

## Acrylic

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

Acrylic is a transparent plastic 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 plastics provide outstanding versatility, durability, and aesthetic qualities.

### TECHNICAL ASSISTANCE

Solve application challenges, find answers to material questions, and get valuable technical advice. We're here to help.

[Ask a Plastics Expert >](#)

#### 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
- Frames and display cases





#### 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®

#### TECHNICAL RESOURCES

-  [Acrylic Data Sheet](#)
-  [Acrylic Sheet Color Chart](#)
-  [Chemical Resistance Chart](#)
-  [Bonding Acrylic with SCIGRIP® 3, 4 or 16](#)

Can't find what you need? [Get a quote.](#)

#### STANDARD SIZES

<b>SHEET</b>	Dimensions: 22.5 in x 46.5 in – 108 in x 108.25 in
	Thickness: 0.010 in – 2 in

<b>RODS</b>	Cast Outside Diameter: 0.250 in – 6 in
	Extruded Outside Diameter: 0.062 in – 3 in
	Extruded Square Outside Diameter: 0.125 in – 1.500 in


<b>TUBES</b>	Cast Outside Diameter: 1.250 in – 12 in
	Extruded Outside Diameter: 0.250 in – 6 in

#### OPTIONS AVAILABLE

<b>TEXTURE, SURFACE, PATTERN</b>	Abrasion Resistant (AR1, AR2), Non-Glare, Light Diffusion, P95, P99, Mirror
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#### TYPES AND COLORS

<b>CAST</b>	Clear
	Opaque: Black 2025, White 3015
	Translucent: White 7328, White 2447, Myst® White 2449, Red 2157, Red 2283, Red 2793, Fluorescent Mars Red, Yellow 2037, Green 2108, Acid Green, Blue 2051, Blue 2050, Blue 2114, Vario Cascade Blue, Metropolitan Manhattan Black 2026
	Transparent: Bronze 2412, Iridescent ECO001

 **Public Healthcare and Safety Sheets Line Card**

 **AMGARD Acrylic Sheet Data Sheet**

 **AMGARD Safety Shields Line Card**

[View more data sheets and resources](#)

**YOU MAY ALSO BE INTERESTED IN:**



**SCIGRIP® Solvent Based, Assembly Adhesives**

SCIGRIP® Solvent Based, Assembly Adhesives; to bond popular plastics for sign and POP applications.



**PTFE Tapes**

PTFE Tapes for heat sealing and roller wrap applications.

**EXPLORE RESOURCES**



**Acrylic Color Chart**

Colored acrylic sheets (aka colored Plexiglas®) come in a broad array of transparent, translucent, and opaque colors.



**Building a Better Machine Guard With Plastic**

Stiffness, impact resistance, clarity, and chemical resistance are keys to selecting the right plastic for a machine guard.

<b>GRADES</b>	General Purpose, Abrasion Resistant, 40% Impact Modified, 70% Impact Modified, Light Diffusing, Bullet Resistant, Sign-Grade, Anti Reflective/ Non-Glare, ESD (Electrostatic Dissipative), Antimicrobial, Digital
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<b>EXTRUDED</b>	<p>Clear</p> <p>Opaque: Black 2025, White 3015, White 7328, Gray 3001, Ivory 2146, Yellow 2037, Orange 2119, Red 2157, Green 2030, Blue 2051</p> <p>Transparent/Translucent: White 2447, White 7328, Yellow 2208, Red 2423, Magenta 2167, Purple 19180, Blue 2424, Green 2092, Light Green 3030, Amber 2422, Bronze 2412, Bronze 2404, Bronze 2370, Gray Smoke 2064, Gray Smoke 2074</p> <p>Fluorescent: Yellow 4073, Yellow 9096, Pink Red 19357, Light Orange 3127, Medium Orange 2150, Red Orange 2149, Dark Orange 9094, Green 5143, Blue 9092</p> <p>Metallic: Gold 7001, Indian Bronze 7026</p>
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<b>MIRROR</b>	Blue 1000, Blue 2069, Blue 2424, Purple 1020, Gray 1050, Gray 2064, Orange 1119, Gold 1300, Red 1310, Red 1400, Red 2423, Bronze 2404, Bronze 1600, Green 4674, Green 2414, Pink 1450, Teal 2120, Yellow 2208, Amber 2422, Mirrored
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<b>PRINT GRADE</b>	White 7328 Translucent
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<b>LIGHT DIFFUSING</b>	Blue 2050, Blue 2114, Red 2157, Red 2283, Red 2793, White 2406, White 2447, White 7328, Yellow 2037, Clear, Colorless, Translucent, White
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Length, width, thickness, and diameter tolerances vary by size, by manufacturer, brand, and grade. Custom sizes and colors available upon request. Acrylic rod and tube are also available in a wide range of colors. Cast and extruded acrylic available in paper and film mask.

**Acrylic Properties and 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.

**Continuous Cast Acrylic** – In addition to the better chemical resistance and superior machining characteristics, **OPTIX® L-Series** provides a more uniform thickness and larger sheet sizes due to the nature of the continuous cast manufacturing method.

**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.

**AMGARD™ Acrylic for Safety Shields**– A transparent sheet formulated with a silver ion antimicrobial agent that protects the sheet surface against the growth of microorganisms such as bacteria, mold and mildew that cause stains and odors. AMGARD™ provides additional surface protection between cleanings and complies with applicable EPA requirements as a Treated Article.

**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.

**OPTIX® 95 Acrylic**– OPTIX® 95 has a matte finish on one side and provides a decorative effect that reduces surface reflections. Smudge and fingerprint resistant.

**OPTIX® 95 LED Light Diffusing Acrylic**– OPTIX® 95 LED offers a soft satin appearance on one side, combining high efficiency with excellent diffusing properties, making it ideal for LED lighting applications.

**OPTIX® Frost LED Light Diffusing Acrylic**– OPTIX® Frost LED acrylic sheet provides a soft satin appearance on 2 sides, combining high efficiency with excellent diffusing properties, making it ideal for LED lighting applications.

**OPTIX® LED Satin** – OPTIX® LED Satin architectural lighting panels enable narrower dimensions and thinner gauges while maintaining hiding power. UL Certification: UL94HB, RTI90, F1 outdoor suitability.

**OPTIX® Lum 1** – OPTIX® Lum 1 diffusive sheet is a premium white acrylic sheet which provides both high transmission and excellent lamp hiding capabilities.

**OPTIX® Flexilume Specialty Film** – OPTIX® Flexilume film is best used as an overlay film for lenses or louvers or as contour inserts with perforated metals, profiles or reflecting surfaces. OPTIX® Flexilume features a matte/smooth finish and excellent uniformity.

**OPTIX® Flex G2 Diffusive Overlay Film** – OPTIX® Flex G2 film is best used as an overlay film for lenses or louvers, or as contour inserts with perforated metals, profiles or reflecting surfaces. Standard OPTIX® Flex G2 is warm in transmittance and cool in reflectance. Enhanced surface diffusion one-side satin/one-side matte; eliminates glossy surface.

**OPTIX® Pattern 12 (PL-21) Panels** – OPTIX® Pattern 12 (PL-21) Prismatic Acrylic lighting panels offer excellent efficiency and direct glare control, while providing an attractive appearance. The PL-21 features a 3/16" square base female conical pattern. It fits standard ceiling grids for easy installation.

**KSH® Acrylic Lighting Panels and Overlays for Light Diffusing**– KSH® panels are prismatic lighting panels that eliminate glare and obscure fluorescent and HID (high intensity discharge) lamps. They are suitable for various size areas and available in several prismatic options. KSH® high transmission acrylic overlay sheets are used to diffuse lamp images and provide a more uniform surface brightness.

**Plexiglas® Sylk Light Diffusing Acrylic**– Plexiglas® Sylk acrylic sheet with a soft texture throughout maintains that texture after bending and forming. It is easy to fabricate and thermoform. UL 94 HB.

**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 Packs**– Some grades of Acrylic sheet are sold in convenient packs ranging from 4-12 sheets such as **Clear OPTIX® Acrylic** and **Impact Modified Acrylic**.

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

**Tech Tip**– A number of coatings can be applied to a sheet or finished part for performance enhancing characteristics such as **scratch resistance**, **anti-fogging**, **glare reduction**, and **solar reflective**.

**Shop for Acrylic**

#### 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/°F $\times 10^{-5}$	D696	4.0
Light transmittance	%	D1003	92

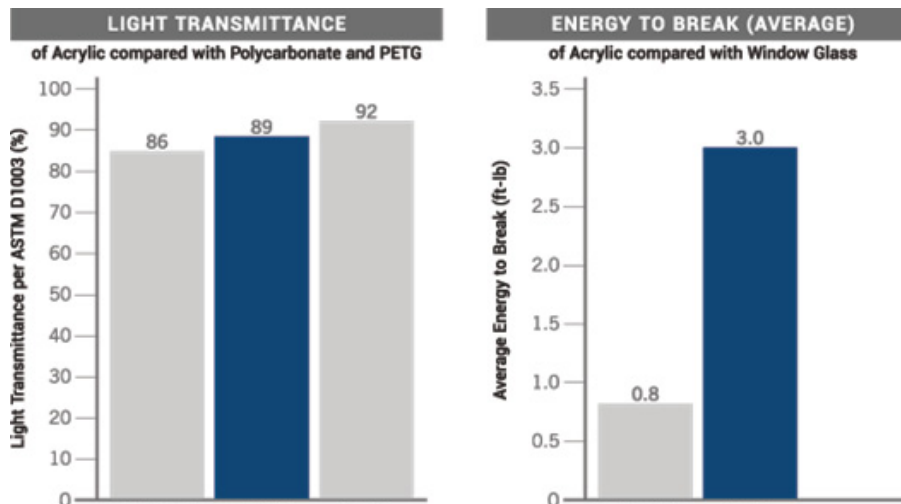
Values may vary according to brand name. Please ask your Curbell Plastics representative for more specific information about an individual brand.

#### EXPLORE POPULAR PLASTIC MATERIAL COMPARISONS:

- **Acrylic vs. Polycarbonate** – With these strong, stiff, and clear plastics, the difference often comes down to: How tough is tough enough?

**Need more information about this material? Use our interactive plastic properties table**

#### ACRYLIC MATERIAL PROPERTIES COMPARISON GRAPHS



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