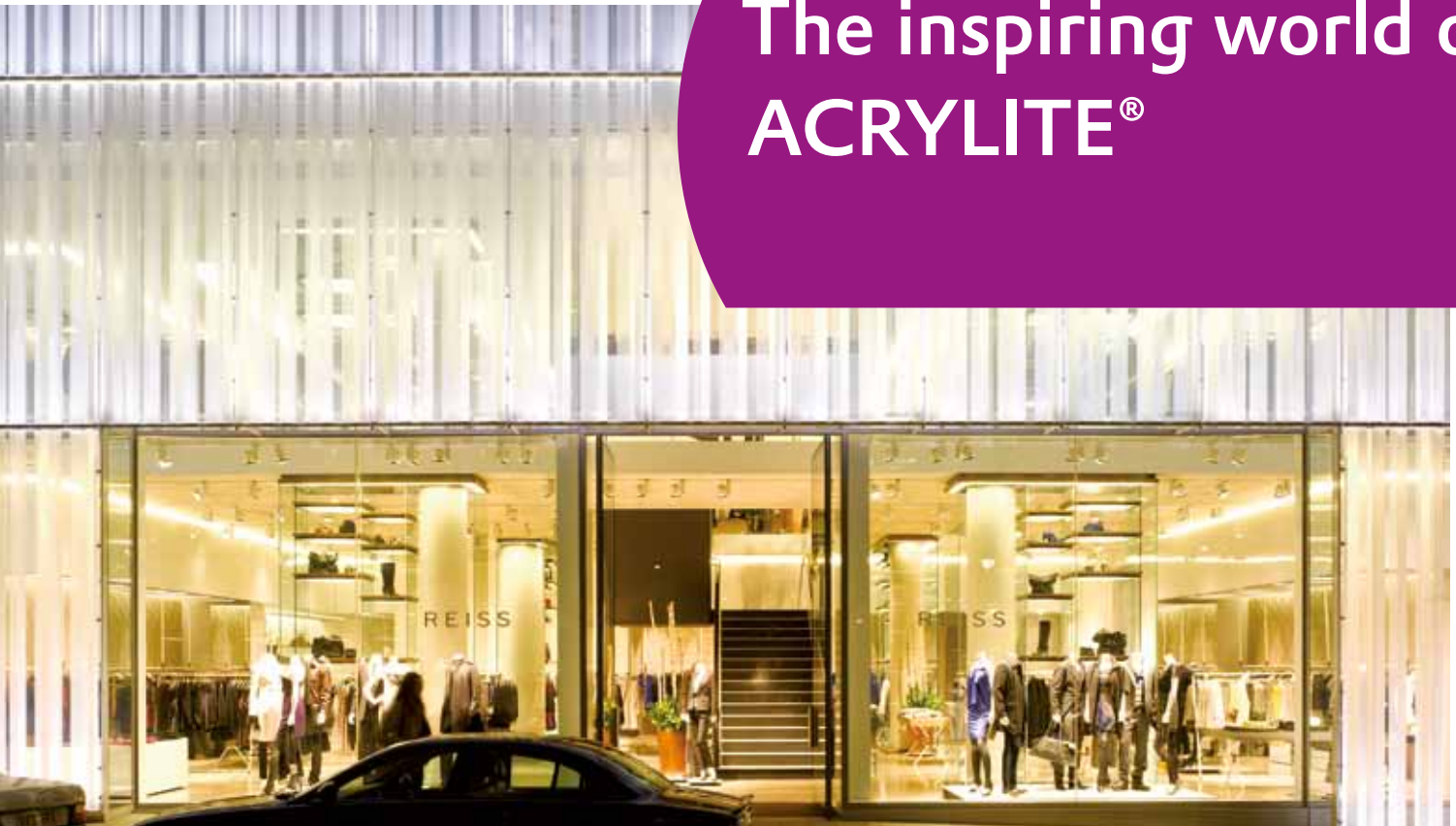


# The inspiring world of ACRYLITE®



**ACRYLITE®** 

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## A lifelong inspiration

ACRYLITE® is inspiration personified, a material for inspired minds. Wherever cutting-edge projects are conceived, ACRYLITE® is in on the act. Its versatile and constantly growing range of functionalities, combined with durability and environmental compatibility, make it one of the most precious plastics and an indispensable partner for innovation.

ACRYLITE® provides a clear view, offers impact strength, lends shape and brilliance to a variety of objects and gives protection against rain, hail and stormy weather. It withstands both extreme pressure and pronounced heat. Its wide range of colors reflects the world in all its breadth and adds fascinating touches.

ACRYLITE® is always the material of choice when special requirements have to be met. This goes from developing new products, producing unusual designs or visionary architecture, creating an eye-catching ambience or realizing sustainable projects.

The Acrylic Polymers Business Line of Evonik Industries is the world's leading supplier of PMMA molding compounds and sheet products, which we market under the ACRYLITE® trademark. Our wide range and high quality standards help our customers to secure success in today's markets. With our large selection of specialties, ongoing developments and partnerships, we also shape the markets of the future together with our customers.

## Customer proximity, every day and everywhere

Our products and know-how are available all over the world, whether directly, via our global distribution network, regional distributors or skilled fabricators.

From aircraft construction and aircraft cabin windows to high-gloss car body panels, monitors and displays, as structural glazing, in noise barriers or lighting engineering, ACRYLITE® offers the tailor-made, durably brilliant and sustainable solution you are looking for.

**Feel free to contact us!**

## A reliable specialist for the long haul

ACRYLITE® is one of the world's most precious and versatile plastics. It can be manufactured with many different functional properties and surfaces, offering high transparency, light diffusion, light focusing, sight screening, heat reflection, heat shielding, heat insulation, sound reflection or mar resistance.

There are no limits to the ideas that can be realized with this material. Technologically-advanced projects in a variety of applications work with ACRYLITE®. It is used in solar panels because it provides greater energy conversion efficiency and shows no yellowing despite exposure to high levels of solar radiation. In automotive construction, it makes cars lighter and saves on air conditioning due to its heat-reflecting properties.

Applications with ACRYLITE® are built to last, thanks to the material's weather resistance and transparency. That makes it ideal for all outdoor projects. Whereas other plastics soon show signs of aging, ACRYLITE® stays as crystal-clear as on the very first day, for years and decades to come. The same applies to heavy-duty components – with its abrasion-resistant surface, ACRYLITE® makes sure they stay attractive and immaculate for many years.

ACRYLITE® is characterized by elegance, brilliance and color consistency. With these attributes, it draws attention to all indoor applications, messages and design objects, and is a constant source of fresh inspiration.

ACRYLITE® products from the Acrylic Polymers Business Line come in many different forms, as solid sheets, multi-skin sheets, corrugated sheets, blocks, tubes, rods and molding compounds.



# Automotive & Transportation

## ACRYLITE® for lightweight, elegant mobility

Functionality, design and safety – when it comes to means of transport and traffic routes, all of these aspects must be brought together. Cars are being made lighter to save fuel. At the same time, they have to meet growing demands for design and functionality.

Aircraft operate under extreme permanent pressure and temperatures, and submarines are exposed to similar stress levels. In all these areas, ACRYLITE® is used because its wide-ranging functionalities meet all these different needs.

## High-quality, long-life design

Non-transparent, high-gloss car body components made of ACRYLITE® have become an indispensable element of many car models. They segue smoothly into the windows and appear all of a piece, enabling unusual, high-class design. As well as looking good, the car body components can also be functional, acting as window channels for side windows, for instance. The special feature of ACRYLITE® components is that they have molded-in color and require no subsequent coating, unlike many other materials. That saves time and cost, looks stylish and is more durable.

Car roofs made of heat-reflecting ACRYLITE® require less air conditioning and offer the additional benefit of low weight. This is also one of the many arguments in favor of using ACRYLITE® for automotive glazing. Compared with glass, ACRYLITE® offers weight savings potential of 40–50%.





## Elegance and color variety

A car interior is what gives the vehicle its character and makes for individual well-being. ACRYLITE® opens up countless opportunities because it can be manufactured in any imaginable shape and also be custom-colored. A variety of surface options, from high-gloss to textured, further extends this choice. Transparent, translucent and opaque grades are available for creating a play of color inside the car, which means designers can give free rein to their imagination.

ACRYLITE® also scores full points in tail lights, an automotive application in which it has been established for decades, thanks to its durability and enormous scope for design. Over the years, tail lights have evolved from functional lamps to signature design elements in cars.



## Under extreme conditions

From pressurized cabins to sub-zero temperatures and extreme exposure to UV light, aircraft windows have a lot to contend with on their travels around the world. ACRYLITE® has proven its worth for decades in these applications. It protects passengers from UV radiation and is extremely impact-resistant, both in aircraft cabin windows and helicopters.

ACRYLITE® also defies the elements under water, offering a clear view of the fascinating surroundings. It withstands pressure and protects submarine passengers.



### ACRYLITE® for Automotive and Transportation

ACRYLITE®

ACRYLITE® Heatresist

ACRYLITE® Heatstop

ACRYLITE® Hi-Gloss

ACRYLITE® LED

ACRYLITE® Resist

ACRYLITE® Satinice

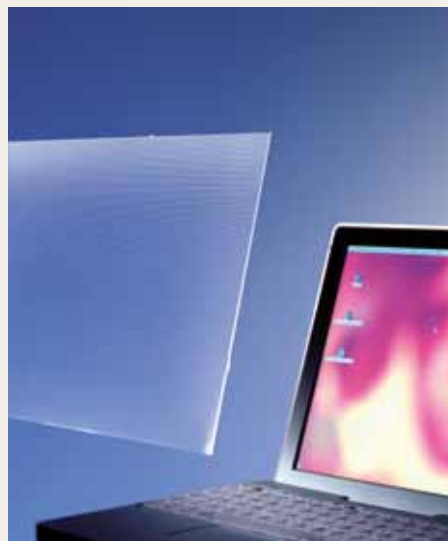


# Electronic & Communication

## ACRYLITE® for a perfect viewing experience

Want to see football players' every move? Enjoy cinema films at home with breathtaking clarity? On increasingly big television screens and in high-quality displays on mobile and smart phones, sat navs, laptops and PCs? All that is only possible with the right material. The solution for perfect picture and extremely high light guidance is ACRYLITE®.

Modern televisions are subject to constantly growing demands. We want them to be thinner, bigger and brighter all the time. ACRYLITE® makes sure these demands are met. In order for LED flat-screen televisions to work at all, it takes a material that offers optimal guidance of the light fed via the edges, uniformly illuminates the entire screen and minimizes absorption and diffusion losses in the light guide plate.





That is no problem for the 4mm thick light guide plates made of ACRYLITE®. The high purity of the optical molding compounds from which they are made means there are practically no losses due to light absorption or diffusion. The result is a perfect picture for gripping movies, breathtaking animal and landscape documentaries and exciting sports events.

Rear-projection screens made from ACRYLITE® also offer excellent picture quality with sharp contrast, and make viewing a real experience even in daylight. Indoor projections require less shading, and in professional uses at television studios and in control rooms, ACRYLITE® also ensures homogeneous and sharply defined images.

#### ACRYLITE® for Electronic & Communication

ACRYLITE®

ACRYLITE® Heatresist

ACRYLITE® Hi-Gloss

ACRYLITE® LED

ACRYLITE® Optical

ACRYLITE® Satinice

# Lighting Technologies

## ACRYLITE® for mood lighting

Light exudes warmth and wakens feelings. In the right light, objects and buildings come to life. Bathed in color, they strike a chord inside us. Wherever light and color go hand in hand, ACRYLITE® is the material of choice. It creates an atmosphere of well-being and inspires creative professionals to design completely new light impressions.

Two key aims of illuminated signs are to catch the eye and impress the viewer. ACRYLITE® is the right material for this, due to its range of colors paired with toughness and weather resistance. In addition, being easy to fabricate and providing inspiration for unusual shapes, it has the desired eye-catching effect. Combined with LEDs, it saves operators of illuminated signs even more energy, without having to sacrifice luminosity and atmosphere.

From dim and cozy to spotlights or area lighting, luminaires create the suitable mood. ACRYLITE® is the ideal material for this. Its unsurpassed transparency and brilliance shine brightly in these applications, as do its variety of colors and surfaces. They bathe the room in the required ambience and give designers the freedom they need to follow their inspiration.





In offices, lighting has to do more than look good and create a conducive atmosphere. Glare-free lighting is essential at computer workplaces, because it makes work more pleasant. ACRYLITE® covers create the ideal conditions and offer the perfect combination of form and functionality.

Industrial lamps, street lighting and outdoor lights have to meet a large number of different requirements. They must be functional, hard-wearing, weather resistant and safe. They are protected by ACRYLITE®, which defies the elements and provides optimal luminous efficiency.

#### ACRYLITE® for Lighting Technologies

- ACRYLITE®
- ACRYLITE® Heatresist
- ACRYLITE® LED
- ACRYLITE® Optical
- ACRYLITE® Reflections
- ACRYLITE® Resist
- ACRYLITE® Satinice
- ACRYLITE® Textures

# Solar Applications

## ACRYLITE® for optimal use of solar energy

Photovoltaic modules are exposed to extremes of nature. Particularly the sun, which is essential for their very purpose, is a constant stress factor that ACRYLITE® withstands on a durable basis. The specific properties of the material simultaneously ensure high energy conversion efficiency and thus make solar electricity even more economical.

Lightweight photovoltaic panels in which ACRYLITE® is used as a cover sheet, for instance, benefit from the material's high transparency, weather resistance and low weight. These modules are preferentially used in overhead applications and can be individually integrated. Their low weight reduces the structural engineering requirements, enabling more delicate and elegant structures that simultaneously provide high energy efficiency. ACRYLITE® also guarantees the panel's long service life and prevents its light transmission and performance from diminishing over the years.





Concentrating photovoltaics offers especially high efficiency. High-precision lenses are required to focus sunlight to the desired degree. ACRYLITE® is a convincing material for this purpose, owing to its specific transmission characteristics and excellent optical properties, high resistance to weathering and UV light, precise mold surface reproduction of even the smallest structures and low weight. All these attributes enable optimal use of sunlight.

**ACRYLITE® for Solar**

ACRYLITE® Solar

# Industrial Construction & Architecture

## ACRYLITE® for the architecture of tomorrow

Architecture is inspiration incarnate. New shapes and structures bear witness to the innovative power of their creators. Functional buildings unite design and usefulness. In all these areas, ACRYLITE® is part of the picture: as a façade, a design element or as a means of transporting light and brightness. In aquariums and animal enclosures, it reconciles animal protection with human curiosity, and as safety glazing, it protects from harm.

In greenhouses, it makes plants grow faster and more efficiently without wasting energy. The right kind of windscreen ensures that drivers safely reach their destination. Transparent noise barriers protect residents from disturbing traffic noise, without bulky walls or embankments. Its versatility and durability make it a vehicle for contemporary and futuristic ideas.

Light weight, light and color variations offer important impetus for modern architecture. ACRYLITE® provides inspiration for all these areas. It is approved for overhead glazing, passes the test for fall-proof glazing and remains durably brilliant and highly transparent. Its light weight enables delicate structures.

Since ACRYLITE® is eleven times as impact-resistant as glass, it not only looks good and provides a clear view, it also protects people and animals.

In stadiums, on machines or transport equipment, ACRYLITE® protects people from injury yet is hard-wearing in permanent service. In public or large aquariums, it withstands enormous water pressure and turns a visit into a unique experience.

Blossoming plants in winter, tasty tomatoes throughout the year and fresh salads even in cold regions: ACRYLITE® greenhouses always provide the right mixture of sunlight and UV radiation. Their good heat insulation keeps energy loss to a minimum. Greenhouse operators benefit twice over, from lower energy costs and the long service life of ACRYLITE®, which comes with a 30-year guarantee: transparent sheets will retain maximum light transmission and show no yellowing during this period.





## Protection against all winds and weathers

ACRYLITE® also shields car drivers from wind and residents from traffic noise. In wind and noise barriers, the material takes up little space and is highly weather resistant. On bridges, it fends off dangerous crosswinds without detracting from the stunning panorama. In towns and cities, the alternation of transparent and non-transparent elements creates sight and noise barriers without forming an impenetrable tunnel. That enhances quality of life and traffic safety at the same time.

### ACRYLITE® for Industrial Construction/Architecture

ACRYLITE®

ACRYLITE® Alltop

ACRYLITE® Heatstop

ACRYLITE® Hi-Gloss

ACRYLITE® LED

ACRYLITE® Resist

ACRYLITE® Satinice

ACRYLITE® Soundstop

ACRYLITE® Textures

# Home & Garden

## ACRYLITE® for home and garden

Cozy, elegant and versatile: from patio roofs to sun rooms, household items to appliances.

ACRYLITE® is ubiquitous. In outdoor applications, its weather resistance makes it the material of choice, and indoors, it brings light and color to living rooms. Safety is just as important as versatility, light weight and transparency.

What a joy it is to get a dose of light and energy in your own sun rooms when it's cold and grey outside! ACRYLITE® defies all winds and weathers, remains durably transparent and offers safety on top. As impact-resistant roof glazing, it protects against dangerous hail and reliably withstands wind pressure and snow loads, not just in conservatories, but also in roof glazing, carports and patio roofs.





ACRYLITE® adds a special touch to balconies, staircases or in bathrooms and spa areas. A variety of colors, textures and transparencies give your home its individual note. Extremely weather resistant and colorfast window profiles with a ACRYLITE® top coat retain their brilliance and enhance the feel-good effect. Artworks and family photos retain their original color thanks to the UV protection offered by ACRYLITE®. Fascia panels on washing machines and refrigerators also remain transparent because ACRYLITE® does not yellow, and its tough surface is resistant to many chemicals.

#### ACRYLITE® for Home & Garden

ACRYLITE®  
 ACRYLITE® Alltop  
 ACRYLITE® Heatstop  
 ACRYLITE® Hi-Gloss  
 ACRYLITE® Reflections  
 ACRYLITE® Resist  
 ACRYLITE® Satinice  
 ACRYLITE® Textures

# Furniture, Exhibition Booth & Retail Display

## ACRYLITE® for individual effects

Whether at trade shows or points of sale, the main thing is to catch the eye. To draw attention, create a striking effect and stand out from the crowd.

To be perceived as something special and achieve a unique look. ACRYLITE® is the perfect material for this. Combined with light, it offers endless scope for design in furniture, furniture profiles and kitchens. Besides its variety, the material's easy-care surface that is warm to the touch contributes to all-round comfort.

Sales decisions are increasingly based on emotions. The right ambience plays a crucial role and successful design is key. Creative professionals from the spheres of exhibition booth construction and shop fitting know the score. Whether transparent or translucent, edge-lit or brilliant, objects made of ACRYLITE® fascinate and captivate us. Customers and trade show visitors cannot help but come closer.

Since ACRYLITE® is easy to fabricate, it lets designers give free rein to their inspiration and creativity.

ACRYLITE® creates the right mood for presenting high-class brands by means of stylish retail displays. These can be chosen in corporate colors to match new collections or trends, and can be standardized for every branch worldwide, thanks to our global production and distribution network.

The design options for furniture are virtually unlimited. Whether crafted entirely from ACRYLITE® or with protective profiles made from this material, they make a room very special and puts its occupants at their ease. The same applies to kitchens. From stylish gloss to sumptuous matte finishes, ACRYLITE® surfaces offer the right solution for every taste.





## ACRYLITE® – the clear choice for conservation glazing

ACRYLITE® offers numerous advantages over glass which is why it is the clear choice for many museums and art galleries. ACRYLITE® is manufactured to more stringent specifications than standard acrylic sheet, eliminating dirt and blemishes that could potentially produce imperfections when viewing framed artwork. It offers beautiful clarity without heaviness or breakability and provides museum-quality protection essential in preserving art and artifacts.

Whether your treasured artwork requires UV filtering from damaging ultraviolet light, a non-glare surface to minimize reflection or abrasion resistance to protect from frequent contact, ACRYLITE® offers optimum performance for all preservation needs.

For exceptional showcasing and enduring protection, museum designers rely on ACRYLITE®. With important safeguarding characteristics, these products provide the preferred aesthetics and conservation performance required for vitrines and display cases that protect cultural, biological, and historical exhibits.

### ACRYLITE® for Furniture, Exhibition Booth & Retail Display

ACRYLITE®

ACRYLITE® Hi-Gloss

ACRYLITE® LED

ACRYLITE® Reflections

ACRYLITE® Resist

ACRYLITE® Satinice

ACRYLITE® Textures

		Automotive & Transportation
ACRYLITE®	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® Alltop	This clear-transparent multi-skin sheet offers the clearest possible view and has a smooth, water-dispersing coating on all sides.	
ACRYLITE® Heatresist	A higher heat deflection temperature is the distinguishing feature of these specialty PMMA molding compounds.	•
ACRYLITE® Heatstop	These heat-reflecting PMMA molding compounds, solid and multi-skin sheets offer greater energy efficiency by cutting air conditioning costs. A multi-skin sheet variant filled with aerogel offers high heat insulation.	•
ACRYLITE® Hi-Gloss	A noble appearance and special deep-view effect are the characteristics of these high-gloss solid sheets, which are available in various colors and with up-to-the-minute décors. Specialty molding compounds provide injection-molded components with a high-gloss Class A surface and remarkable depth of color.	•
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® 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, multi-skin, corrugated and 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® Solar	These ultra-pure molding compounds, sheets, tubes and Fresnel lenses have specific light transmission properties and high resistance to UV light and weathering, which makes them suitable for high-efficiency solar modules.	
ACRYLITE® Soundstop	These specialty products offer effective noise control and wind protection. The sheets are sound-reflecting, impact-resistant, highly transparent and contain embedded polyamide threads for sliver retention. They are also available with bird-deterrent strips.	
ACRYLITE® Textures	Solid sheets with a variety of classical and modern surface textures, combined with trendy colors or a rainbow effect.	

Electronic & Communication	Lighting Technologies	Solar Applications	Industrial Construction & Architecture	Home & Garden	Furniture, Exhibition Booth & Retail Display
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# Product application matrix

Evonik Industries is a worldwide manufacturer of PMMA products sold under the ACRYLITE® trademark in the Americas and under the PLEXIGLAS® trademark in the European, Asian, African and Australian continents.

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