



Fire-resistant glasses

Pilkington **Pyrostop**™ Fire Resistance Glass

Pilkington **Pyrodur**™ Fire Protection Glass



PILKINGTON

A member of NSG Group

Fire Protection and Aesthetic Design

A Range of Remarkable Fire Resistance and Fire Protection Glasses

Modern functional glazings have opened up a vast realm of creative possibilities for today's architecture. Transparent design from facades and roofs right through to the core of the building is no longer a vision. It is reality.

Where solid roofs, doors and walls block out views and natural light, state-of-the-art fire resistance and fire protection rated glazings can now be used to provide a protected and comfortable environment based on daylighting and clear vision without sacrificing fire resistance or fire protection properties.

Pilkington Pyrostop™ Fire Resistance Glass

Pilkington **Pyrostop™** Fire Resistance Glass was the first in a new category of fire resistance rated glazings to come on to the market in Europe, close to 30 years ago. It is still leading the way and demonstrates an established track record of repeated fire testing, as well as widespread use in a broad range of building types and applications.

Pilkington **Pyrostop™**'s first class performance is based on its structure as a multiple laminate of float glass and a special transparent intumescent interlayer, which is totally compatible and optically homogenous with the glass layers. When exposed to fire, the pane facing the flames fractures but remains in place and the interlayers, one after the other foam up to form an opaque insulating shield that blocks the heat of the blaze. Pilkington **Pyrostop™** also offers the full range of properties traditionally associated with glass: primarily natural lighting and transparency along with options to reduce building heat loss, maximize solar control and to provide decoration, impact safety, security protection and acoustic insulation.

The Pilkington **Pyrostop™** range includes products of 45, 60, 90 and 120 minutes depending on the application. Pilkington **Pyrostop™** must always be used as a part of an approved fire resistance rated framing assembly.

Mary and Leigh Block Museum of Art, Evanston, IL: Pilkington **Pyrostop™** can be combined with other functional glasses to meet specific building requirements.





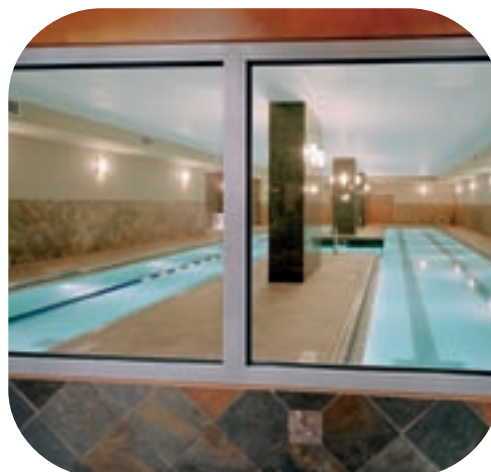
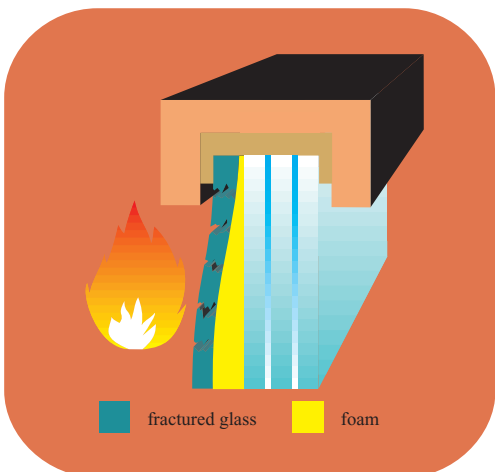
Mary and Leigh Block Museum of Art, Evanston, IL: Partition with doors glazed with Pilkington **Pyrostop™** secures safe escape in case of a fire.

Pilkington Pyrodur™ Fire Protection Glass

Pilkington **Pyrodur™** Fire Protection Glass was specifically designed to meet requirements for 20 minute applications. Its performance is based on the same advanced technology as Pilkington **Pyrostop™**. Pilkington **Pyrodur™** holds back flames, smoke and hot gases. Its great advantage compared to the majority of other glasses in its class is that it also offers a bonus in terms of better thermal protection (90 % of radiant heat). As Pilkington **Pyrostop™** it must always be used as a part of an approved fire protection rated framing assembly.

Pilkington Pyroshield™ and Pilkington Pyroshield™ Plus

Additionally Pilkington offers Pilkington **Pyroshield™** and Pilkington **Pyroshield™ Plus** wired glass products through a number of stockists. Pilkington **Pyroshield™ Plus** is a newly developed wired Fire Protection Glass to meet CPSC Category I Impact Resistance.



– Image left–
Reaction of Pilkington **Pyrostop™** and Pilkington **Pyrodur™** in case of fire.

– Image right–
X Sports, Chicago, IL: Partition glazed with Pilkington **Pyrostop™** protects high traffic area in a sports center.

Pilkington **Pyrostop**™ Fire Resistance Glass

Product Features

- Totally clear, Pilkington **Pyrostop**™ is aesthetically superior to other fire resistance glasses, combining fire resistance with the traditional optical quality and clarity of glass.
- Isolates the fire and protects the non-fire side from the blaze, reducing damage, allowing time for safe escape and providing protected access for firefighters.
- Creates a barrier against heat, smoke, flames and hot gases.
- Stays in place and acts as an insulating fire wall when installed in an appropriate fire resistance rated assembly.
- Protects occupants from fire from either direction.
- Can be framed in fire resistance rated assemblies of wood, steel, L-angle steel, aluminum or gypsum walls.
- Optical quality products in the Pilkington **Pyrostop**™ range at ratings of 60 minutes and above are based on Pilkington **Optiwhite**™ Low Iron Glass to ensure superior light transmission and optical quality of the thicker laminates.
- Established track record of performance proven almost 30 years of use worldwide in a broad range of building types and in single and double glazed applications.
- Designed for interior and exterior applications.
- Ideal for windows, walls, doors, transoms, partitions, facades and even sloped glazing applications.
- Tested and approved, Pilkington **Pyrostop**™ has passed the hose stream test for physical resilience under fire conditions as required by U.S. and Canadian standards.
- Meets CPSC Category II Impact Resistance.
- Meets Level I-III Bullet Resistance as specified in UL 752 (1995).
- Classified by Underwriters Laboratories Inc. (UL).
- Available in the U.S. in thicknesses from 0.71” (19 mm) to 2.20” (62 mm).
- Fabricated in the U.S. for short lead times.
- Comes with a five year warranty.
- Permanently marked to ICC requirements.
- Labeled as prescribed in the IBC 2006 codes.

Pilkington **Pyrostop**™ has established success in a wide variety of applications and buildings around the world:

- Partition walls for interior use
- Fixed glazing for vertical and horizontal interior and exterior applications, including roof and sloped glazing
- Fire doors, sidelight and transom assemblies
- Windows and curtainwalls

John Burroughs High School, Burbank, CA: Partition with double leaf door glazed with Pilkington **Pyrostop**™ secures safe escape in such high traffic buildings.



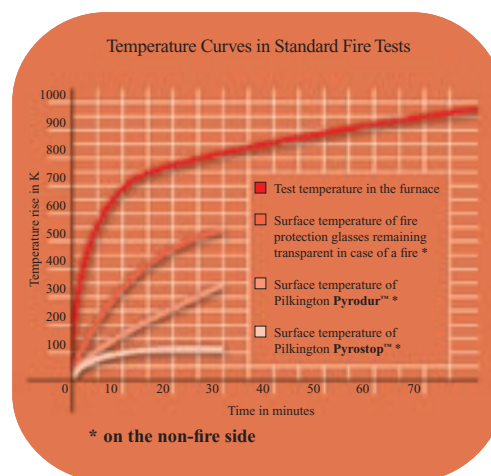
Glass Combinations for Any Glazing Situation

Pilkington **Pyrostop**™ is designed to be combined with the full range of Pilkington glasses as monolithic glazing or in insulating glass units for varied building situations. This allows flexibility of design and aesthetics, and permits optimization of thermal insulation, solar control, acoustic insulation, safety and security properties – all with built-in high performance fire protection.

- Thermal insulation can be maximized in an insulating glass unit that combines Pilkington **Pyrostop**™ with Low-E glass.
- Solar control can be optimized by creating an insulating glass unit using Pilkington **Pyrostop**™ and solar control glass.
- For noise reduction, Pilkington **Pyrostop**™ can be combined in an insulating glass unit with acoustic laminated glass.
- For safety and security, combine Pilkington **Pyrostop**™ with tempered safety glass and laminated safety glass.
Hurricane resistance products available.
- For decoration, Pilkington **Pyrostop**™ can be filmed (for internal use only) or slightly sand-blasted.
- Additionally Pilkington **Pyrostop**™ products of 45 and 60 minutes can be combined with manually operable Venetian blinds included in an insulating glass unit (for internal use only).



John Burroughs High School, Burbank, CA: Partition with a double leaf door glazed with Pilkington **Pyrostop**™.



– Image left – Pilkington **Pyrostop**™ combined with Venetian blinds to block out views.

– Image right – Surface temperatures of Pilkington **Pyrostop**™ and Pilkington **Pyrodur**™ in case of fire.



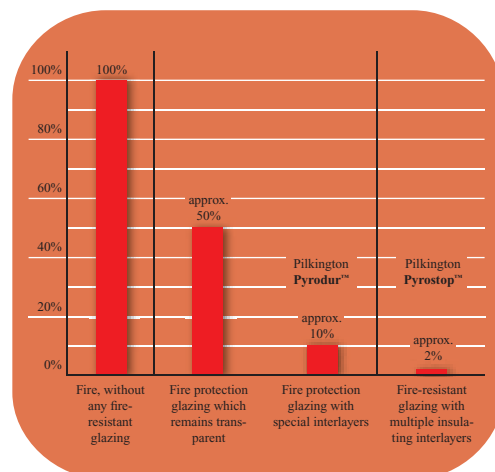
Elementary School, Charlestown, PA: Windows glazed with Pilkington **Pyrodur**™ insulating glass units incorporating glasses for optimization of thermal insulation or solar control.

Pilkington **Pyrodur**™ Fire Protection Glass

Product Features

- Totally clear, Pilkington **Pyrodur**™ is aesthetically superior to other fire protection glasses, combining fire protection with the traditional optical quality and clarity of glass.
- Isolates the fire and protects the non-fire side from the blaze, reducing damage, allowing time for safe escape and providing protection for firefighters.
- Protects against smoke, flames and hot gases.
- Stays in place throughout the rating period when installed in an appropriate door or window assembly.
- Established track record of performance proven over more than 20 years of use worldwide in a broad range of building types and in single glazed applications.
- Designed for interior and exterior applications.
- Ideal for windows and doors.
- Pilkington **Pyrodur**™ resists thermal shock caused by sprinklers.
- Meets CPSC Category I and II Impact Resistance depending on type.
- Classified by Underwriters Laboratories Inc. (UL).
- Available in the U.S. in thicknesses from 0.28” (7 mm) to 0.38” (10 mm).
- Cut locally for short lead times.
- Comes with a five year warranty.
- Labeled as prescribed in the IBC 2006 codes.

Radiant heat transfer after 30 minutes.



Pilkington **Pyrodur**™ can be used in the following applications:

- Windows
- Doors
- Sidelights
- Transoms



– Image left –
L'Anse Creuse High School,
Harrison, MI: Partition with a
double leaf door glazed with
Pilkington **Pyrostop**[™].

– Image right –
Old Castle, Bietigheim, Germany:
Doors for internal applications
could be glazed with Pilkington
Pyrodur[™].

Southdale Library, Edina, MN:
Partition wall glazed with
Pilkington **Pyrostop**[™] protecting
a stair case.

Glass Combinations for Any Glazing Situation

Pilkington **Pyrodur**[™] can be combined with a range of Pilkington glasses in insulating glass units for optimization of thermal insulation and solar control – all with built-in high performance fire protection.

- Thermal insulation can be maximized in an insulating glass unit that combines Pilkington **Pyrodur**[™] with Low-E glass.
- Solar control can be optimized by creating an insulating glass unit using Pilkington **Pyrodur**[™] and solar control glass.



The information contained in this brochure and the Pilkington website is subject to change. The information contained in this and other Pilkington publications and website does not constitute a warranty of merchantability for fitness of any particular purpose.

Actual performance may vary in specific applications.

Pilkington **Pyrostop**[™] and Pilkington **Pyrodur**[™] are available through TGP Technical Glass Products. For further information and glazing recommendations, contact

TGP at 800-426-0279, or fax inquiries to 800-451-9857.

Or visit TGP's website at www.fireglass.com.



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