



The Pilkington Glass Range

## Everything you need in glass from the experts.

Pilkington UK have been manufacturing and processing glass since 1826. This experience has been invaluable and has enabled us to invest in and develop our ideas into world leading products. Products such as high-quality float glass, coated, toughened, laminated, fire protection and specialist glass were developed by combining our unrivalled technical expertise with true innovation.

Today, as part of the NSG Group, we supply these products to our partners in around 130 different countries – just one of the reasons why the Pilkington brand has become synonymous with glass.

This brochure gives a brief outline of our most popular commercial products. To help you choose the right glass for your particular project, we have divided the range by product benefit.

For more details and technical data for all the Pilkington glass range, including various specialist products for specific uses:

Visit [www.pilkington.co.uk](http://www.pilkington.co.uk)

Email [enquiries@pilkington.com](mailto:enquiries@pilkington.com)



Front cover image:  
The Tepper School of Business,  
Pennsylvania, USA



## The Pilkington Range



### Solar Control:

Pilkington **Suncool™** Range  
Pilkington **Optifloat™** Tint



### Thermal Insulation:

Pilkington **Optitherm™** S1 Plus  
Pilkington **K Glass™** Range  
Pilkington **energikare™** Range



### Fire Protection:

Pilkington **Pyrostop®**  
Pilkington **Pyrodur®**  
Pilkington **Pyrodur®** Plus  
Pilkington **Pyroclear®**  
Pilkington **Pyroshield™** 2 Safety Clear



### Noise Control:

Pilkington **Optiphon™**



### Safety/Security:

Pilkington **Optilam™** Range



### Self-Cleaning:

Pilkington **Activ™** Range  
Pilkington **Activ Suncool™**



### Decoration:

Pilkington Texture Glass  
Pilkington **Optifloat™** Opal  
Pilkington Oriel Collection  
Pilkington **Optimirror™** Range



### Glass Systems:

Pilkington **Profilit™**



### Health Applications:

Pilkington **SaniTise™**



### Special Applications:

Pilkington **Optiwhite™**  
Pilkington **Galleria™**  
Pilkington **OptiView™**  
Pilkington **MirroView™**  
Pilkington **Mirropane™**  
Pilkington **Mirropane™** Chrome  
NSG **TEC™** Technical Applications  
Pilkington **AviSafe™**  
Pilkington **OptiShower™**



## Solar Control

In winter, the fact that glass allows the sun's heat as well as light into a building can be beneficial; but in summer months, without solar control it can become uncomfortably hot.

Solar control glass helps provide a more comfortable environment and can help to reduce a building's capital outlay, running costs and carbon emissions throughout the year, by reducing or eliminating the requirement for air conditioning.

Solar control glass regulates solar radiation by managing reflectance, transmittance and absorptance.

### How glass can provide solar control

Solar control can be achieved in a number of ways, including body-tinted glass, coated glass and laminated glass with tinted interlayers.

### Specifying solar control glass

Given today's increased use of glass in architecture, it is imperative to consider the comfort of a building's occupants. In hot climates, solar control glass can be used to minimise solar heat gain and help control glare; while in temperate regions, it can be used to balance solar gain with heat loss and achieve high levels of natural light.

Solar control glass can be specified for any situation where excessive solar heat gain is likely to be an issue, from large conservatories to glass walkways and building façades to atria. The Pilkington range of solar control glass offers performance options to suit almost every need, with each product available in toughenable or laminated form.

## Pilkington Suncool™ Range

A range of superior solar control products with a wide range of visible light transmittance, reduced solar transmittance and excellent low-emissivity (low-e), all in one product. With its extensive range, Pilkington **Suncool™** is the ideal choice for providing maximum light transmission and thermal comfort for occupants all year round.

Pilkington **Suncool™** products are available in annealed, toughenable as well as safety and acoustic laminated forms. It's also available on Pilkington **Optiwhite™** – a true low-iron substrate to increase light transmission.

Pilkington **Suncool™** is always used as part of an Insulating Glass Unit (IGU). A range of 'colours' including clear, neutral, and silver are available, as well as Pilkington **Activ Suncool™**; a range of self-cleaning glass combined with solar control performance.

### Pilkington Suncool™ Benefits

- Reduces solar heat gain
- Offers excellent low-e for high thermal insulation
- A flexible range of solar control options
- Choice of high to low light transmittance
- Available on both Pilkington **Optifloat™** Clear substrate and true low-iron Pilkington **Optiwhite™**

For self-cleaning glass with solar control options, go to the self-cleaning glass section.

Hox Haus, Royal Holloway  
University of London







## Other solar control options

### Pilkington Suncool™ One Pro T

Pilkington **Suncool™** One 60/40 Pro T and Pilkington **Suncool™** One 30/21 Pro T are off-line coated, toughenable, mid-range solar control products. They combine excellent low-e properties with medium solar control performance. They are very versatile and can be used in both commercial and residential applications such as schools, building façades, bi-folding doors and other large glazed areas.

### Pilkington Optifloat™ Tint

A range of low-to-medium performance, body-tinted glass manufactured using the standard float glass process. Solar control level and colour densities vary with thickness.

Available in Bronze, Grey, Green, and Pilkington **Arctic Blue™**.

Slimming World Headquarters, Derbyshire



St James's  
Place,  
Cirencester

For the full range of solar control products visit [www.pilkington.co.uk/solarcontrol](http://www.pilkington.co.uk/solarcontrol)



## Thermal Insulation

With increasing environmental awareness, more emphasis is now being placed on ways to save energy in any domestic or commercial building, and glass can play an important role.

Thermal insulation can help to reduce heat loss to save energy and help maintain a comfortable environment. It reduces cold spots and draughts near windows, improving comfort as well as internal condensation and helps to lower heating costs.

### Ways to improve thermal insulation

For any glazing, there are a number of ways its thermal performance can be improved, including:

- Incorporation of a low-e glass into the IGU
- Incorporation of a gas of lower thermal conductivity (e.g. argon) in the airspace between the panes of glass
- Increasing the width of the airspace to an optimum for the type of glass eg. 16 mm for Argon
- Triple glazing
- Vacuum Insulating Glazing

### Pilkington Low-emissivity Glass (low-e)

We have two ranges of low-e glass; Pilkington **Optitherm™** and Pilkington **K Glass™**, both offer a number of common benefits:

#### Pilkington **Optitherm™** S1 Plus

Pilkington **Optitherm™** S1 Plus offers ultra low-emissivity and achieves a  $U_g$ -value (centre pane) of only 1.0 W/m<sup>2</sup>K when incorporated in a double-glazed IGU.

Pilkington **Optitherm™** S1 Plus combines superior light transmittance with a highly neutral colour. It is the ultimate in thermal insulation and should be specified for any situation where excessive heat loss is a concern.

#### Pilkington **Optitherm™** S1 Plus Benefits

- Excellent thermal insulation –  $U_g$  value as low as 1.0 W/m<sup>2</sup>K – in IGU form
- High light transmittance
- Can be combined with other Pilkington products to provide multiple benefits
- A single stock product, it can be used in annealed, laminated and toughened applications

### Pilkington **K Glass™** Range

Pilkington **K Glass™** S is an off-line coated product that offers excellent thermal insulation and passive solar gain to help windows optimise their Window Energy Rating (WER).

#### The full range also includes the following on-line coated products:

- Pilkington **K Glass™** A; can help windows to achieve a WER band A (dependant on frame type)
- Pilkington **K Glass™**; the original on-line coated glass

#### Pilkington **K Glass™** Benefits

- The UK's leading low-e glass range
- Easy to handle and process to all relevant European and British Standards
- Good transmitter of solar radiant heat
- Can help windows achieve excellent Window Energy Ratings (WER), dependant on frame type
- Can be combined with other Pilkington products to provide multiple benefits



122 Waterloo Street, Glasgow





## Pilkington **energiKare™**

Pilkington **energiKare™** is an IGU typically used in residential sectors. Designed to improve the energy efficiency of homes it incorporates a glass from the Pilkington **K Glass™** range or Pilkington **Optitherm™** S1 Plus with Pilkington **Optiwhite™**, which allows more heat in from the sun (solar gain) and helps to reduce heat escaping from the building.

### The full range includes the following:

- Pilkington **energiKare™** Advantage, a new concept for the ultimate in thermal efficiency, it combines Pilkington **K Glass™** on Surface 4\* of an IGU with Pilkington **Optitherm™** S1 Plus on Surface 2\*\* to offer an outstanding  $U_g$ -value of only 0.9 W/m<sup>2</sup>K. Put simply, you get triple performance with only two panes of glass!
- Pilkington **energiKare™** Triple; high performance triple-glazed units to optimise both  $U_g$  and g-values to maximise energy efficiency

\* the exterior surface of the inside pane

\*\* the interior surface of the outside pane





## Fire-Resistant Glass

A range of fire-resistant glass offering varying levels of protection, which is measured in terms of integrity (the time the glass remains intact in a fire) and insulation (the amount the glass will limit the temperature rise on the non-fire side). It should be noted that fire-resistant glass should always be specified as part of a complete glazing system and installation carried out by specialists in order to ensure it achieves its expected fire performance.

### Pilkington Pyrostop®

The Pilkington **Pyrostop®** Range is a clear, laminated, fully insulating fire-protection and impact-resistant glass. It offers the highest levels of fire protection (integrity and insulation), whilst maximising the available levels of natural light and visibility. Depending on the thickness, it provides impact protection up to Class 1 of BS EN 12600. A variety of products are available for both internal and external applications.

#### Pilkington **Pyrostop®** Benefits

- Clear, multi-laminated glass, retaining integrity and insulating against heat transfer from fire
- Turns opaque in a fire
- Restricts flames and hot gases
- Up to 180 minutes insulation and integrity in suitable glazing systems
- Impact safety performance up to Class 1(B)1 BS EN 12600
- Thicknesses from 14 mm to 60 mm for various levels of protection
- Tried and successfully tested in a wide range of applications, and covered by third party certification schemes
- Available for butt jointed screen applications up to 120 minutes insulation and integrity
- Can be used in roof and floor applications where insulation and integrity is required
- Provides high levels of noise reduction
- Available directly from Pilkington UK and through our nationwide network of stockists

### Pilkington Pyrodur® and Pilkington Pyrodur® Plus

These products use laminated intumescent layers to combine integrity and can provide insulation for an initial classification time in a clear glass. In a fire, the clear interlayer foams to provide an opaque barrier, thus reducing fear and panic during evacuation.

#### Pilkington **Pyrodur®** Benefits

- Restricts flames and hot gases
- Offers 30 and 60 minutes integrity and can provide insulation to an initial classification time, available in 7 mm & 10 mm products for internal use and for external applications 11 mm & 13 mm
- Low levels of transmitted radiant heat
- Up to Class 1(B)1 BS EN 12600
- Grades available for internal or external applications
- BS EN 356 classification within the product range
- Turns opaque in a fire

#### Pilkington **Pyrodur® Plus** Benefits

- Restricts flames and hot gases
- Nominal 7 mm thickness
- 30 minutes integrity, with an insulation classification for 15 minutes
- Low levels of transmitted radiant heat
- Class 2(B)2 BS EN 12600
- Specially designed for internal fire doors and partitions in timber
- Turns opaque in a fire







1 Aylesbury Street, London

## Pilkington Pyroclear® Range

Pilkington **Pyroclear**® is an advanced toughened fire-resistant glass for use as a basic integrity-only barrier. It is based on a new technology development built on an in-depth understanding of the behaviour of glass in fire.

### The range includes the following:

- Pilkington **Pyroclear**®; an advanced toughened fire-resistant glass for use as a basic integrity-only barrier
- Pilkington **Pyroclear**® Line; enables Pilkington **Pyroclear**® to be specified as a butt jointed system. Ideally suited for internal glass partitions providing 30 or 60 minutes integrity
- Pilkington **Pyroclear**® Plus; can be combined into an IGU or into a monolithic laminated glass to achieve an EW60 performance for internal, external screens, external façades and inclined applications. Resulting in a reduced heat radiation for up to 60 minutes and in some configurations a 15-minute insulation value can be achieved.

### Pilkington **Pyroclear**® Benefits

- An integrity-only product for 30 and 60 minutes, (E30 and E60) to BS EN 13501-2
- Offers superior visual quality due to special processing, superior quality toughening and process control
- Large pane size capability in metal systems (1.97 m × 4 m)
- Tested with a variety of glazing seals including a specialist foam tape option for use in timber doors and screens
- Allows large pane butt-jointed systems to be specified for 30 and 60-minute internal applications

## Pilkington Pyroshield™ 2 Safety Clear

A clear monolithic wired glass that provides integrity classification for fire protection.

An integral wire mesh effectively holds any broken sections together in the case of thermal fracture caused by the extreme heat of a fire, allowing the product to maintain its integrity performance.

## Contact

To find out more, e-mail [enquiries@pilkington.com](mailto:enquiries@pilkington.com)

Alternatively follow the link below for contact details of our Pilkington **Pyrostop**® or Pilkington **Pyrodur**® specialists in the UK and Ireland.

For the full range of fire products visit [www.pilkington.co.uk/fire](http://www.pilkington.co.uk/fire)



## Noise Control

With an increase in city living and more focus on noise-related illnesses in the workplace and at home, noise insulation is an important topic. Sound insulation is no longer a question of being a luxury; it is an essential consideration when specifying glazing.

Pilkington **Optiphon™**, is an enhanced quality acoustic laminated glass incorporating a special PVB (PolyVinyl Butyral) interlayer.

### Pilkington **Optiphon™** Benefits

- Suitable for internal and external applications
- Provides a range of noise control levels
- Special PVB interlayer for enhanced sound insulation performance
- A thinner and lighter glass for the equivalent acoustic performance
- All products achieve a minimum impact classification to Class 1(B)1 BS EN 12600 and can also be designed to meet the security glazing standard classifications for manual attack BS EN 356



Helsinki University, Finland

For the full range of noise control products visit [www.pilkington.co.uk/noisecontrol](http://www.pilkington.co.uk/noisecontrol)





## Safety and Security

Safety and Security provides impact or impact and penetration resistance to protect people from accidental injury, deliberate attack and damage from criminal activity.

Pilkington Toughened Safety Glass is subjected to a heating and cooling process, which creates high compressive surface stresses to make it up to five times stronger than ordinary annealed float glass of the same thickness.

Pilkington **Optilam**<sup>™</sup> offers optimum protection for people and property. For safety, security or noise control, it remains intact and in place after accidental impact, reducing the possibility of injury or restricting access after deliberate impact. Pilkington **Optilam**<sup>™</sup> is produced by combining two or more sheets of glass with PVB interlayers. By varying the number of layers and thickness of the glass, increased levels of security can be obtained.



Ureddplassen, Bodo, Norway

### Pilkington Toughened Safety Glass Benefits

- Up to five times stronger than annealed glass of the same thickness
- Breaks into small pieces to reduce risk of serious injury
- Up to Class 1(C)1 to BS EN 12600
- Can be heat-soaked to reduce risk of spontaneous breakage
- Eliminates risk of thermal fracture

### Pilkington **Optilam**<sup>™</sup> Benefits

- Remains in position on impact, thus reducing the risk of serious injury
- Resists attack for longer as it remains bonded to the interlayer
- Suitable in applications from domestic conservatories to large commercial buildings
- Achieves up to Class 1(B)1 to BS EN 12600
- Range of products to meet BS EN 356, the specification for anti-bandit glazing

© Foster and Partners, London



The Great Court at The British Museum, London



## Self-Cleaning Glass

A significant step change in the glass industry was made with the development of Pilkington **Activ™**, the first self-cleaning glass to use a microscopic coating with a unique dual-action. Firstly, it breaks down any 'organic' dirt deposits, such as the organic content of bird droppings and tree sap, and secondly, rainwater 'sheets' down the glass to wash the loosened dirt away. With a choice of solar control properties the Pilkington **Activ™** range is the perfect solution for large glazed areas, creating an environment that can be used all year round.

Pilkington **Activ™** is the first glass to be independently tested for self-cleaning performance to BS EN 1096-5 by the Fraunhofer Institute for Surface Engineering & Thin Films IST. As the coating is applied during manufacture, the coating lasts as long as the glass itself. Pilkington **Activ™** meets the durability requirements for a Class A (i.e. surface 1) coated glass in accordance with BS EN 1096-2.

### The product range consists of:

- Pilkington **Activ™** Clear: Self-cleaning glass
- Pilkington **Activ™** Bronze: Self-cleaning glass with solar control properties on a bronze substrate
- Pilkington **Activ™** Blue: Self-cleaning glass with solar control properties and a subtle blue appearance
- Pilkington **Activ SunShade™** Neutral: Self-cleaning glass with good solar control properties
- Pilkington **Activ SunShade™** Blue: Self-cleaning glass with excellent solar control properties and a stronger blue appearance
- Pilkington **Activ Suncool™**: A range of superior performance solar control and self-cleaning products for commercial applications

### Pilkington **Activ™** Range Benefits

- Breaks down and loosens organic dirt
- Reduces cleaning and maintenance costs, giving windows a better appearance for longer
- Unlike secondary spray coatings, Pilkington **Activ™** will not be worn away or rubbed off and lasts the lifetime of the glass
- Available with different solar control options, ideal for use in residential and commercial applications
- Pilkington **Activ™** needs only a small amount of UV radiation to activate the coating and remain 'charged' working on overcast days and even during the night!
- High light transmission



Image courtesy of David Salisbury

For the full range of self-cleaning products visit [www.pilkington.co.uk/activ](http://www.pilkington.co.uk/activ)





Image courtesy of David Salisbury







## Decoration

Our decorative glass is very versatile; it allows total freedom in design and can be customised to fulfill various requirements. By incorporating decorative glass, you can add privacy or meet any other aesthetic or practical needs.

### Pilkington Texture Glass

Offers an extensive choice of contemporary and traditional designs and finishes, with five levels of obscuration for privacy. Available as either toughened or laminated for additional safety or security.

### Pilkington Optifloat™ Opal

A modern, smooth matt appearance with a durable surface that offers high light transmission, excellent privacy and easy handling. Suitable for internal and external applications, it creates an attractive finish for a wide range of requirements.

### Pilkington Oriel Collection

An exciting range of stunning high-end decorative etched glass designs offering excellent light transmission in combination with various levels of privacy. Each of the original eight designs offer a modern opaque appearance.



Pilkington Texture Glass – Reeded™

### Pilkington Optimirror™ Range

Our comprehensive silver-based mirror range offers high performance in light reflection with a variety of safety and aesthetic options that are environmentally friendly, copper-free and virtually lead-free.

#### The product range consists of:

- Pilkington **Optimirror™**: a mirror on a Pilkington **Optifloat™** Clear substrate
- Pilkington **Optimirror™** OW: a mirror on a low-iron Pilkington **Optiwhite™** substrate
- Pilkington **Optimirror™** Grey: a mirror on a grey tinted substrate
- Pilkington **Optimirror™** Bronze: a mirror on a bronze tinted substrate
- Pilkington **Optimirror™** Protect: a mirror with the addition of a protective safety film backing
- Pilkington **Optimirror™** Protect OW: a mirror on a low-iron Pilkington **Optiwhite™** substrate with the addition of a protective safety film backing



Pilkington Oriel Collection – Linear™

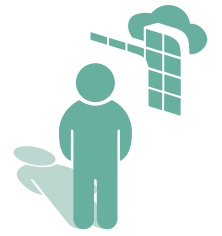




### Pilkington **Optimirror™** Range Benefits

- High light reflection of up to 94% in 4 mm thickness
- Environmentally-friendly manufacturing process
- Excellent resistance to natural atmospheric corrosion and cleaning products
- Complies with European standard BS EN 1036, the European standard for quality and durability of mirrors
- Pilkington **Optimirror™** Protect incorporates a special safety film for added impact protection and performance

For the full range of decoration products visit [www.pilkington.co.uk/decoration](http://www.pilkington.co.uk/decoration)



# Glazing Systems

## Pilkington **Profilit**™

The Pilkington **Profilit**™ glazing system is a simple yet effective concept that allows high light diffusion, good light transmission and sound insulation whilst maintaining privacy. It is a highly durable system in which translucent cast glass channels (U-shaped) are fitted into a metal frame, offering exciting design possibilities for internal or external use.

### Pilkington **Profilit**™ Benefits

- High light diffusion for privacy
- Large curtain-wall lengths available
- Attractive, cost-effective solution for internal and external applications
- Allows the construction of curved glass structures
- Bespoke design possibilities

Royal Air Force Museum, Hendon

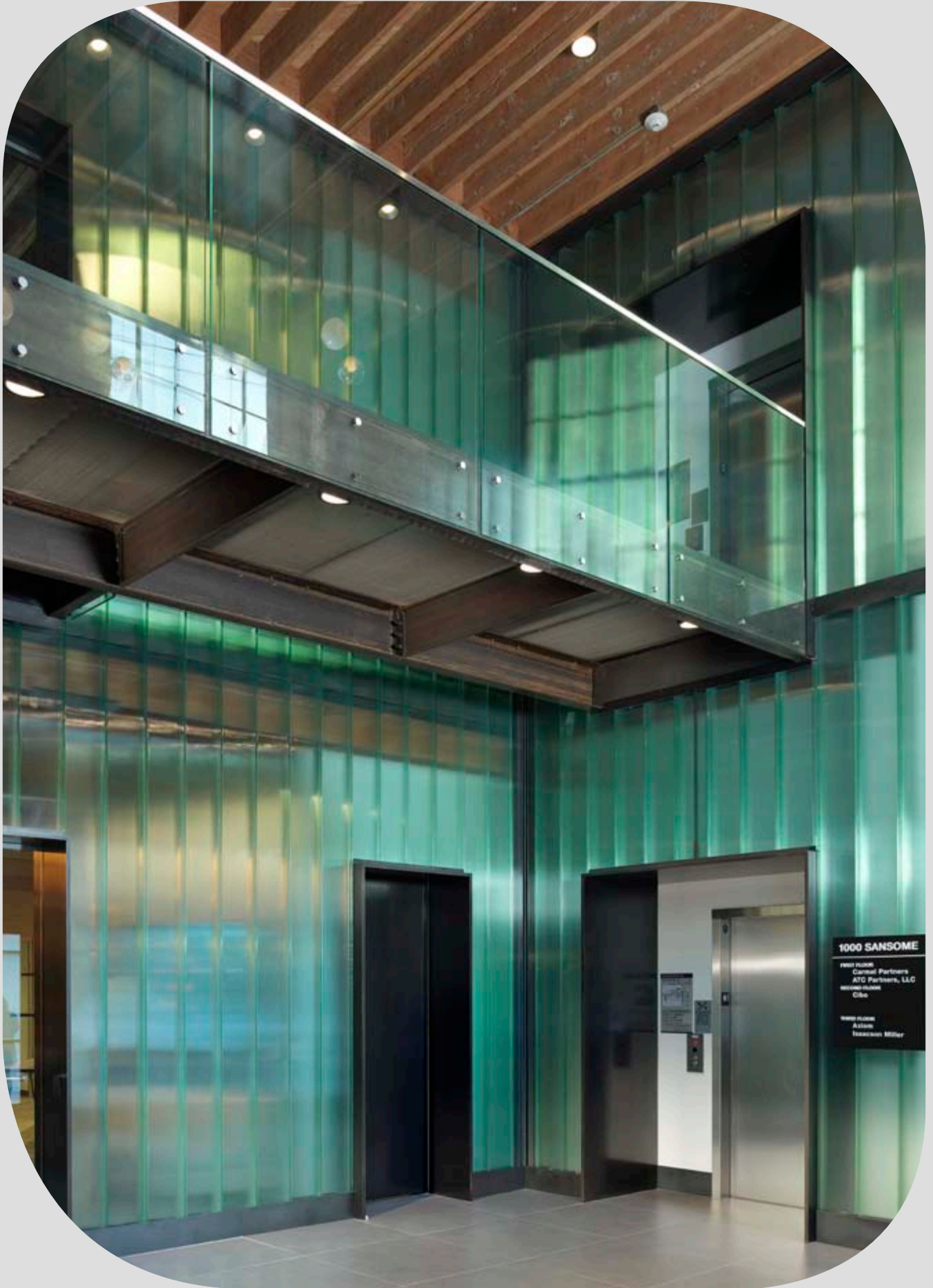


Queens Library at Glen Oaks, USA



Museum in Royal Castle, Warsaw, Poland





1000 Sansome, San Francisco, USA

For further information on UK & Distributors visit [www.pilkington.co.uk/proflit](http://www.pilkington.co.uk/proflit)



## Health Applications

As the world changes, health and safety are at the forefront of everyone's mind.

Our antimicrobial glass technology provides solutions for shared spaces and everywhere germs are a concern such as:

- Commercial and public buildings including office, retail, education, healthcare, leisure and hospitality environments
- Public transport such as school buses, trains, shuttle buses, ferries and cruise liners
- Exterior shared spaces such as bus stop shelters, where many different people are touching the glass throughout the day

### Pilkington SaniTise™

Pilkington **SaniTise™**, a world-first in glazing. It is an on-line coated glass with a photocatalytic coating, that provides antimicrobial properties. Tested by leading Universities it helps protect against enveloped viruses, reducing the risk of microbial transmission from any shared/frequently touched surfaces that have access to UV radiation.



#### How it works

The glass uses a durable on-line coating deposited directly onto the glass surface during its manufacturing process.

The Pilkington **SaniTise™** antimicrobial coating is activated when exposed to UV radiation from natural daylight or artificial UV irradiation devices and works in 2 stages:

- **Stage 1** – The coating reacts with water vapour within the air, in a photocatalytic process that produces reactive oxygen species
- **Stage 2** – These species support the breakdown of organic species and help to provide antimicrobial properties and activity against enveloped viruses on the glass surface



## Pilkington **SaniTise™** Benefits

- Suitable for a variety of glazing applications
- Pilkington **SaniTise™** glass provides antimicrobial properties when exposed to UV radiation
- Helps protect against enveloped viruses
- Pilkington **SaniTise™** is activated by natural daylight and retains photocatalytic activity for up to 2 hours in the dark. The coating can also be activated by artificial UV radiation
- Pilkington **SaniTise™** can double the effectiveness of UV disinfection processes on the glass surface
- Highly resistant to corrosion, physical force and chemical damage
- The glass can be toughened, laminated, bent and processed into Insulating Glass Units (IGU) using standard processes. The coating is typically on the interior (room facing) surface of the IGU



For further information visit  
[www.pilkington.co.uk/...](http://www.pilkington.co.uk/...)



## Special Applications

### Pilkington **Optiwhite**™

The use of glass in architecture and design is becoming more and more prevalent, and Pilkington **Optiwhite**™ is at the very forefront of making it possible.

Pilkington **Optiwhite**™ is a true low-iron, extra clear float glass with very high light transmission making it an ideal choice for a wide range of applications. It is practically colourless, and the green cast inherent in other glass is not present. It is therefore ideal for use where glass edges are visible.

#### Pilkington **Optiwhite**™ Benefits

- High light transmission for outstanding visual clarity
- Purity of colour
- Suitable for use in a wide range of applications such as furniture and display glass

### Pilkington **Galleria**™

Pilkington **Galleria**™ picture framing glass diffuses light across its surface so that instead of a harsh, sharp reflection, the reflected image is reduced to a soft sheen. Framed as close to the picture as possible, Pilkington **Galleria**™ will enhance the visibility of any framed print, photograph or watercolour.

Cantina Antinori, Tuscany, Italy







The Presidents House,  
Philadelphia, USA

## Pilkington **OptiView™**

The Pilkington **OptiView™** Range comprises anti-reflective on-line coated products. They reduce light reflectance and allow more light to pass through when compared to clear float glass.

### The product range consists of:

- Pilkington **OptiView™**: a single sheet of glass with a low reflective coating on one surface
- Pilkington **OptiView™ Protect**: a laminated glass with low reflective coatings on surfaces #1 and #4 (both outer surfaces of the laminated glass)

## Pilkington **OptiView™** Benefits

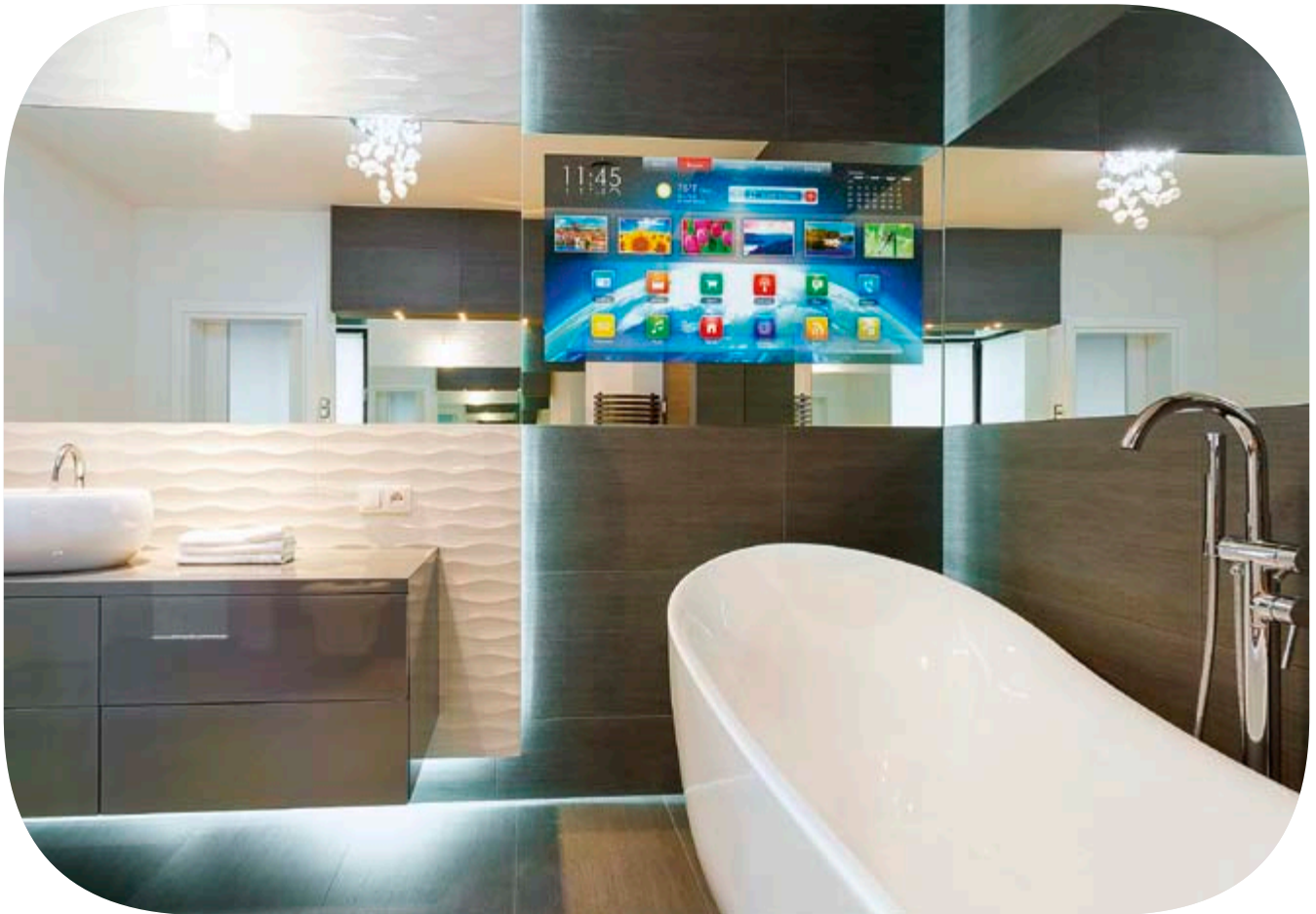
- Interior and exterior light reflection considerably reduced
- Provides an unobscured and virtually reflection-free view
- Highly durable on-line coating
- Neutral colour
- Laminated version blocks over 99% of UV transmittance and helps to reduce fading
- Suitable for a variety of applications such as digital signage, retail shop fronts, display cases and car showrooms





© Pino & Nicola Dell'Aquila





## Pilkington MirroView™

Pilkington **MirroView™** is ideal for concealing digital displays and video screens for commercial and residential applications. When the screen is turned 'off' Pilkington **MirroView™** maintains a mirrored appearance, which conceals the screen. When the screen is turned 'on' the picture on the video screen shows through.

Pilkington **MirroView™** is very durable and can be easily handled, transported and processed, including toughening and laminating. Due to the durability of the on-line coating, it does not degrade over time, which gives the product a virtually unlimited shelf-life.

Pilkington **MirroView™** 50/50 offers the same qualities as the original product, yet it is designed for use in applications with high ambient light. Available in large stock sizes which can conceal one or multiple displays.

## Pilkington Mirropane™

Pilkington **Mirropane™** is an on-line coated glass developed for use as a one-way mirror where clear vision is required and specific lighting conditions can be achieved. It offers an effective means of providing undetected surveillance and high-quality one-way vision to achieve complete privacy. In order to maintain privacy in the observing area, the ratio of illumination levels between public and private side, or observed and observing side, must be at least 8:1.



## Pilkington Mirropane™ Chrome

Pilkington **Mirropane™** Chrome is a special off-line coated mirror, which is resistant to atmospheric corrosion. A versatile product that can be toughened, bent and laminated.

Pilkington **Mirropane™** Chrome can be used in a variety of interior, exterior and decorative applications such as:

- Bathrooms/wet rooms/shower screens
- Kitchen splashbacks
- Internal partitions
- Leisure areas: swimming pools, changing areas, wet areas and gyms
- Technical applications such as commercial refrigeration
- External/outdoor areas where corrosion resistance and impact safety are important for example:
  - Urban landscaping
  - Used as a feature within garden designs to reflect light and colour
  - Small gardens to create an illusion of space



Park Hotel Imperial, Italy

The Pilkington **Mirropane™** Chrome family also includes Pilkington **Mirropane™** Chrome Plus; a more opaque version when compared with the original Pilkington **Mirropane™** Chrome and is ideally suited for applications where no light transmittance is required.





## NSG TEC™ Technical Applications

A range of low-e glass with an on-line electric conductive coating. NSG TEC™ offers a wide variety of thermal and heated glass performance properties, whilst increasing light transmittance and optimising electrical conductivity. Our products are specifically tuned to meet the requirements of a wide range of applications.



© Zytronic, Electroglaz



© Cohda, Power Tap®

## Pilkington **AviSafe**™

Every year millions of birds are killed or injured globally flying into glass. Our R&D experts have innovated a special solution called Pilkington **AviSafe**™.

Pilkington **AviSafe**™ is an innovative glass solution, developed to greatly reduce the number of bird collisions. The unique patterned UV enhanced coating disrupts the reflection on the glass, so the bird can see a barrier.

The reflection of vegetation, the sky, and other buildings are deceptive and can result in bird collisions. Birds in flight are unable to use visual signals such as window frames to distinguish the location of the glass, as a human would. Unlike humans, birds can see light in the ultraviolet spectrum.

Therefore, the coating on Pilkington **AviSafe**™ makes the glass more visible to birds while remaining aesthetically appealing on the exterior surface. From the inside however, it's barely visible to the human eye, unlike other solutions. When installed in an Insulating Glass Unit (IGU), the coating is located on surface #1, the external face of the outer pane. This enables the product to be as effective as possible at disrupting the reflection so the bird can only see a barrier.



### Pilkington **AviSafe**™ Benefits

- Could potentially save millions of birds each year
- Passes the WIN test, a measure of bird impacts from reflection
- Maintains high transparency
- Aesthetically appealing externally
- Internally it's barely visible to the human eye, unlike other solutions
- Available in the following sizes:
  - In Europe sizes up to 6000 mm × 3210 mm
  - Outside Europe up to 5100 mm × 3210 mm
- Highly durable surface #1 coating
- Can be combined with many other Pilkington glass products for additional benefits, for example thermal insulation, solar control, safety & security, and noise control



### Glass – A Triple Threat to Birds

- Reflections of vegetation or landscape attract birds to collide with glass
- Green habitat inside buildings such as glass atriums, with clear glass can lead to collisions
- Glass corners or narrow passages can allow birds to see through to habitat on the other side of a building, encouraging them to try to fly through

For the full range of special application products visit [www.pilkington.co.uk/specialapps](http://www.pilkington.co.uk/specialapps)



## Pilkington OptiShower™

Pilkington **OptiShower™** is a durable, on-line coated clear float glass designed to prevent surface corrosion when exposed to water, moisture, and humid environments. Over time, glass exposed to water, heat and humidity can corrode, reducing its natural transparency and aesthetics, making Pilkington **OptiShower™** the ideal glass solution for use in humid environments.

The product is available in extra clear version Pilkington **OptiShower™** OW (coating on low-iron extra clear Pilkington **Optiwhite™** substrate). For greater privacy, the product is also available in an acid-etched version, Pilkington **OptiShower™** Opal.

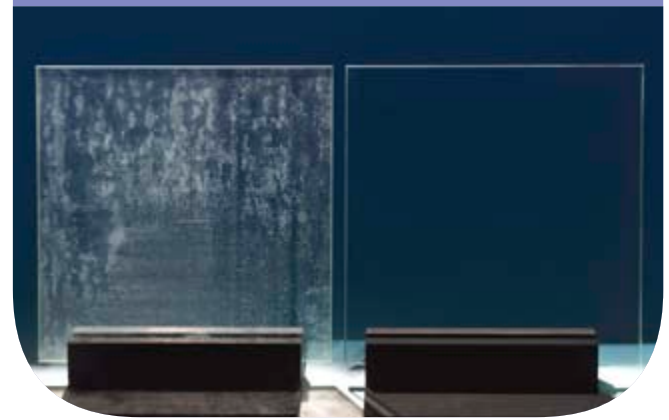
### Pilkington OptiShower™ Benefits

- Durable, on-line coated clear float glass that provides a protective barrier to reduce corrosion and facilitate ease of cleaning the glass surface.
- Thanks to its high abrasion resistance, the durable pyrolytic coating does not deteriorate during the lifetime of the shower enclosure and retains its properties over time.
- Easy to process using standard techniques. It can be toughened, curved, laminated and also screen printed on the coated side.
- Suitable for further additional treatments to improve limescale protection and aid cleaning.
- Available in an acid-etched version, Pilkington **OptiShower™** Opal, which offers an elegant design solution for greater privacy.
- Available in extra clear version Pilkington **OptiShower™** OW (coating on low-iron extra clear Pilkington **Optiwhite™** substrate).
- Available in sizes up to 6000 mm × 3210 mm

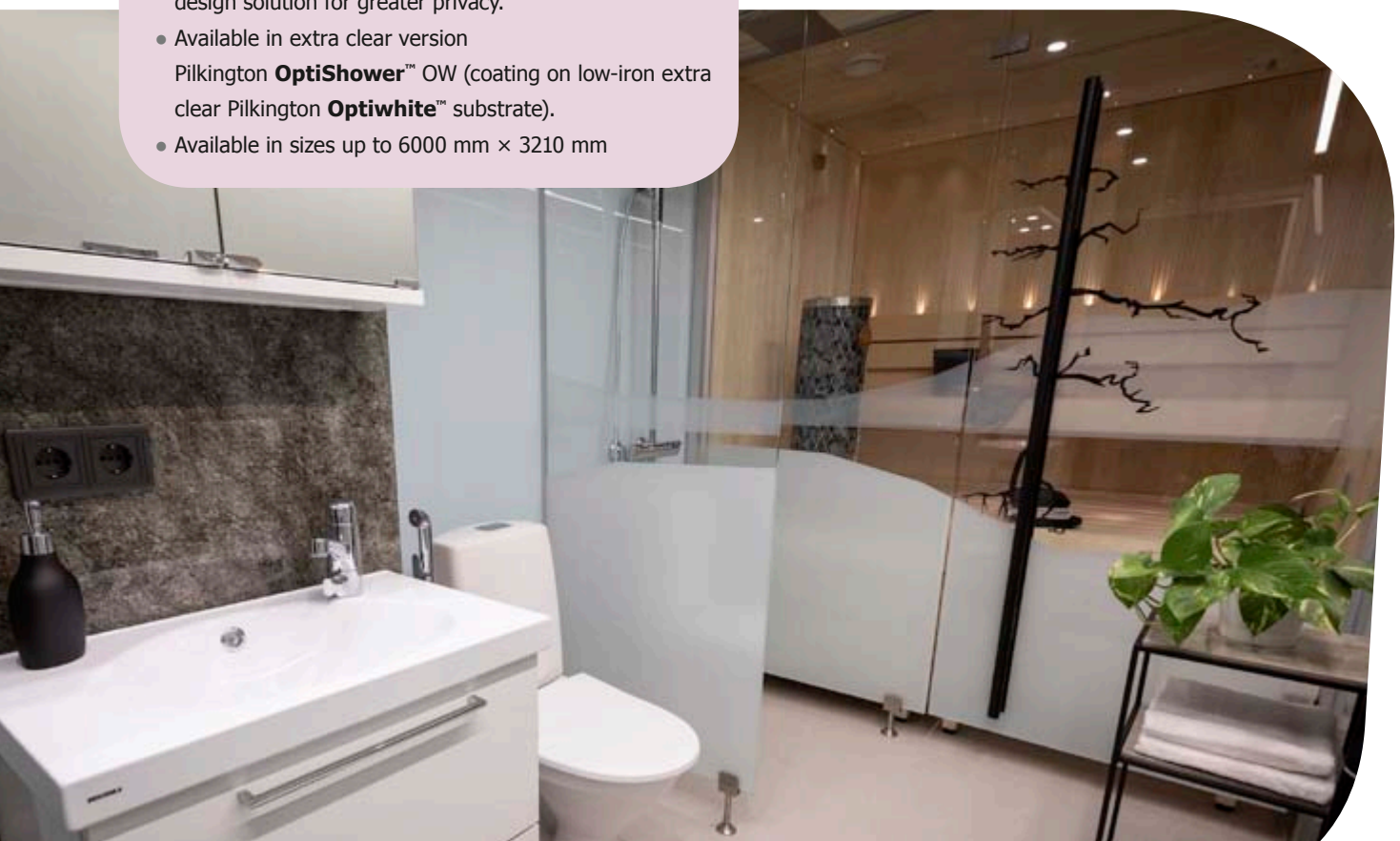
The glass has a wide range of residential and commercial applications, such as shower cubicles, back plates against cooking surfaces in kitchens, sauna glass, and aquariums.

### Comparative analysis

Aging tests at high temperatures and humidity demonstrate that Pilkington **OptiShower™** limits the corrosive process and limescale deposits compared to untreated glass. It meets stringent EN 1096-2 standards, which certifies the products as able to withstand challenging outdoor weather conditions and abrasion.



For further information on all of our products please visit [www.pilkington.co.uk](http://www.pilkington.co.uk)



This publication provides only a general description of the products. Further, more detailed, information may be obtained from your local supplier of Pilkington products. It is the responsibility of the user to ensure that the use of these products is appropriate for any particular application and that such use complies with all relevant legislation, standards, codes of practice and other requirements. To the fullest extent permitted by applicable laws, Nippon Sheet Glass Co. Ltd. and its subsidiary companies disclaim all liability for any error in or omission from this publication and for all consequences of relying on it. Pilkington, "Suncool", "Optifloat", "Optilam", "K Glass", "energiKare", "Optitherm", "Pyroshield", "Optiphon", "Activ", "Optimirror", "Proflit", "Optiwhite", "Pyrodur", "Pyrostop", "Pyroclear", "SaniTise", "MirroView", "OptiView", "Mirropane", "NSG TEC", "Galleria" and "AviSafe" are trademarks owned by Nippon Sheet Glass Co. Ltd, or a subsidiary thereof.



CE marking confirms that a product complies with its relevant harmonised European Norm.

The Declaration of Performance for each product, including declared values, can be found at [www.pilkington.com/CE](http://www.pilkington.com/CE)



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