EVONIK INDUSTRIES

ACRYLITE®

for Lighting Technologies

ACRYLITE®

Evonik. Power to create.

A specialized material that is reliable and durable

ACRYLITE® is one of the world's highest-quality and most versatile plastics. It can be manufactured with many different functional properties and surfaces which include high light transmission for focused or diffused light and resistance to ultraviolet, impact and/or scratching.

Other benefits are that it is lighter in weight than glass, with 11 times its impact strength. It can take rough handling and is easy to machine and fabricate. ACRYLITE® molding compounds are ideally suited for all injection molding and extrusion processes. The semifinished materials (sheet, rod and tube) can be drilled, routed, and laser cut easily. ACRYLITE® can also be cold-curved or thermoformed to provide new, unique effects. It lends itself to creative designs that play with light, shape and color.

These effects are made to last. ACRYLITE® remains clear, even after many years of use. There is no yellowing or aging. We guarantee that our colored ACRYLITE® solid sheet will not change color at all for 10 years. Our clear-transparent solid sheets, blocks, tubes and rods come with a 30-year non-yellowing guarantee.
Since ACRYLITE® remains virtually unchanged; it does not have to be replaced in the course of time, unlike other plastics.

Lighting manufacturers can choose between ACRYLITE® molding compounds and semifinished materials that are suitable for every application and processing technology.

ACRYLITE®
sends signals

Wherever you look, advertising messages are displayed at potential buyers. Brand names can be seen from afar and will entice customers to shop in their stores. Elegant design is critical to maximize the advertising sign. ACRYLITE® LED for back lighting is ideal in channel letter and light box signage design.

ACRYLITE® LED for back lighting is offered in various standard and custom colors. Corporate colors will appear identical across all company locations, such as those of a retail chain in countless shopping malls across the globe. The selected color stays the same, whether lit or unlit, making sure the brand is recognized. Since the material is resistant to UV light, both logos and large advertising signs retain their authentic color and high quality for years.

ACRYLITE® LED for back lighting has more to offer, than color, when it comes to design ideas. Designers can attract the attention of consumers using every imaginable shape because it can be easily formed while retaining its engineering properties which supports design through functionality. ACRYLITE® LED can be uniformly backlit and its homogeneous surface will not be disturbed by hot spots.

ACRYLITE®
the intelligent material for LEDs

Advertising messages are often lit up , so energy-saving signs are becoming increasingly popular. LED technology consumes less energy than traditional light sources, but the energy savings can only be obtained if an optimal complimentary material is used. ACRYLITE® LED for back lighting is specially designed for illuminated signs operated by LEDs. The colored grades are adjusted to the wavelength ranges (color coordinates) of red, green and blue LEDs. This makes optimum use of LED light and makes sure not a single ray of light is lost.

In addition, the material offers improved light diffusion properties to prevent undesired hot spots in super-slim advertising signs. This patented technology enables the production of high-efficiency illuminated signs that cut energy costs to a minimum. LEDs and ACRYLITE® LED are a powerfully luminous duo that makes for a brilliant appearance.

ACRYLITE® LED
for backlighting

ACRYLITE®
LED is the solution

ACRYLITE® LED for back lighting allows color changing effects. Surfaces will appear deep black during the day and bright white when illuminated with white light at night. The effect is similar if you use other colored light sources, the material will appear that color when lit.

This flexibility lets designers produce a striking illuminated sign that has high contrast during the day and great visibility in the dark.

ACRYLITE®
super-slim design

LED technology now enables lighting in areas that have never before been possible. Consumers and designers alike are excited by this new light source. ACRYLITE® LED for edge lighting enables designers and engineers to utilize the advantages, offered by LEDs, for new design ideas. ACRYLITE® LED and LEDs together make it possible to produce super-slim light panels by edge lighting.
One or two sided slim illuminated partitions, luminous ceilings and advertising displays can now easily be designed.

ACRYLITE® LED for edge lighting will guide the light through the material's edges and enable uniform illumination through the perpendicular transparent surfaces.

ACRYLITE® LED for edge lighting is offered in sheet, rod and molding compounds.

ACRYLITE®
effective illumination

Luminaires need to meet a variety of demands including a functional workplace, an environment with ambient lighting that creates a specific mood as well as interior design concept and imaginative decorative objects. ACRYLITE® allows lighting manufacturers and designers to find the choice material to bring their creations to life through light, shape, color and texture.

Luminous efficiency, aethetics and long life are key properties for materials used to design lighting. The required function determines which aspect is more important. ACRYLITE® offers a full range of options and is available in the form of sheet, tubes, rods and molding compounds in a multitude of colors and functions.

Plastic converters that manufacture light lenses or covers by injection molding or extrusion processes can choose from a versatile range of ACRYLITE® molding compounds, from clear, impact-modified to acrylic with a high heat deflection temperature and/or diffusion grades with a satin appearance for diffusing light.

ACRYLITE®
crystal-clear for a good view

The best possible view: with its high optical purity, ACRYLITE® transmits all wavelengths in the visible range and guides light without loss precisely to where it is needed. ACRYLITE® prevents disturbing rings of color from showing at the edge of the light cone. Luminaires made with ACRYLITE® efficiently achieve high impact and enable extremely comfortable viewing, whether they are equipped with LEDs, fluorescent tubes or other light sources.

The range of possibility is enormous. From decorative ambient lighting to high output area lighting, the material unites modern design with new adopted technology, such as edge lit ceiling panels with LEDs.

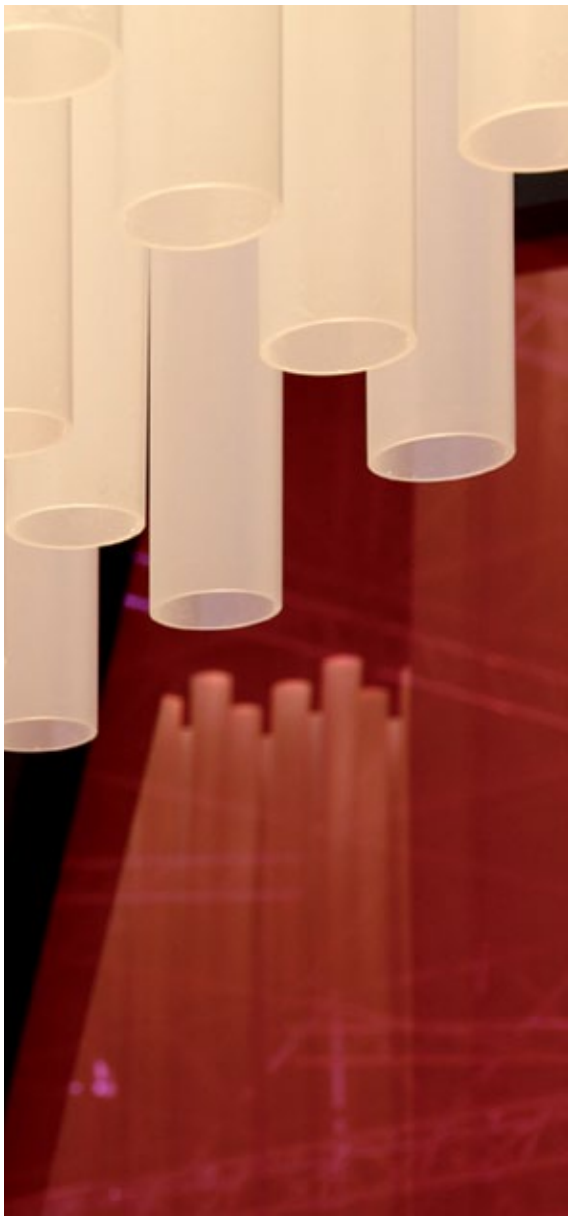
Lenses or covers made from the specialty molding ACRYLITE® Resist and ACRYMID® compounds can withstand very high thermal loads. This material is an ideal choice in applications where a very high powered light source is being used close to the material.

ACRYLITE® is not affected by tough weather conditions.
The material does not yellow and it withstands both rain and hail making it ideal for outdoor applications. ACRYLITE® withstands extremely tough conditions and retain its high quality for many years to come.

ACRYLITE®
designing pleasant light

Modern lighting concepts are often based on sophisticated technology. While some people find this exciting and want to show the technology involved, others prefer to conceal the interior workings. ACRYLITE® makes both options possible. In its clear-transparent grade, it offers a crystal clear view. But when the material incorporates various diffuser particles, the internal workings of the lamps can be completely concealed. The material can be adjusted to provide any view in between those levels.

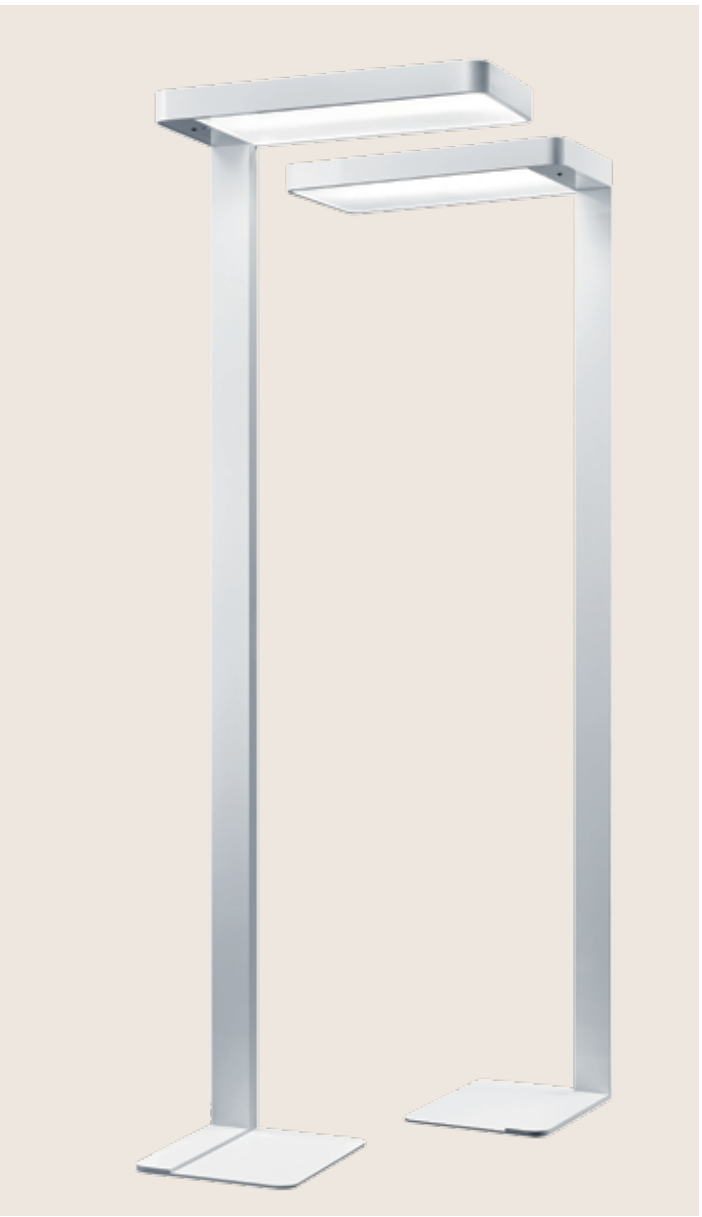
The properties of ACRYLITE® make it possible to satisfy conflicting demands for functional lights in various environments. These lights can all be attractive to look at, pleasant to the eye and provide the appropriate amount of light to the target area. ACRYLITE® distributes brightness evenly, regardless of light source. It diffuses light and prevents unpleasant hot spots.



ACRYLITE®
no reflections

An extruded light cover made of ACRYLITE® Satinice prevents disturbing glare and minimize light loss through its surface. Lighting manufacturers can choose from a wide range of different degrees of diffusion. Tiny bead-shaped polymer particles continuously refract light to different angles, with no significant light loss, creating effective hiding power. This grade of acrylic is ideal for light fixtures that can not afford glare of light source hot spots.

Due to its special light-diffusing properties, similar effects can also be achieved with illuminated ACRYLITE® Satinice tubes. The frosted surface is resistant to scratches and traces of wear which makes it suitable for high traffic areas.



ACRYLITE®
light in the right places

Pleasant light is crucial at the workplace. Glare-free lighting is essential to prevent eye exhaustion when working. Covers made of ACRYLITE® create ideal office lighting conditions, with the perfect creation of form and function.

The material's precisely reproduced surface texture guides the light exactly to where it is needed. This provides uniform illumination of workplaces.

Lighting solutions made with ACRYLITE® can also be used to light stadiums airports, or individual items in retail displays with a special glow. ACRYLITE® is offered as specialty molding compounds with precise mold surface reproduction for injection molding or for extruded lighting profiles.

ACRYLITE®
space for ideas

Lighting provides rooms and objects a unique character. ACRYLITE® offers designers plenty of design flexibility. It can be shaped into virtually any form and comes in a range of different colors, surfaces and decors.

ACRYLITE® Reflections with a radiant effect offers lighting designers and manufacturers a unique option with its rainbow-like appearance. Even in ambient light, the material shines in a number of beautiful colors. But it only reveals its true magic when illuminated.

The color will change when viewed at different angles. An unforgettable impression that is equally fascinating in table lamps, ceiling elements, or eye-catching shop window displays.

		Molding Compound	Sheets		Rods/Tubes	Films
		Luminaries	Signage	Luminaries	Luminaries	Luminaries
ACRYLITE® LED	The new dimension of light: specialty PMMA sheets and molding compounds for efficient lighting applications combined with LEDs. Specialty products for edge lighting and backlighting offer maximum light transmission without disturbing hot spots, as well as attractive color play effects.	•	•	•	•	
ACRYLITE® Heatresist	A higher heat deflection temperature is the distinguishing feature of these specialty PMMA molding compounds.	•				
ACRYLITE® Optical	PMMA molding compounds and sheets with optical functionalities, high light guidance and distribution provide a uniformly bright and perfectly sharp picture, especially in display applications and for rear projection.	•				
ACRYLITE® Reflections	Attractively mirror-coated and reflective solid sheets with a metallic, glossy, matte or rainbow-colored surface.		•	•		
ACRYLITE® Resist	These impact-modified molding compounds, films, solid sheets and tubes combine toughness with excellent weather resistance.	•	•	•		•
ACRYLITE® Satinice	This material's velvet surfaces are robust, pleasant to the touch and discretely light-diffusing. Sheets and tubes are available with a matte satin surface on one or both sides, or with diffuser beads evenly distributed throughout the material, in various colors. Available as diffuser molding compounds for components with a light-diffusing effect.	•	•	•	•	
ACRYLITE® Textures	Solid sheets with a variety of classical and modern surface textures, combined with trendy colors or a rainbow effect.			•		
ACRYLITE® Clear	PMMA sheets, tubes, rods, films and molding compounds as basic products with unbeatable resistance to UV light and weathering, combined with durability. The products are either clear and brilliant or available in a large number of opaque, translucent, transparent and fluorescent colors.	•		•	•	•
ACRYLITE® White		•	•	•	•	•
ACRYLITE® colored		•	•	•		

Product properties and applications