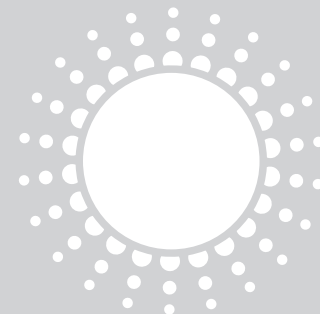# Acrylite®

ACRYLIC SHEET

Superior performance in any light.

CYRO

# Acrylite® SG
ACRYLIC SHEET

The premier acrylic sheet product for the sign industry today, this impact-modified acrylic sheet was specifically developed to meet the unique needs of the sign industry. What sets ACRYLITE® SG acrylic sheet apart from the competition is an impact strength up to ten times stronger than standard acrylic, so it will resist breakage during storage, fabrication, shipping and installation.

The easily fabricated ACRYLITE SG sheet, perfect for any sign application, is known for its amazing light transmission, outstanding weatherability, excellent light diffusion with LED light sources and cost effectiveness. Offered in eight standard colors as well as colorless, ACRYLITE SG sheet is stocked locally in both reels and flat sheet, so it's always readily available.

# Acrylite® FF
ACRYLIC SHEET

For further economic flexibility, there's ACRYLITE® FF acrylic sheet. This easily fabricated acrylic sheet comes in 11 standard colors plus colorless—and a non-glare surface. It offers unmatched thickness tolerance, excellent weatherability, first-rate light transmission, and is a fine choice for all lighting applications including LED and neon.

CYRO also produces the easily fabricated Extra Thick ACRYLITE® FF acrylic sheet. With superior optical clarity and a blemish-free appearance, this acrylic sheet is ideal for push- or press-through lettering. In addition, Extra Thick ACRYLITE FF sheet gives you the flexibility of run-to-size orders to meet all your needs.

# Acrylite® GP
ACRYLIC SHEET

Available in vibrant and dazzling colors for interior and exterior signage, ACRYLITE® GP acrylic sheet offers custom colors made-to-order with minimum order quantities as low as one case. This product can be easily formed and fabricated. It is also offered with an abrasion and chemical resistant coating or with UV filtering properties that ensure outstanding performance in harsh environments.

ACRYLITE GP sheet is available as transparent, translucent and opaque—with glossy, matte or textured finishes—and maintains its rich color in daylight or under all artificial light conditions.

ACRYLITE FF P-99 sheet with a non-glare surface and ACRYLITE GP P-95 sheet with a matte finish both comply with American Disabilities Act (ADA) section 4.30.5 which states that indoor signage must have an eggshell, matte or other non-glare finish.

# Acrylite® Satin Ice
ACRYLIC SHEET

With exceptional light transmission and diffusing properties, ACRYLITE® Satin Ice acrylic sheet is perfect for indoor or outdoor lit signage. Available in both standard and impact modified acrylic, ACRYLITE Satin Ice sheet has a frosted, textured surface throughout the sheet that performs exceptionally well with LED and neon applications.

ACRYLITE Satin Ice sheet comes in a large selection of widths and thicknesses. The surface of ACRYLITE Satin Ice sheet hides fingerprints and scratches for enhanced service life and is available in ten standard colors as well as custom colors that can be made upon request.

# Acrylite® AR
ACRYLIC SHEET

ACRYLITE® AR Abrasion Resistant acrylic sheet utilizes an abrasion resistant coating for greater protection from scratching and marring due to frequent public contact and is ideal for interior signs. This acrylic sheet is cost effective and offers superior optical clarity and a long service life.

ACRYLITE AR sheet is available with a coating on one or both sides. Due to its outstanding chemical resistance, the coated side can be cleaned with common household cleaning supplies. When you add in its shatter resistance and easy fabrication and handling characteristics, ACRYLITE AR sheet is an excellent alternative to glass or other plastic materials.

# Acrylite® EndLighten
ACRYLIC SHEET

ACRYLITE® EndLighten acrylic sheet is specifically engineered for edge-lit applications. Formulated with neutral-color diffuser particles, ACRYLITE EndLighten sheet accepts light through its edge and redirects it to the surface, resulting in a bright and uniform illumination.

The lit edges of ACRYLITE EndLighten sheet should have smooth surfaces for enhanced light entry, which is easily done by buffing the edges. Edges that aren't lit should be covered with a reflective material such as adhesive tape to optimize sheet brightness.

Luminous displays can be installed with one or two radiant surfaces. If only one side is intended to emit light, a highly reflective cover should be provided on the back. Graphic images should be printed on light-diffusing film or paper so light is evenly distributed upon exiting ACRYLITE EndLighten sheet.

ACRYLITE EndLighten sheet diffuses light evenly in edge lighting applications, eliminating the need for deep sign cabinets, allowing sign fixtures to stay in compliance with American Disabilities Act (ADA) section 4.4.1 which limits protrusion for wall-mounted signage to just four inches (100 mm).

## STERLING
### COLLECTION

The proprietary designs of the Sterling Collection of ACRYLITE® acrylic sheet offer five decorative, silvery patterns with the look of metal and all the advantages of acrylic. Each design emits a spectacular reflective effect. The Sterling Collection is a lightweight, fabrication-friendly alternative to metal with the durability and impact resistance of acrylic sheet.

## Black/White

Black/White ACRYLITE® GP acrylic sheet appears dark by day and, with a little backlighting, glows white at night. It's manufactured from a special pigment formulation that yields 10-19% light transmittance when backlit, yet appears dark and opaque without backlighting. These features make Black/White ACRYLITE GP sheet a great solution for channel letters and faces.

## Spectacularly compatible with any LED application.

Whether they are for traffic control, the auto industry, underwater light applications or overhead lighting, LEDs are everywhere. And due to their low energy output, longer life span, low maintenance and vibration resistance, LEDs are fast becoming the most popular lighting technology for the sign industry. And while ACRYLITE sheet products perform exceptionally well with all light sources, it seems to be especially true with LEDs.

Many ACRYLITE SG, FF, GP and Satin Ice sheet colors have proven that they can outperform other substrates and are quickly becoming the industry standard for light transmission and the elimination of hot spots in LED applications.

# Acrylite® Specifications at-a-glance.

ACRYLIC SHEET

| Physical Properties of ACRYLITE Acrylic Sheet | | | | | |
|---|---|---|---|---|---|
| **PROPERTY[a]** | | **ASTM METHOD** | **TYPICAL VALUE[b]** | | |
| | | | **FF** | **GP** | **SG** |
| **Mechanical** | Sheet Thickness Tested | — | 0.250" | 0.236" | 0.118" |
| | Specific Gravity | D 792 | 1.19 | 1.19 | 1.17 |
| | Tensile Strength<br>  Elongation, Rupture<br>  Modulus of Elasticity | D 638 | 10,000 psi (69 MPa)<br>4.5%<br>400,000 psi (2800 MPa) | 10,000 psi (69 MPa)<br>4.2%<br>400,000 psi (2800 MPa) | 8,900 psi (61 MPa)<br>4.8%<br>350,000 psi (2450 MPa) |
| | Flexural Strength<br>  Modulus of Elasticity | D 790 | 17,000 psi (117 MPa)<br>480,000 psi (3300 MPa) | 16,500 psi (114 MPa)<br>475,000 psi (3300 MPa) | 14,000 psi (96 MPa)<br>330,000 psi (2270 MPa) |
| | Impact Strength<br>  Izod Milled Notch | D 256 | 0.4 ft-lbs/in of notch<br>(21.6 J/m of notch) | 0.4 ft-lbs/in of notch<br>(21.6 J/m of notch) | 0.63 lbs/in of notch<br>(34 J/m of notch) |
| | Rockwell Hardness | D 785 | M-93 | M-94 | M-70 |
| **Optical** | Refractive Index | D 542 | 1.49 | 1.49 | 1.49 |
| | Light Transmission, Total | D 1003 | 92% | 92% (clear material) | 90% |
| **Thermal** | Forming Temperature | — | Approx. 300°F (149°C) | 340-380°F (170-190°C) | 270-350°F (135-175°C) |
| | Deflection Temperature<br>  under load, 264 psi | D 648 | 195°F (91°C) | 210°F (99°C) | 199°F (93°C) |
| | Vicat Softening Point | D 1525 | 220°F (105°C) | 239°F (115°C) | 223°F (106°C) |
| | Maximum Recommended<br>  Continuous Service<br>  Temperature | — | 160°F[c] (71°C) | 180°F[d] (82°C) | 160°F[c] (71°C) |
| | Coefficient of Linear<br>  Thermal Expansion | D 696 | 0.000040 in/in-°F<br>(0.000072 m/m-°C) | 0.000040 in/in-°F<br>(0.000072 m/m-°C) | 0.000044 in/in-°F<br>(0.000080 m/m-°C) |
| | Flammability, Burning Rate<br>  (0.125" thickness) | D 635 | 1.0 in/min.<br>(25 mm/min.) | 1.2 in/min.<br>(30.5 mm/min.) | 1.0 in/min.<br>(25 mm/min.) |
| | Self Ignition Temperature | D 1929 | 850°F (455°C) | 910°F (490°C) | 842°F (450°C) |
| | Smoke Density Rating | D 2843 | 4.80% | 11.40% | 3.80% |
| **Water Absorption** | 24 hrs @ 73°F | D 570 | 0.2% | 0.2% | 0.3 |

(a) Typical values; should not be used for specification purposes.
(b) Some values will change with thickness or pigmentation.

(c) It is recommended that temperatures not exceed 160°F for continuous service, or 190°F for short intermittent use.
(d) It is recommended that temperatures not exceed 180°F for continuous service, or 200°F for short, intermittent use.

For the physical properties of Satin Ice, AR, Sterling Collection, Black/White and EndLighten, visit the TechKnowlogy Center at www.cyro.com.

## ACRYLITE Acrylic Sheet Standard Product Color Cross-Reference

| ACRYLITE Product | Color | CYRO Color Number | Pantone Color Number | R & H Color Number |
|---|---|---|---|---|
| SG | Red | 211-1 | 201C | 2283 |
| | Red | 205-0 | 201C | 2157 |
| | Red | 278-0 | 187C | 2793 |
| | Yellow | 407-2 | Yellow C | 2037 |
| | Blue | 605-0 | 288C | 2114 |
| | Dark Green | 5200-0 | 3305C | — |
| | Black | 199-0 | Black C | 2025 |
| | White | 015-2 | — | 7328 |
| | Colorless | 011-9 | — | — |
| FF | Bronze | 126-4 | 404 | 2404 |
| | Bronze | 131-2 | 405C | 2412 |
| | Bronze | 311-1 | 412C | 2370 |
| | Grey | 103-2 | 5477 | 2064 |
| | Grey | 104-1 | 419 | 2074 |
| | White | 097-0 | — | 2371 |
| | White | 015-2 | — | 7328 |
| | White | 020-4 | — | 2447 |
| | White | 020HG | — | 2447 |
| | Glass Green | 5110-9 | — | 3030 |
| | Black | 199HG | Black C | 2025 |
| Satin Ice | Med. Blue | 6194-5 | 299C | 3166 |
| | Dark Blue | 6198-0 | 288C | 3162 |
| | Light Grey | 1239-7 | 421C | 3160 |
| | Light Green | 5170-8 | 621C | 3167 |
| | Black | 1235-0 | Black C | 3165 |
| | White | 0149-5 | — | W3172 |
| | Colorless | 0918-8 | — | — |
| GP | Custom colors made-to-order with minimum order quantities as low as 1 case! | | | |

## ACRYLITE Acrylic Sheet Standard Sheet Sizes

| ACRYLITE Product | Form | Standard Thickness | Standard Sheet Sizes |
|---|---|---|---|
| SG | Sheet | 0.118" (3mm) | 51" x 100" (1295mm x 2540mm) |
| | Sheet | 0.177" (4.5mm) | 51" x 100", 75" x 100", 75" x 125" (1295 x 2540mm, 1905 x 2549mm, 1905 x 3175mm) |
| | Reels | 0.118", 0.150", 0.177", 0.236" (3, 3.8, 4.5, 6mm) | 4', 5', 6', and 8' widths available (1219, 1524, 1829 and 2440mm) |
| FF | Sheet | 0.060", 0.080", 0.098", 0.118", 0.177", 0.220", 0.236", 0.354", 0.472", 0.708", 0.944" (1.5, 2, 2.5, 3, 4.5, 5.6, 6, 9, 12, 18, 24mm) | 48" x 96", 48" x 120", 51" x 100", 60" x 96", 60" x 120", 72" x 96", 72" x 120", 75" x 100" (1220 x 2440mm, 1220 x 3048mm, 1295 x 2540mm, 1524 x 2440mm, 1524 x 3048mm, 1829 x 2440mm, 1829 x 3048mm, 1905 x 2540mm) |
| Satin Ice | Sheet | 0.118", 0.177", 0.236", 0.354", 0.472" (3, 4.5, 6, 9, 12mm) | 49" x 97" (1245mm x 2464mm) |
| GP | Sheet | 0.060" - 2.0" (1.5mm - 51mm) | 48" x 96", 60" x 96", 72" x 96" (1220 x 2440mm, 1524 x 2440mm, 1829 x 2440mm) |
| AR | Sheet | 0.060", 0.080", 0.098", 0.118", 0.177", 0.236", 0.354", 0.472" (1.5, 2, 2.5, 3, 4.5, 6, 9, 12mm) | 48" x 96", 60" x 96", 72" x 96" (1220 x 2440mm, 1524 x 2440mm, 1829 x 2440mm) |
| Sterling Collection | Sheet | 0.118" (3mm) | 48" x 96" (1220 x 2440mm) |
| Black/ White | Sheet | 0.118", 0.177", 0.236", 0.354" (3, 4.5, 6, 9mm) | 48" x 96", 60" x 96", 72" x 96" (1220 x 2440mm, 1524 x 2440mm, 1829 x 2440mm) |
| EndLighten | Sheet | 0.236", 0.315", 0.394", 0.472" (6, 8, 10, 12mm) | 80" x 120" (2030 x 3048mm) |

# Acrylite®
## ACRYLIC SHEET

## For amazing signs that perform with any light source.

Only one company can claim to be the world's largest manufacturer of acrylic sheet...and that company is CYRO. As a wholly-owned subsidiary of Degussa, CYRO has both the broad technological and global resources to respond to any market demand. We've been manufacturing high-quality sheet products and providing our customers with outstanding service, which includes everything from customized technical advice to an outstanding delivery capacity, since 1976. And with our family of ACRYLITE® acrylic sheet products, we have proven to be an invaluable partner for everyone in the sign industry. Known worldwide for vibrant colors, luxurious textures and outstanding light diffusion, ACRYLITE sheet performs remarkably well with daylight as well as incandescent, LED, fluorescent and neon light sources. So, for superior signage in any light, choose CYRO's ACRYLITE sheet products.

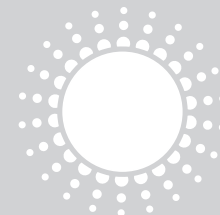INCANDESCENT        LED        FLUORESCENT        NEON        DAYLIGHT

For additional product information, or to locate a local authorized CYRO distributor, please Call: 800.631.5384 or Visit: www.cyro.com

## TECHNICAL SUPPORT

Visit the TechKnowlogy Center at www.cyro.com where visitors have immediate access to FAQ, technical information, tips and hundreds of other facts about acrylic sheet products.

**CYRO.COM**
**TECH KNOWLOGY CENTER**
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## IMPORTANT

The information and statements contained herein are not to be taken as a warranty or representation for which we assume legal responsibility nor as permission, inducement or recommendation to practice any patented invention without a license. The information is offered solely for your consideration, investigation and verification. Users should perform their own testing and verification to determine the applicability and suitability of the information and any products for their own particular purpose.

## FIRE PRECAUTIONS

ACRYLITE GP and ACRYLITE FF acrylic sheet are combustible thermoplastics. Precautions should be taken to protect these materials from flames and high heat sources. ACRYLITE GP and ACRYLITE FF sheet usually burn rapidly to completion if not extinguished. The products of combustion, if sufficient air is present, are carbon dioxide and water. However, in many fires sufficient air will not be present and toxic carbon monoxide will be formed, as it will when other common combustible materials are burned. We urge good judgement in the use of these versatile materials and recommend that building codes be followed carefully to assure they are used properly.

**CYRO**