



SCHOTT
glass made of ideas

PYRAN® Platinum

Environmentally friendly
fire-rated glass-ceramics

SCHOTT is an international technology group with more than 125 years of experience in the areas of specialty glasses and materials and advanced technologies. With our high-quality products and intelligent solutions, we contribute to our customers' success and make SCHOTT part of everyone's life.

Together with architects and designers, SCHOTT is expanding the limits of building design in offering virtually unlimited application options for interiors and exteriors. With the help of internationally approved fire-rated glass-ceramics, SCHOTT is creating freedom for ideas in form and space. Fire protection and transparency, aesthetics and function connect strikingly with the individual architecture. This makes SCHOTT a uniquely expert partner for architecture and design.



PYRAN® Platinum

Fire-rated glass-ceramics

PYRAN® Platinum is the world's first and only floated glass-ceramic developed specifically for the North American fire-rated glazing market. Architects appreciate the smooth surface, neutral color and proven technical performance.

PYRAN® Platinum fire-rated glass-ceramics are certified by Underwriters Laboratories for fire-protection ratings up to 90 minutes in windows and 180 minutes in doors. For safety-rated applications, filmed and laminated versions are available.





PYRAN® Platinum

UL-certified

Fire Test

The Fire Endurance test for fire-protection rated glazing subjects a full-size window or door assembly to a controlled time-temperature profile in a furnace. The test duration is 20 minutes up to three hours, depending on the desired rating, with temperatures reaching nearly 2000° F in three hours. The window assembly including frame, glazing and components must not allow flaming on the non-fire side, and the glazing must survive the test without breaking or cracking. This test is performed in accordance with test standards UL 9, UL 10b, NPFA 252 and NFPA 257. PYRAN® Platinum is tested and certified by Underwriters Laboratories for fire protection up to 90 minutes in windows and 180 minutes in doors.

Sound Transmission

The acoustical performance of glazing is described by the Sound Transmission Class (STC) measured by ASTM E90. PYRAN® Platinum L effectively reduces unwanted sound transmission and has an STC rating of 36, making it suitable for installation in LEED-rated school buildings.

Hose Stream Test

Immediately following the Fire Endurance Test, the fire-exposed side of the test assembly is subjected to impact from water blast in a prescribed pattern for duration appropriate to the specimen size. The glazing must remain intact in the frame. PYRAN® Platinum fire-rated glass-ceramic passes the hose stream test thanks to its superior strength and near zero thermal expansion.

Impact Test

In installations where accidental human impact could occur, fire-rated glazings must also withstand Impact Tests. Impact is tested according to CPSC 16 CFR 1201 using a 100-lb weight swung from a pendulum at 48-inch drop height. The glazing must remain intact with no significant openings. PYRAN® Platinum F with a surface applied safety film and PYRAN® Platinum L with an impact-resistant interlayer meet CPSC Category II impact tests.



PYRAN® Platinum

Product Advantages

With PYRAN® Platinum, SCHOTT has succeeded in developing a revolutionary and innovative solution in the area of fire-resistant glass ceramics.

PYRAN® Platinum combines aesthetics and safety – thanks to a unique manufacturing process it is able to provide high optical quality with outstanding clarity, smooth as a mirror, and without any trace of haze or amber tint.

PYRAN® Platinum is environmentally friendly – it is the world's first transparent, floated glass-ceramic which is produced without the environmentally harmful toxic metals arsenic and antimony.

In the international glass industry, SCHOTT has been a pioneer in environmental and climate protection for many years. SCHOTT strives to meet the highest standards for sustainable environmental and climate protection, meeting or exceeding legal requirements.

This is one of the reasons that PYRAN® Platinum has been Cradle to Cradle (C2C) certified by McDonough Braungart Design Chemistry (MBDC).



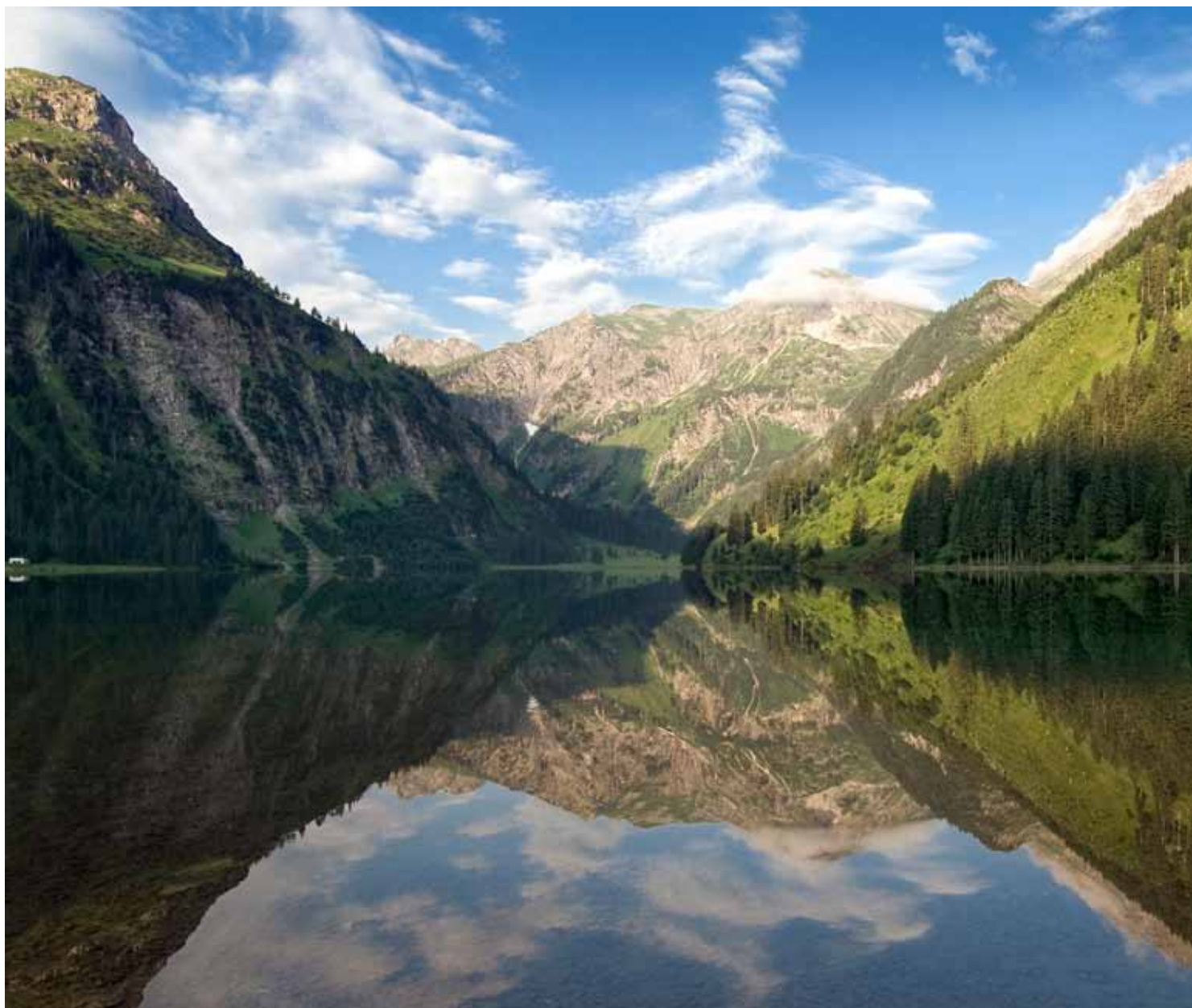
PYRAN® Platinum

Clean composition plus innovative
manufacturing equals excellent glass properties

In designing the chemical composition for PYRAN® Platinum, technical experts at SCHOTT gave special consideration for human health and environmental safety. The glass is manufactured without hazardous heavy metals antimony and arsenic normally used as refining agents. Instead, SCHOTT uses unique manufacturing steps to produce high quality glass without hazardous metals. Therefore SCHOTT does not contribute to the mining and transport of antimony and arsenic, and protects our employees from handling them.

PYRAN® Platinum is clear and colorless, closely resembling normal architectural window glass, without the distracting orange/amber tint associated with competitive glass-ceramics. The neutral color allows PYRAN® Platinum to blend in with the surrounding architecture of the building. This unique attribute is a result of carefully designed decolorization agents added to the glass melt. The composition of PYRAN® Platinum is stable and is not sensitive to exposure to UV light rays or heat.





PYRAN® Platinum

Unique manufacturing process
gives the glass-ceramic outstanding surface quality

PYRAN® Platinum is a verifiably environmentally friendly product with outstanding surface quality. This is thanks to a unique manufacturing process, the Microfloat process.

The hot molten glass ribbon is floated on an inert bed of liquid tin and is allowed to cool slowly without any mechanical contact that could blemish the smooth surface.

The result is PYRAN® Platinum's smooth, distortion-free mirror finish.





PYRAN® Platinum

Ecological commitment

At SCHOTT, the focus is increasingly on the manufacture of environmentally friendly products. In addition to the development of energy efficient melting technologies, SCHOTT strives to reduce energy consumption and production emissions.

Our many different activities in these areas are reflected in the patent applications for inventions. More than one-third of our patent applications can be classified as relevant to our environment. All SCHOTT products comply with legal regulations. It is our goal to go beyond the legal requirements in paving the way for green products and developing innovative solutions.

In the manufacture of PYRAN® Platinum, we have optimized the energy saving aspects of the production processes while eliminating the use of environmentally harmful raw materials to the greatest extent possible.

The company's plan to achieve its goal of protecting the environment and preserving natural resources was mapped out in the application process for the C2C certification of PYRAN® Platinum.



PYRAN® Platinum

Ecological aspects begin in manufacturing

Water conservation and protection

Production water consumption is closely monitored and controlled. Fresh water is used only for sensitive manufacturing steps, and process water is recycled in continuous loops. To further conserve and protect our fresh water supply, SCHOTT was granted a special permit to draw greywater from the nearby river. SCHOTT uses this greywater for 90% of the total water needed for the manufacturing site instead of fresh water. Water and waste water streams are measured. All water and waste water regulations are strictly met and required local conservation measures are often exceeded.

Reduced toxicity in raw materials

All materials used are strictly tested for contamination: PYRAN® Platinum glass-ceramics are produced without dangerous heavy metals such as antimony and arsenic which are normally used as refining agents.

Use of renewable energy

20 percent of the required electricity comes from renewable sources, including solar energy generated on site that is fed into the grid. SCHOTT is a global leader in solar energy technology, manufacturing highly efficient receivers for concentrated solar power as well as innovative photovoltaic products.

Recyclability

SCHOTT is committed to the conservation of natural resources. To minimize the amount of glass-ceramic in landfills in North America, SCHOTT launched a recycling program in summer 2010. Cullet and other unused materials are brought back to the production sites to be recycled and used in the production process. PYRAN® Platinum is recyclable at the end of its product life. This is in keeping with the cradle-to-cradle principle.



PYRAN® Platinum

The world's only C2C-certified fire-rated glass-ceramic

What does C2C mean?

C2C stands for Cradle to Cradle, an environmental certification program that evaluates a product's Material Health, Material Reutilization, Renewable Energy Use, Water Stewardship, and Social Responsibility. C2C is administered by MDBC, McDonough Braungart Design Chemistry. PYRAN® Platinum achieves C2C Certification at the Silver level, which means all chemicals in the product are identified down to 100 ppm level (0.01%) with no toxic heavy metals or related chemicals. All materials and chemicals are assessed for toxicity to human and environmental health, and all materials can be recycled. The energy required for manufacturing is quantified, energy sources are characterized and renewable energy is used. Company-wide water stewardship principles are in place, and SCHOTT has a strong focus on responsibility for the environment and for our employee and consumer health.

What does LEED-certification mean?

LEED is an internationally-recognized program evaluating green building performance. LEED is an acronym for Leadership in Energy and Environmental Design, administered by the U.S. Green Building Council (USGBC). LEED recognizes home and commercial building projects that implement strategies for better environmental and health performance.

How does PYRAN® Platinum fire-rated glass-ceramic fit into the LEED program?

LEED building projects incorporating C2C Certified products such as PYRAN® Platinum qualify for special credit in the Innovation in Design category in the LEED rating system. For residential buildings, C2C Certified products also qualify for LEED credit in the LEED for Homes rating system as Environmentally Preferable Materials.

What does it mean PYRAN® Platinum qualifies for EPP?

The U.S. Environmental Protection Agency lists environmentally preferred products in a database called EPP, Environmentally Preferable Products. PYRAN® Platinum's C2C Certification qualifies the product for inclusion in the EPP database. Federal agencies are directed by executive order to purchase products that have a lesser impact on health and the environment.

No other glass-ceramic on the market meets these requirements.





PYRAN® Platinum fire-rated glass-ceramic is tested and certified to stop the spread of smoke, hot gas and flames in fire-protection rated windows and transoms. During a fire, the glazing remains intact and transparent, allowing escaping occupants to clearly see the appropriate exit routes.



PYRAN® Platinum is a perfect choice for replacement of old wired glass, for example in doors and sidelites, and is available with surface-applied film or laminated with impact-safety interlayer for installation in safety-rated areas.



The full line of environmentally-friendly PYRAN® Platinum fire-rated glass-ceramic is available from distributors and fabricators throughout North America.

PYRAN® Platinum

Technical Data

	Rating (Minutes)	Location	Max. exposed area of glazing (in ²)	Max. width of exposed glazing (in.)	Max. height of exposed glazing (in)	Min. depth of glazing channel	Impact safety-rated*	Thickness
PYRAN® Platinum	Up to 90	Other than doors	3,422 (23.7 ft ²)	76	76	5/6"	No	5 mm
PYRAN® Platinum F (filmed)	Up to 90	Doors Non-Temp Rise	2,736 (19 ft ²)	36	76	5/8"	Yes	
	Up to 180	Doors Temp-Rise and Non-Temp Rise	100 (0.69 ft ²)	12	33	1/2"	Yes	5 mm
	Up to 90	Other than doors	3,422 (23.7 ft ²)	76	76	5/6"	Yes	
PYRAN® Platinum L (laminated)	Up to 90	Doors Non-Temp Rise	2,736 (19 ft ²)	36	75	5/8"	Yes	
	Up to 180	Doors Temp-Rise and Non-Temp Rise	100 (0.69 ft ²)	12	33	1/2"	Yes	9 mm
	Up to 90	Other than doors	3,143 (21.7 ft ²)	75	75	5/8"	Yes	

*according to ANSI Z 97.1 and CPSC 16 CFR 1201 (Cat. I and II)

PYRAN® Platinum products are classified and labeled by Underwriters Laboratories, Inc. for the United States and Canada with File-No. R22036. All fire tests performed in accordance with UL9, UL10B, UL10C, UBC7-2 (1997), UBC7-4 (1997), NFPA252, NFPA257, NFPA80, ASTM E2010-01, ASTM E2074-00, ULCCAN4-S104 and ULCCAN4-S106

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