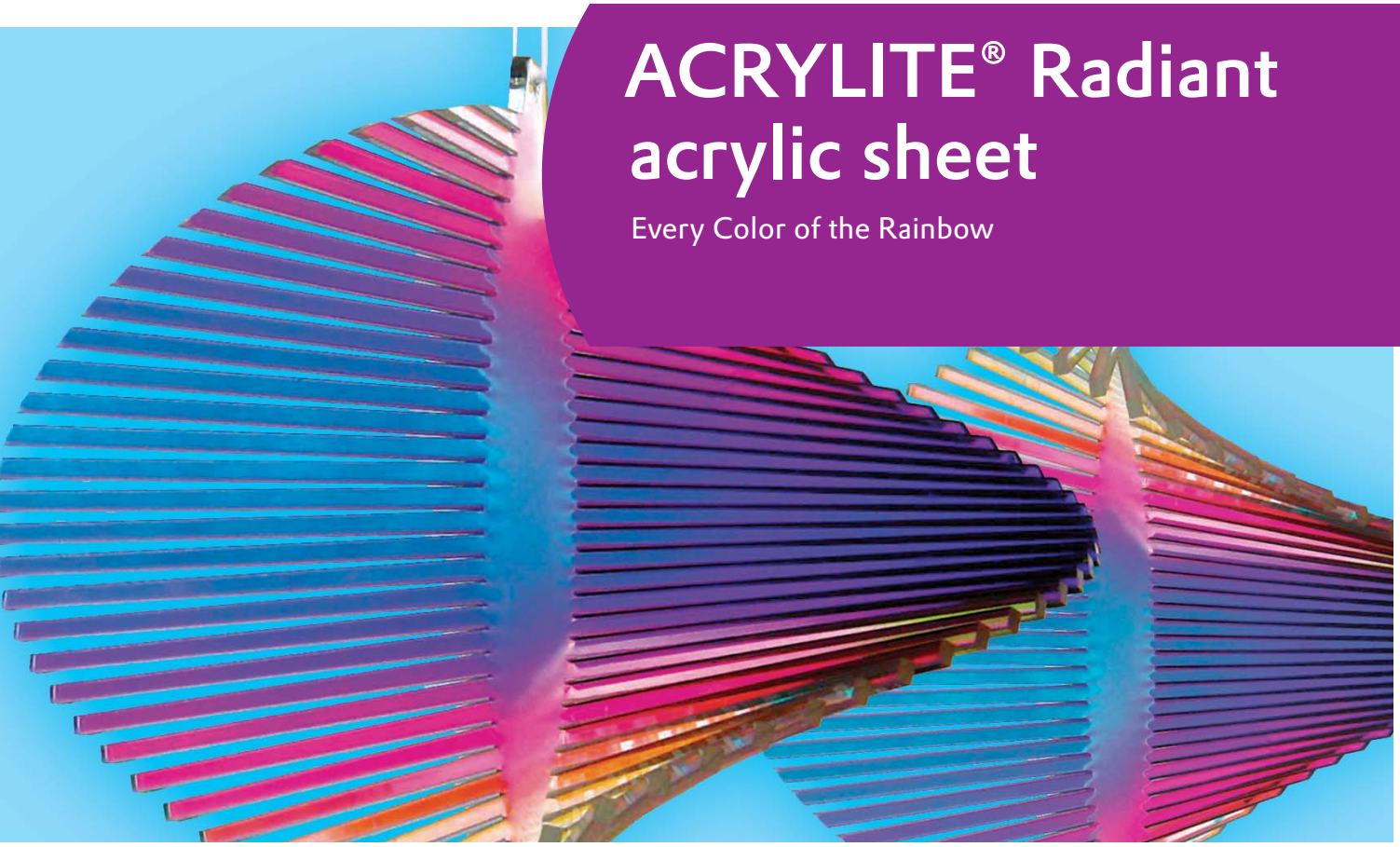
EVONIK INDUSTRIES

ACRYLITE® Radiant acrylic sheet

Every Color of the Rainbow



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Rainbows never cease to fascinate us. We gaze at them in wonder and amazement. With their brilliant colors and awesome dimensions, they capture the attention of children and adults alike. Take advantage of this magical play of colors for your displays, signs and store fixtures.

Features & Benefits

- changes color depending on the viewing angle
- uses ambient light to create its own lighting effects
- produces mirror-like reflections
- shines in every color of the rainbow
- easy to saw, mill, drill, bend and polish
- can be thermoformed into almost every desired shape

ACRYLITE Radiant sheet is the ideal material for designing eye-catching items, attention-grabbing displays, effective signs and dynamic, colorful tradeshow booths and store fixtures. It is a beautiful addition to the ACRYLITE sheet product line and a real inspiration for all designers and creative professionals.

Standard Product Offering

Size	Thickness
48 x 96″ (2438 mm x 1219 mm)	.118″ (3 mm)

Fabricating Recommendations

ACRYLITE Radiant sheet has a surface coating on one side that is responsible for the lighting effects. The following recommendations take this special feature into account during handling and fabrication.

ACRYLITE Radiant sheet can be fabricated with the same parameters and equipment as standard acrylic sheet. Correct positioning of the coated surface is essential in order to obtain perfect fabrication results.

Cleaning

Clean ACRYLITE Radiant sheet with mild soap and lukewarm water or ACRIFIX™ AC 1010 Anti-Static Cleaner. Use a soft, clean cloth and gentle pressure (no rubbing). Make sure not to scratch the coated surface, because scratches cannot be removed by polishing this side of the sheet.

Machining

ACRYLITE Radiant sheet can be sawn, drilled, milled and edge-machined like standard ACRYLITE® FF acrylic sheet, provided the coated surface is positioned at the correct angle to the machining tool. Make sure that the cutting tools used for sawing, drilling, routing and edge treatment enter the coated surface and exit through the uncoated surface.

Refer to ACRYLITE FF sheet Technical Briefs 1-13 for details.

Bonding

Adhesives suitable for standard ACRYLITE FF sheet are also compatible with ACRYLITE Radiant sheet. Since ACRYLITE Radiant sheet is partially transparent, it is important that adhesive joints remain almost invisible on the uncoated surface. The uncoated surface of ACRYLITE Radiant sheet can be easily bonded to standard ACRYLITE sheet, providing comparable final bond strength. However, the final bond strength does differ noticeably when bonds are made with the coated surface. The bond with the coated surface can be improved to a certain extent using cyanoacrylate adhesives. Where high bond strengths are required, we recommend removing the surface coating in the area to be bonded. If polyester tape is used to assist with bonding, please remove the strips of tape carefully after bonding is completed, pulling them off from the surface towards the edge. That avoids delamination of the coating at the edges.

ACRIFIX™ Special Bonding Agents manufactured by Evonik are the perfect complement for cementing ACRYLITE sheet products. When bonding the uncoated side of ACRYLITE Radiant sheet, ACRIFIX™ 1S 0117 Pure or ACRIFIX™ 1S 2105 Express are recommended. These solvent cements have superior capillary action for better flow through, and dry quickly with a strong bond and attractive appearance. ACRIFIX 1S 0117 is the only non-methylene chloride solvent cement in the North American market.

Linear Heating/Line-Bending

ACRYLITE Radiant sheet can be bent simply and quickly on standard line-bending machines. For best results, the coated side of the sheet should be on the side exposed to tensile stress (outer side of bend). At small bending radii, heat the uncoated side of the sheet. At large bending radii of more than 90°, it is advisable to heat the coated side.

Thermoforming/Stretch Forming

You can thermoform ACRYLITE Radiant sheet to obtain a variety of shapes. If only one side of the sheet is heated, the coated surface should face the heat source. ACRYLITE Radiant sheet is also suitable for moderate stretch forming using compressed air. In this case, and during thermoforming, the coated surface of the sheet should be on the side exposed to tensile stress (outer side). Depending on the degree of stretching, the rainbow effect may be diminished. We therefore advise you to conduct preliminary trials. The recommended forming temperature is between 290 to 320 °F.

Flame Polishing

ACRYLITE Radiant sheet can be flame-polished under the same conditions as standard acrylic sheet. For best results, flame-polish stacked sheet. The coated surfaces should face inwards, to protect them from the flame. If you would like to flame-polish individual sheets, we recommend placing the sheet with the coated surface on a sheet of standard acrylic for better protection.

Important notes

- The coated surface is protected by a clear masking film. The uncoated surface has blue masking film.
- Scratches can not be polished off the coated surface. Please make sure not to scratch that surface.
- ACRYLITE Radiant sheet is meant for indoor use. It has only limited resistance to outdoor exposure.
- Store the sheet horizontally on a perfectly flat surface. Do not store vertically or near heat sources.

Important Notice

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Fire Precautions

ACRYLITE® acrylic sheet is a combustible thermoplastic. Precautions used to protect combustibles from flames and high heat sources should also be observed with this material. ACRYLITE sheet usually burns 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 available and toxic carbon monoxide will be formed, as it will from other common combustible materials.

For further details on our specialty acrylic products please visit our website at www.cyro.com or www.acrylite-magic.com. Contact us for information regarding custom requests.

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