

PLEXIGLAS®
for Roof and Façade

PLEXIGLAS®
The Original.



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Building shells – protective skins

It's the first impression that counts. The facade and roof of a building can be seen from afar – they are its architectural calling card, so to speak. But looks aren't everything. Modern structures unite design with functional value. The shell of a building does more than determine its appearance, it also acts as a protective skin to ward off winds, weathers and other external influences. For decades to come.

To perform these functions, architects are increasingly looking for new materials that offer different options while meeting high technical demands. PLEXIGLAS® is the ideal material. It can be formed and colored with excellent results. It is extremely stable and can be manufactured in large sizes to provide homogeneous and practically seamless surfaces. This material opens up new dimensions and adjusts perfectly to the individual characteristics of the structure in question.

We at Evonik are among the world's leading suppliers of PMMA and acrylic products, which were invented in 1933 by Dr. Otto Röhm and his team. The products we market under the PLEXIGLAS® brand (and under the ACRYLITE® brand in the Americas), as well as our know-how, are available everywhere, either directly via our global distribution network, via regional distributors or qualified fabricators.

Let us help you combine sophisticated design with maximum functional value!



A specialized material that is reliable and durable

Facades and roofs are permanently exposed to all winds and weathers. In towns and cities, they additionally suffer from car, bus and truck exhaust fumes. Colors and decors must withstand these stress factors throughout their service lives. This makes high demands on materials. PLEXIGLAS®, as one of the world's highest-quality and most versatile plastics, is the perfect choice.

PLEXIGLAS® offers excellent resistance to weathering and aging. Nor is the material affected by UV radiation, since its chemical composition offers durable UV protection through and through, not just on the surface. There is no yellowing or embrittlement, and no color fading. With PLEXIGLAS®, facades and roofs retain their color or their transparency. The material stays the same even decades later.



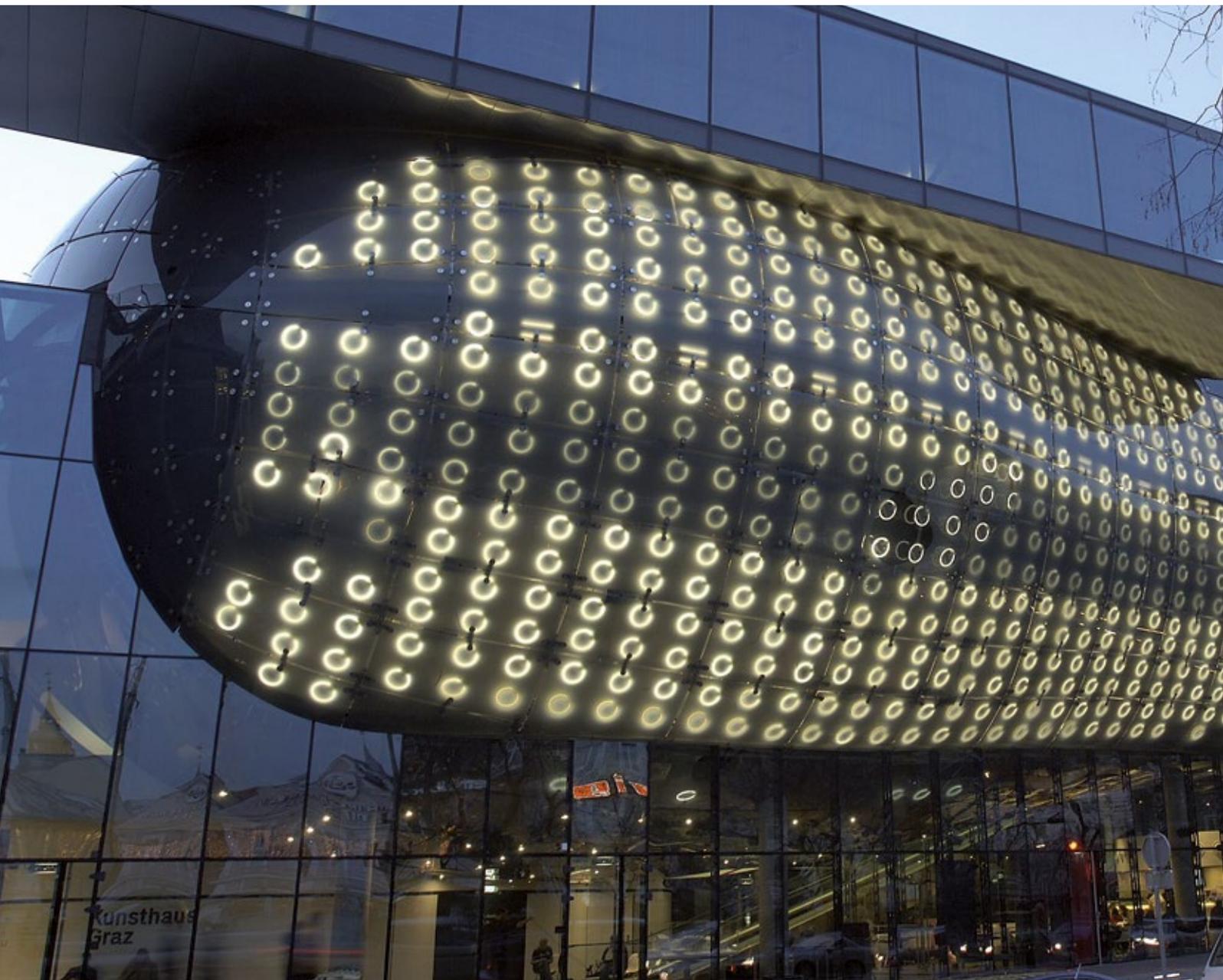
We guarantee that our clear-transparent solid, multi-skin and corrugated sheets, blocks, tubes and rods will not yellow for 30 years, and that our colored solid sheets will remain colorfast for 10 years.

PLEXIGLAS® films offer an invisible protective shield for the colors and decors of other materials too. These clear-transparent films available in thicknesses of up to 1mm protect window profiles and facades against harmful influences such as UV radiation.

To furnish proof of the sustainability offered by PLEXIGLAS®, we have performed an extensive life cycle assessment of the material from cradle to grave.

From production to recycling, the different environmental impacts of PLEXIGLAS®, including its greenhouse gas reduction effect due to the material's longevity, were determined and confirmed in this Life Cycle Assessment (LCA) in accordance with DIN ISO 14040ff.

PLEXIGLAS® is also a good choice in terms of safety. It burns with almost no smoke, forms no acutely toxic smoke gases and can be easily extinguished with water.



PLEXIGLAS®
room for ideas



© LMJ/Niki Lackner

Facades determine the appearance of buildings. Individual solutions therefore play a key role in architecture. PLEXIGLAS® makes room for ideas.

The material opens up new dimensions. It can be machined and fabricated with excellent results and can be provided as three-dimensional or rounded elements. In addition, its large sizes make it possible to install homogenous surfaces that retain their uniform appearance even at the corners because PLEXIGLAS® can be seamlessly joined. Weight is no problem, since the material weighs only half as much as glass and can easily be fastened to standard supporting structures. Individual designs are possible for every facade, in keeping with the specific project.

PLEXIGLAS® also offers creative freedom in terms of color. It can be colored with ease and is available in high-gloss, matte satin, transparent and opaque grades to suit every taste, as well as grades with a deep-view effect or a special decor. Not only does the material look good in itself; its transparency and light-guiding properties provide maximum brilliance also in technical applications such as illuminated and media facades.

Whatever the chosen type of design, PLEXIGLAS® offers the best long-term solution. The material does not yellow or turn brittle, either at the surface or the edges. Its perfectly smooth surface also offers good protection against soiling, which cannot adhere and is simply washed off by the rain.



PLEXIGLAS® flooded with light

Modern buildings feature rooms flooded with light, bright stairwells and open-plan architecture. This gives residential and office buildings a lightness that makes for a pleasant living and working atmosphere. PLEXIGLAS® is the ideal material for letting light into the inside of a building. In its clear-transparent grade, it even offers higher light transmission than glass.

A completely colorless and completely transparent façade makes it possible to see and be seen. Or to catch glimpses of the world outside that is barely visible behind a translucent shell. PLEXIGLAS® can be manufactured in any type or combination of transparency and translucency.

Designers can play with its properties as their fancy takes them to create spectacular designs in a huge choice of colors.



PLEXIGLAS® transposing grand schemes into grand reality

Light that shimmers through a colored facade; clouds that are mirrored in a facade of transparent sheets – the transparency and translucency of PLEXIGLAS® are particularly impressive when the material is installed over large surfaces.

Such lavish facade structures are no problem because the material is lighter in weight than glass or comparable facade panels. The lower weight means less effort is required for installing the supporting structure and assembling the facade, which translates into lower costs as well. This is also an option for large industrial facades, which additionally benefit from excellent heat insulation or uniform

light distribution, depending on the product used.

With PLEXIGLAS®, even large surfaces can be given an exciting design. The material is easy to machine and fabricate and therefore allows unusual shapes to be realized.

Once the facade has been properly installed, it becomes a spectacular, light-transmitting design element for many years to come.



Photograph by William Price

PLEXIGLAS® GS und XT
(sheets, tubes, rods, blocks)
PLEXIGLAS® Satinice
PLEXIGLAS® multi-skin sheets

PLEXIGLAS® that certain something

Complete facades fashioned from translucent or transparent material are real eye-catchers. But even by adding a touch of color, shape or surface texture to the shells of conventional buildings, PLEXIGLAS® can make a vital contribution to their overall impact.

Facades create the biggest impression when they are made of material that has been machined in different ways; with recesses routed to different depths, or with matte and polished areas. These surfaces change the way in which light is refracted, and the alterations in brightness during the day add to the effect. PLEXIGLAS® can be machined in this way without sacrificing its stability due to differences in material thickness.

Individually printed sheets offer an attractive alternative. Whether it sports a company logo or is adorned with a pattern, PLEXIGLAS® offers a solution with that certain something, which makes the building stand out from the run-of-the-mill architecture to be seen elsewhere.



PLEXIGLAS® adds color to the streetscape

Goodbye to insipid shades of grey. Colorful facades are gaining sway in downtown and residential areas. PLEXIGLAS® is a versatile material, whether self-colored, with a decor or with a deep-view effect. It also adds spectacular optical touches in its non-transparent grades.

In its original form, PLEXIGLAS® is absolutely colorless and can therefore be colored at will. Designers can give free rein to their color fantasies. And because the material is UV-stable, colors stay as they are for a long time to come.

We give a 10-year colorfastness guarantee for the solid sheets marketed under the PLEXIGLAS® trademark. The color impression is even retained if the material suffers mechanical damage,

since it is self-colored through and through. This makes any damage hard to detect.

PLEXIGLAS® also offers variety when it comes to surface textures. The sheets are available with high-gloss or fine matte-satin surfaces. PLEXIGLAS® Hi-Gloss additionally provides a special deep-view effect that creates unusual reflections, as well as offering increased UV protection for the decor. Translucent patterns can be obtained by routing the reverse of the sheet.



PLEXIGLAS®

**the eye-catching solution
for facades**



Shape, color and feel are all elements that help design an idiosyncratic facade. PLEXIGLAS® Mineral is an unusual material for this purpose. It is the eye-catching solution for facades, whether it is installed over an entire storey, shaped, individually routed or printed.

One of the material's most outstanding properties is its color. PLEXIGLAS® Mineral is available in several standard colors and can be colored to provide any chosen hue. It is provided with a matte-satin surface at the factory, for a unique reflective effect and a velvety feel. This makes for more brilliant color, which is combined with permanent colorfastness due to the material's inherent UV protection. It can also be provided with a high-gloss surface.

PLEXIGLAS® Mineral is extremely impact-resistant and can be two- or three-dimensionally formed with excellent results. This makes it possible to obtain molded parts for corner, intrados and lintel elements that provide seamlessly matching facade connections. Combined with all conventional aluminum supporting structures, this adds up to a coordinated facade system, also for large areas.

The material is also a good choice when it comes to safety in buildings. PLEXIGLAS® Mineral emits very little smoke and the smoke gases are neither corrosive nor toxic. A flame-retarded version is also available.



Photo: Graz 2003

PLEXIGLAS® XT
PLEXIGLAS® GS
PLEXIGLAS® Hi-Gloss
PLEXIGLAS® Mineral

PLEXIGLAS® a facade that looks all of a piece

Curved sheets nestle up against a building, forming a large surface that catches the rays of the sun. To create the most stylish impression, facades should be as homogenous and seamless as possible.

PLEXIGLAS® enables large sizes to be produced that are easy to shape in the intended form, whether as two-dimensionally curved or as three-dimensional structures. The advantage is that large panels reduce the number of required elements and therefore the total number of joints.

Who says the optical impression has to be flawed by obtrusive joints? Facade sheets made of PLEXIGLAS® can also be invisibly fastened. They are designed to match conventional supporting structures and fastening systems for curtain-type rear-ventilated facades. It goes without saying that individual fastening options are also possible.



PLEXIGLAS® an all-round talent indoors and out

Shopping malls, office buildings, hotels – modern business premises prefer up-to-date, attractive but replicable design. The boundaries between indoors and outdoors are fluid: materials extend from the facade into the building's interior, or are repeated as elements of individual rooms. PLEXIGLAS® is highly suitable for achieving the smoothest possible transition from outside to inside.

PLEXIGLAS® Hi-Gloss and Mineral are the perfect materials in this case. Certified fastening systems are available for both grades, also for interiors, to enable smooth transitions. Their huge variety of colors offers almost endless possibilities in terms of design. Added to this, they are practical in use.

Both materials have a perfectly smooth surface, which makes them anti-soiling and very easy to clean.

With its special feel, PLEXIGLAS® Mineral has the best credentials for interior design. It can be used in a variety of applications, from wall paneling to furniture through to non-slip shower trays. In its flame-retarded grade, the material is also suitable for use in corridors and secondary escape routes.



PLEXIGLAS® the individual solution for roofs

Curved, bent and rounded: PLEXIGLAS® makes individual roof solutions a reality. It has excellent machining properties and can be cold-curved. Mounted directly in the assembly system, the material also provides a fast and inexpensive roof covering.

Roof domes made of PLEXIGLAS® Resist SG demonstrate the material's formability. This grade of acrylic specially developed for safety glazing brings light into buildings while ensuring greater safety on roofs. Its embedded plastic threads provide light domes with fall-through protection that meets the requirements of EN 1873.

PLEXIGLAS® Heatstop offers protection against extreme heat, which is an important factor especially for roofs in exposed positions or southern latitudes. Its special coating reflects most of the incident infrared light, which prevents heat buildup in the rooms beneath the roof and reduces air-conditioning costs.



		Facade – transparent, translucent	Facade – opaque	Facade – inside	Roof – Systems, industrial glazing (light domes, sky lights)	Roof – individual roof construction
PLEXIGLAS® GS/XT Clear	PMMA sheets, tubes and rods 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. Additionally a UV-resistant grade is available.	•			•	•
PLEXIGLAS® GS/XT colored	PMMA sheets, tubes and rods 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. Additionally a UV-resistant grade is available.	•	•			•
PLEXIGLAS® 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.		•	•		
PLEXIGLAS® Heatstop	These heat-reflecting PMMA solid and multi-skin sheets offer greater energy efficiency by cutting air conditioning costs. The different color effects make the products especially attractive.				•	•
PLEXIGLAS® Mineral	This high-quality, mineral-filled material based on PMMA has the appearance of natural stone. The sheets are solid, completely smooth and homogeneous. They can be formed and are available in many different colors.		•	•		
PLEXIGLAS® 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.	•		•		

Products, applications and properties



® = registered trademark

PLEXIGLAS is a registered trademark of Evonik Röhm GmbH, Darmstadt, Germany

Certified to DIN EN ISO 9001 (Quality) and DIN EN ISO 14001 (Environment)

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

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