



SCHOTT

glass made of ideas

PYRAN®
PYRANOVA®

Special-purpose glass products
for fire resistant glazing

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.

SCHOTT works closely with architects and designers to extend the boundaries of design and create new opportunities for building culture – in terms of design and space, indoors and outdoors, for solar power and fire protection, aesthetics and functionality – sustainable and custom tailored. That's what makes SCHOTT a qualified partner for architecture and design.

When it comes to fire resistant glazing, architects and system suppliers truly appreciate having an expert partner who can assist them on an individual basis – a partner like SCHOTT. SCHOTT offers reliable advice and delivers comprehensive solutions, customized developments, proven system components and designs approved for use in construction. This paves the way for designing safety in a creative manner.



PYRAN®

Special borosilicate glass for use in fire resistant glazing

PYRAN® S

Fire resistance classes:
E 30 to 120
EW 30 to 60
Glass thicknesses:
6, 8, 10, 12 mm

ISO PYRAN® S

Insulating glass
Fire resistance class:
E 30 to 120
Glass thicknesses:
Depending on design

PYRAN® G

Curved glass
Fire resistance classes:
E 30
Glass thicknesses:
6 and 8 mm

PYRANOVA®

Thin-profile multiple-pane glass laminate for use in fire resistant glazing

Fire resistance classes:
EI 15 to 120
EW 30 to 60
Glass thicknesses (internal):
7, 11, 15, 19, 23, 37, 52 mm
Glass thicknesses (external):
10, 14, 19, 27, 40, 56 mm

ISO PYRANOVA®

Insulating glass
Fire resistance classes:
EI 15 to 60
Glass thicknesses:
Depending on design

A comprehensive solution for complex challenges

SCHOTT expertise translates into reliable fire protection

There are companies that supply just glass. And then there is SCHOTT. SCHOTT offers complete system solutions on the basis of high quality special purpose glass products for use in fire resistant glazing that have already proven themselves in countless buildings. Furthermore, SCHOTT advises and supports architects and system suppliers during all phases of the project cycle – including consulting with construction supervisors and expert installers. This results in a complete quality chain from A to Z.

Certified constructions

SCHOTT has already developed many comprehensive solutions based on a wide variety of frame materials together with experienced system partners for use in façades, roofs, skylights, partitions, doors, smoke aprons and lift glazing. These systems are internationally approved. And new products are being introduced on a frequent basis. Architects and planners thus have a large pool to choose from that is ready to be used immediately. And, if they fit the bill, these solutions can also be adapted on an individual basis to meet new, building-specific demands.

Safety up until installation

As required by law, fire resistant glazing can only be performed by certified companies. SCHOTT holds seminars on a regular basis to train installers how to properly install all types of fire resistant glazings. On request, SCHOTT will provide contact information for installers who have participated in these training sessions.

Multifaceted diversity

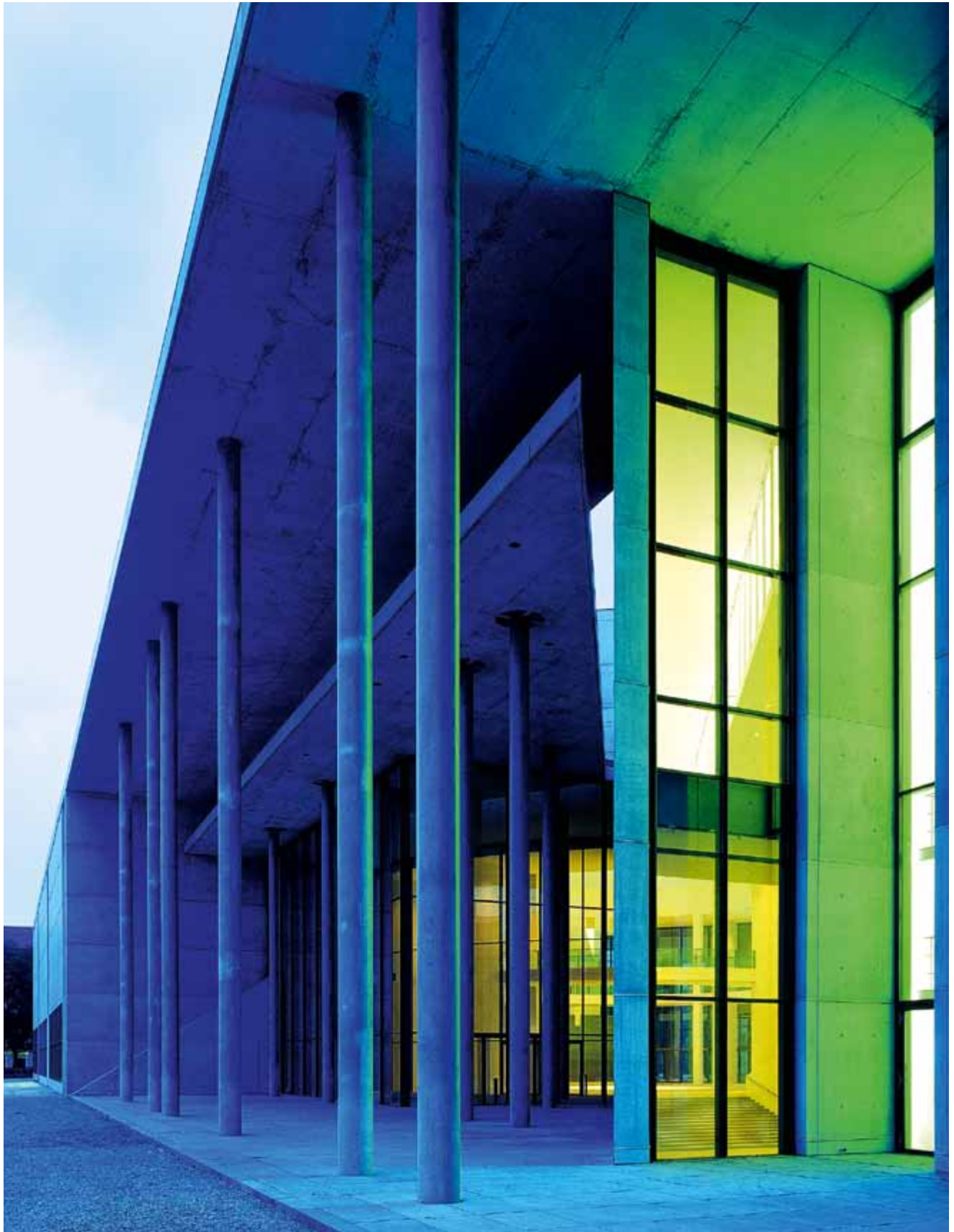
Each and every project poses additional demands that extend beyond fire protection. Here, too, SCHOTT offers exactly the right solutions. For example, special glass products from SCHOTT can be sandblasted or designed using

colours and patterns. Insulating glass constructions offer even more new possibilities – and not just in the area of design. The spectrum ranges from improved energy efficiency and thermal insulation to protection from sound and the sun, and even protection from x-ray radiation. Precisely tailored special construction even allows for glazing that has bullet resistant properties, is capable of setting off alarms and resisting burglary attempts by preventing penetration – simply ideal for banks, jewelry stores, prisons, embassies and other high-security buildings.



Left: BMW Welt, München
Photo: Marcus Buck

Right: Ultramodern solution involving
PYRAN® S fire resistant glass for the Pinakothek
der Moderne in Munich.



Safety that looks great too

Fire resistant glazing with PYRAN® S

PYRAN® S glass is far superior to conventional glasses for use in fire resistant glazing. The secret lies in the material and the manufacturing process used. Together, both guarantee outstanding qualities – in terms of both building physics and appearance.

When it comes to offering protection from fire, PYRAN® S special glass is manufactured using a micro-float process and clearly outperforms soda lime glass. Its special physical properties allow for large formats and long fire resistance times to be achieved with normal edge covers and basic frame construction. Furthermore, NiS crystals are unable to form with borosilicate glass.

Proven and safe

PYRAN® S fire resistant glass also remains transparent, even when exposed to severe heat. In the event of a fire, this ensures life-saving viewing and makes it much easier to evacuate the building safely. Excellent colour rendition and high transmission in the visible and UV light ranges also ensure that safety is achieved without having to compromise in respect to aesthetics. There are plenty of good reasons why PYRAN® S fire resistant glass has successfully proven itself for decades, regardless of whether in airports, hospitals, hotels, industrial buildings, museums, offices, schools, shopping centers, sports facilities or even on passenger ships.

System glazing

The PYRAN® S fire-resistant glass product family has been certified for and used in the construction of many international projects. The butt joint system with PYRAN® S joins the glass panes in a frameless manner using a special silicon seal. This allows for long glass runs without using any vertical profiles. In fact, PYRAN® S in a point-fixed system requires no frame at all. This features a light weight support structure and without causing any stress points it permanently locks in the glass panes so they cannot slip out, even under extreme conditions.

PYRAN® S

- > Borosilicate single-pane safety glass
- > E 30 to 120
EW 30 to 60
- > 6 to 12 mm thicknesses

Left: PYRAN® S fire resistant glass in the Mercedes-Benz Museum.
The fire resistant glazing which was 50 meters in length was enhanced with the help of screen printing.

Right: BMW World, Munich





Layer for layer more safety

PYRANOVA® also protects against heat in case of fire

With PYRANOVA®, it isn't the glass that offers protection from a fire, but rather the spaces in between. This compact laminated glass that is made up of multiple panes contains a hidden composition that unfolds layer by layer when a fire breaks out. It not only offers protection against fire and smoke, but also keeps out the heat radiation that results.

PYRANOVA® fire resistant glass with heat protection consists of two components that are placed on top of each other several times: glass and a transparent protective layer between the panes. The outside pane bursts when a fire breaks out. The layer beneath it reacts at approximately 100 °C and foams up to form an opaque heat shield. This reaction repeats itself over and over again. From the first to the very last layer. The more layers, the longer the resistance time. The protection that PYRANOVA® is designed to offer can thus be adjusted by modifying the thickness of the panes. Precise and perfectly suited to the needs of your building – for up to 120 minutes.

Proven safety

PYRANOVA® fire resistant glass with heat protection also ensures greater safety when a building needs to be evacuated. The protective shield that PYRANOVA® forms in the event of a fire keeps out the heat. Thanks to this protection, people can now leave the building in a safe and orderly manner. This makes PYRANOVA® glass ideal for use in escape routes and around staircases. In addition, PYRANOVA® fire resistant glass has passed the ball drop, ball throwing and fall safety tests.

System glazing

The butt joint system that SCHOTT uses allows for glazings to be installed using PYRANOVA® heat resistant and heat protection glass in long strips of glass without using vertical profiles. And the PYRANOVA® Planline F30 system paves the way for glazing that is flush with the frame and features extremely thin profiles and large glass surfaces. The glazing units are installed with the help of a patented mounting kit that is integrated invisibly without using glazing beads that are often otherwise required. PYRANOVA® Planline F30 system can even be used in a butt jointed glazing with the help of a nearly invisible seam.

PYRANOVA®

- > Multiple pane laminated glass
- > EI 15 to 120
- > EW 30 to 60
- > 7 to 52 mm in thickness (interiors)
- > 10 to 56 mm in thickness (exteriors)

Left: PYRANOVA® glass offers fire and fall protection in the Stadthalle in Vienna.
Right: Coeur Défense, Paris; 10,000 m² of fire resistant glazing were installed in the section that joins the towers.







The roof of this house on Friedrichstrasse in Berlin consists of ISO PYRAN® S special glass for use in fire resistant glazing.

SCHOTT

Your partner for fire protection

Otto Schott invented heat resistant borosilicate glass back in 1887. Since then, SCHOTT has continued to extend its technological expertise. Architects benefit from the company's decades of experience in the field of fire resistant glazing in so many different ways. SCHOTT offers them expert advice on either their own premises or onsite. And is always there to help them, even when it comes to obtaining an approval from the building authorities on an individual case basis. In fact, SCHOTT is even able to accompany them over the course of the entire project, if they would like.

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