 264 psi	°F	D648	195
Maximum continuous service temperature in air	°F		160
Water absorption (immersion 24 hours)	%	D570	0.20
Coefficient of linear thermal expansion	in/in/°Fx10^{-5}	D696	4.0
Light transmittance	%	D1003	92

Values may vary according to brand name. Please ask your Curbell Plastics representative for more specific information about an individual brand.