



# L B OOK

VOL. 8

**TGP** | TECHNICAL GLASS PRODUCTS®

**ALLEGION** 





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# ALWAYS LOOKING AHEAD

Technical Glass Products (TGP), part of the Allegion family of brands, remains at the forefront of innovation, craftsmanship and design; continually introducing groundbreaking ways to meet a broad range of specialty architectural glazing needs. We are your one source for fire-rated and architectural glass and framing systems.

This look book is a showcase of the artistry and technology that goes into all of our products. Page through the collection of real-life applications meant to inspire your imagination. View projects, case studies and stunning photography that communicates the spirit and strength of TGP. It's all to help you do your job better. Take a closer look.

### **FireLite® Family of Fire-Rated Glazing**

FireLite®  
FireLite Plus®  
FireLite® NT  
FireLite® IGU

### **Pilkington Fire-Rated Transparent Wall Panels**

Pilkington Pyrostop®

### **Fireframes® Family of Fire-Rated Framing**

Fireframes® Aluminum Series  
Fireframes® Designer Series  
Fireframes® Heat Barrier Series  
Fireframes TimberLine® Series  
Fireframes ClearView® System

Fireframes® Hardwood Series  
Fireframes® Curtainwall Series  
Fireframes SG Curtainwall® Series  
Fireframes ClearFloor® System





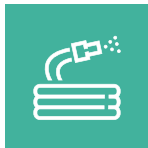
# COMPARING FIRE-RATED GLASS & FRAMING

Looking for a clearer view of how our fire-rated products stack up to one another? Use this helpful chart to compare. Review the icons and descriptions below, then see which of our glass and frames include these corresponding features. For more information, visit [fireglass.com](http://fireglass.com) or contact us at [sales@fireglass.com](mailto:sales@fireglass.com).



## Fire-Rated

Glass, framing and components are heated in a furnace during the fire test to simulate the high temperatures of a building fire. The testing lab assigns the products a fire rating of 20 minutes to 3 hours, depending on how long they remain in the wall with no flaming on the exposed surface of the assembly.



## Hose Stream Tested

Immediately following the fire test, heated glass is subjected to water from a fire hose. The cooling, impact and erosion created by the hose stream tests the integrity of the glass. This test is mandatory for products with fire-ratings over 20 minutes in the U.S. (and in Canada for all fire ratings).



## Positive Pressure

Once the fire reaches equilibrium in the positive pressure zone, smoke, hot gases and flames are forced through any openings in the door or window assembly. Testing to the UL 10C standard more closely simulates real fire conditions.



## Heat Barrier

Blocks radiant and conductive heat transfer from one side of the glass to the other. A required characteristic of glass used as a wall.



## Impact-Rated

Building codes clearly define hazardous locations where impact safety glass is required. Glass with this designation has to be tested to meet impact safety requirements required for areas such as doors, sidelights, and areas close to the floor.



## Stainless Steel (option)

Available with stainless steel frame finish options for increased design flexibility.



## Hurricane-Rated (option)

Meets stringent hurricane requirements with relative Florida Product Approvals.



## Energy Efficient

Designed for use in exterior applications where energy codes require an insulated product, or for interior applications with special needs such as sound reduction.



## Bullet Resistant (option)

The ability of the glass to stop various types of ammunition. Ratings are assigned in levels from 1 to 8, with a Level 8 rating being the highest (able to stop a 7.62 mm rifle lead core full metal copper jacket, military ball).



## Load Bearing

The capacity of an element in a building structure to support a weight in addition to its own.



## UL Classified and Labeled












Classified and labeled by Underwriters Laboratories, Inc.® (UL), an independent product safety certification organization.

## DIGITAL TOOLBOX

Compare up to four fire-rated products at a time. [Go to fireglass.com](http://fireglass.com) and check out the Product Comparison Tool.





											
FireLite®	●	●	●								●
FireLite Plus®	●	●	●		●						●
FireLite® NT	●	●	●		●						●
FireLite® IGU	●	●	●		●			●			●

Pilkington Pyrostop®	●	●	●	●	●		●		●		●
----------------------	---	---	---	---	---	--	---	--	---	--	---

Fireframes® Aluminum Series	●	●	●	●							●
Fireframes® Designer Series	●	●	●			●					●
Fireframes® Heat Barrier Series	●	●	●	●							●
Fireframes TimberLine® Series	●	●	●	●							●
Fireframes ClearView® System	●	●	●	●	●						●
Fireframes® Hardwood Series	●	●	●								●
Fireframes® Curtainwall Series	●	●	●	●		●	●				●
Fireframes SG Curtainwall® Series	●	●	●	●		●					●
Fireframes ClearFloor® System	●	●		●	●					●	●

# FireLite®

Family of Fire-Rated Glazing



**FireLite®**  
Family of Products

## ultraHD TECHNOLOGY

The FireLite family of products feature ultraHD® Technology for superior color, clarity and surface quality and are available in two distinct surface grades.

**Standard Grade** - polished for a surface quality that is comparable to alternative fire-rated ceramics marketed as having a premium finish.

**Premium Grade** - finish ground and polished on both surfaces to provide superior surface quality, improving overall clarity and providing a surface that is unmatched by alternative products.

## FireLite®

**Fire-Rated Glass Ceramic**  
**Fire-Rating: 20-90 Minutes**

FireLite is a 3/16" (5 mm) thick fire-rated glazing material. It is listed for use in non-impact safety-rated locations such as transoms and borrowed lites.



## FireLite Plus®

**Fire-Rated, Impact Safety-Rated Glass Ceramic**  
**Fire-Rating: 20-180 Minutes**

FireLite Plus is a 5/16" (8 mm) thick laminated fire-rated and impact safety-rated glazing material. It is listed for use in doors, sidelites, transoms and borrowed lites.



## FireLite® NT

**Fire-Rated, Impact Safety-Rated Glass Ceramic with Surface-Applied Film**  
**Fire-Rating: 20-180 Minutes**

FireLite NT is a 3/16" (5 mm) thick fire-rated and impact safety-rated glazing material, composed of FireLite and fire-rated, surface-applied film. It is listed for use in doors, sidelites, transoms and borrowed lites.



## FireLite® IGU

**Fire-Rated or Fire/Impact Safety-Rated Insulated Glass Units**  
**Fire-Rating: 20-180 Minutes**

Fire-rated glass ceramic is available in a configuration that will also comply with energy codes. FireLite IGU is composed of FireLite products and tempered or annealed float glass.





<b>Project</b>	William Jones College Preparatory High School
<b>Location</b>	Chicago, IL
<b>Architect</b>	Perkins + Will and The Architects Enterprise, Ltd.
<b>Product</b>	FireLite Plus® fire-rated glass ceramic
<b>Photo Credit</b>	James Steinkamp © Steinkamp Photography

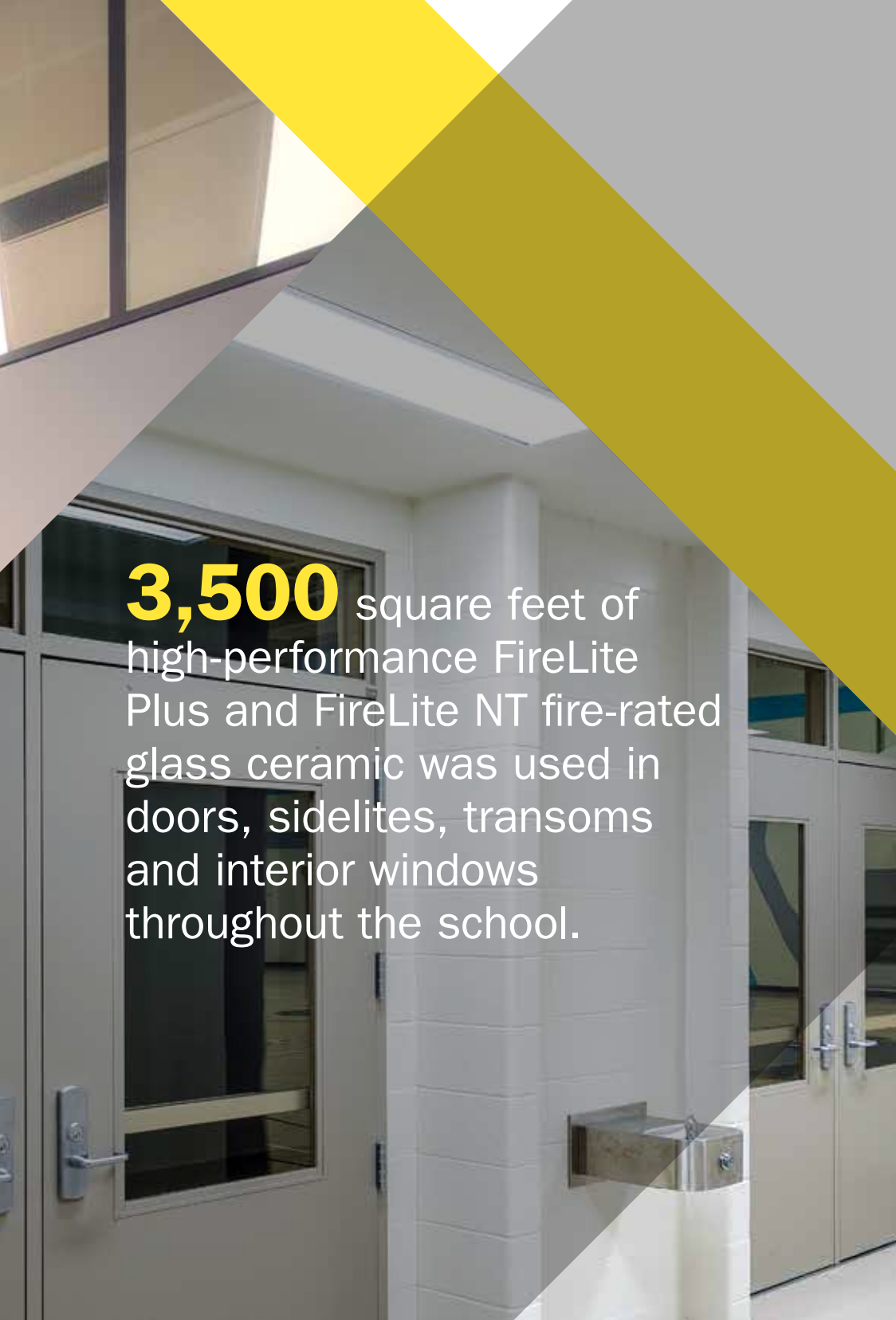




# CASE STUDY

## Brooklin High School

<b>Location</b>	Brooklin, Ontario (Greater Toronto Area)
<b>Architect</b>	Moffet & Duncan Architects, Inc.
<b>Glazier</b>	Aerloc Industries
<b>Product</b>	FireLite Plus® and FireLite® NT fire-rated glass ceramic



**3,500** square feet of high-performance FireLite Plus and FireLite NT fire-rated glass ceramic was used in doors, sidelites, transoms and interior windows throughout the school.

### **Fire-Rated Glass Ceramic Enhances Life Safety and Aesthetics in Toronto Area's Brooklin High School**

**Challenge:**

In the Durham District School Board's (DDSB) new 173,200 square foot (16,090 m<sup>2</sup>) Brooklin High School, the design team incorporated extensive glazing throughout to provide natural light and visibility for students and staff. To satisfy building codes – including the International Building Code (IBC) and National Building Code of Canada (NBC) – it was necessary for glazing in certain applications to provide fire protection.

**Solution:**

To fulfill code requirements for defending against the spread of deadly flames and smoke in case of a fire, Aerloc Industries (Dundas, Ontario) installed 3,500 square feet (325 m<sup>2</sup>) of high-performance FireLite Plus® and FireLite® NT fire-rated glass ceramic in doors, sidelites, transoms and interior windows throughout the school. One captivating use of the glazing is in a second floor lofted space overlooking a common area. With the clarity of ordinary window glass, the 45-minute rated glazing provides essential life safety while helping to create a welcoming school environment. In addition to fire protection, the multi-functional glass ceramic is also impact safety-rated, to help prevent injuries from glass breakage if students run into it – important in a busy school serving 1,125 teenagers in grades 9 through 12.



<b>Project</b>	University Hospitals, Seidman Cancer Center
<b>Location</b>	Cleveland, OH
<b>Architect</b>	Cannon Design
<b>Product</b>	Fireframes® Designer Series steel doors and frames with FireLite Plus® glass ceramic





<b>Project</b>	Volkswagen Assembly Plant
<b>Location</b>	Chattanooga, TN
<b>Architect</b>	SSOE
<b>Product</b>	Fireframes® Curtainwall Series frames with Pilkington Pyrostop® fire-rated glass and Fireframes Designer Series doors with FireLite® IGU insulated glass units



<b>Project</b>	Post Road Elementary School
<b>Location</b>	White Plains, NY
<b>Architect</b>	Kaeyer, Garment & Davidson
<b>Product</b>	FireLite Plus® and FireLite® NT fire-rated glass ceramic



A yellow circular graphic with a dashed white border containing the text '640 students' in bold black font. A dashed white line with a red arrowhead points from the bottom right of the circle towards the text below.

**Fire-rated glass helps keep over 640 Post Road Elementary students safe from the threat of fire each year.**

The design team used clear FireLite Plus® and FireLite® NT fire-rated glass ceramic, to resemble the look of ordinary window glass and visually integrate with Post Road Elementary School's non-fire-rated windows. Utilized in borrowed lites and doors, the glass draws daylight into interior spaces while providing fire protection.





# Pilkington Pyrostop®

## Fire-Rated Transparent Wall Panels



Pilkington Pyrostop®

### Pilkington Pyrostop

**Fire-Rated Transparent Wall Panels**  
**Fire-Rating: 45-120 Minutes**

Pilkington Pyrostop is a fire-rated and impact safety-rated glazing material. Pilkington Pyrostop also blocks heat, protecting people and valuables on the non-fire side of the glass during a fire. It is listed for use in doors, sidelites, transoms, borrowed lites and wall applications with a fire rating of up to 120 minutes.

Where needed, Pilkington Pyrostop can double as security glazing, offering various levels of bullet resistance and/or attack performance.



#### HANDLES THE STRESS



*Fire-rated for up to 120 minutes with required hose stream test*

#### MAKES AN IMPACT



*Meets ANSI Z97.1 and CPSC 16CFR1201 (Cat. I and II)*

#### CALLS THE SHOTS



*Available with Level III bullet resistance rating*



<b>Project</b>	Roux Center for the Environment, Bowdoin College
<b>Location</b>	Brunswick, ME
<b>Architect</b>	Cambridge Seven Associates (C7A)
<b>Product</b>	Fireframes SG Curtainwall® Series
<b>Photo Credit</b>	© Jeff Goldberg /Esto





<b>Project</b>	Middletown High School
<b>Location</b>	Middletown, NY
<b>Architect</b>	KG+D Architects
<b>Product</b>	Fireframes ClearView® System with Pilkington Pyrostop® fire-rated transparent wall panels and Fireframes® Heat Barrier Series perimeter frame, Fireframes Designer Series & Fireframes Heat Barrier Series doors
<b>Photo Credit</b>	© David Lamb Photography





<b>Project</b>	University Center at the New School
<b>Location</b>	New York, NY
<b>Architect</b>	Skidmore, Owings & Merrill LLP
<b>Product</b>	Fireframes® Heat Barrier Series steel framing with Pilkington Pyrostop® fire-rated transparent wall panels
<b>Photo Credit</b>	© OTTO

A photograph of a modern glass building facade, partially obscured by a large red diagonal overlay. The building features a curved glass wall with multiple stories and a prominent glass elevator shaft. The red overlay is a solid, vibrant color that cuts across the image from the top left to the bottom right. The text is centered within the red area.

# MATCHED SYSTEMS

BRIDGING THE GAP BETWEEN FIRE-RATED  
& NON-RATED SYSTEMS



For many years, fire-rated window, door and curtain wall frames were bulky wrap-around affairs. Although functional in blocking fire and keeping people safe, they lacked the sleek aesthetic commonly available with non-fire-rated frames. The problem for many architects was these limitations rendered it impossible to achieve a visual cohesiveness between fire-rated frames and other framing systems within a building.

Technical Glass Products has been a pioneer in offering solutions that sideline this design challenge. By pairing clear, fire-rated glazing products with slender, steel fire-rated frames in a multitude of versatile profiles, it is possible to create and maintain visual harmony between fire-rated and non-fire-rated assemblies.

From diverse projects such as an expansion of the Art Institute of Chicago to New York City's Fulton Center transit hub, TGP has worked with building teams to develop fire-rated framing systems that visually complement the most challenging aesthetic applications.

New ways to retain fire-rated glazing push design options further. From the smooth, frame-free aesthetic of silicone glazed curtain wall systems to fire-rated glass floor systems, architects can typically find a fire-rated glass and framing solution that supports the building's design goals.

See more images and details for the Fulton Transit Center project on pages 32-33.

**Non-Rated**  
SteelBuilt Curtainwall®  
Systems



**Fire-Rated**  
Fireframes®  
Curtainwall Series





# Fireframes®

Family of Fire-Rated Framing



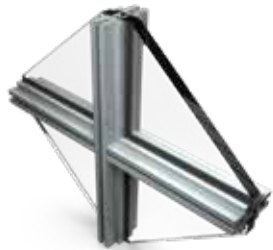
*fireframes*

## Fireframes® Aluminum Series

Fire-Resistive-Rated Frames

Fire-Rating: 45/60/120 Minutes

Fireframes Aluminum Series combined with Pilkington Pyrostop® fire-rated transparent wall panels provides a barrier to radiant and conductive heat transfer, allowing unlimited areas of glazing in fire separations. This patented system offers narrow aluminum profiles unmatched by alternative systems. The system may incorporate Fireframes Designer Series or Fireframes Heat Barrier Series doors by TGP.



## Fireframes® Designer Series

Fire-Protective-Rated Doors and Frames

Fire-Rating: 20/45/60/90 Minutes

Fireframes Designer Series provides a sleek, modern alternative to traditional hollow metal steel frames. Using narrow steel profiles, the Fireframes Designer Series system can incorporate a wide range of fire-rated glazing materials with glass sizes that surpass traditional systems.



## Fireframes® Heat Barrier Series

Fire-Resistive-Rated Doors and Frames

Fire-Rating: 60/90/120 Minutes

Fireframes Heat Barrier Series doors and frames combined with Pilkington Pyrostop® fire-rated transparent wall panels provide a barrier to radiant and conductive heat transfer. The system allows full-lite fire doors for aesthetic or security reasons.





## Fireframes TimberLine® Series

**Fire-Resistive-Rated Frames**

**Fire-Rating: 45/60/120 Minutes**

Fireframes TimberLine Series features a high strength steel sub-frame with a real wood veneered metal cover cap. The result is a barrier to radiant and conductive heat transfer with tall spans and a real wood finish. Combined with Pilkington Pyrostop fire-rated transparent wall panels, this patented system allows for unlimited areas of glazing in fire separations. The system can incorporate Fireframes Designer Series doors, Fireframes Heat Barrier Series doors or wood doors by others.



## Fireframes ClearView® System

**Fire-Resistive-Rated Frames**

**Fire-Rating: 60/120 Minutes**

Fireframes ClearView System is comprised of butt-glazed Pilkington Pyrostop® low-iron fire-rated and impact safety-rated transparent wall panels with a heat resistive perimeter frame. TGP's butt-glazed joints feature nearly colorless transitions between adjoining pieces of the low-iron glass, eliminating the need for colored internal glass unit spacers or vertical frame mullions. The perimeter of each butt-glazed elevation can be held in place by a variety of narrow profile Fireframes fire-rated frames. Contact TGP for more information.



## Fireframes® Hardwood Series

**Fire-Protective-Rated Doors and Frames**

**Fire-Rating: 20/45 Minutes**

Nothing compares to the warmth and beauty of genuine wood. Thanks to the Fireframes Hardwood Series, you can incorporate wood doors and framing into your fire-rated openings. Designed for maximum durability and performance, the Fireframes Hardwood Series offers an attractive alternative to traditional hollow metal frames with large glass sizes.



# Fireframes®

Family of Fire-Rated Framing

fireframes

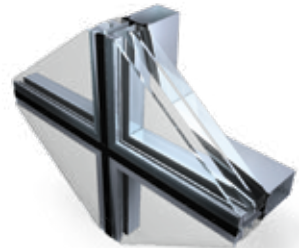


## Fireframes® Curtainwall Series

**Fire-Resistive-Rated Frames**

**Fire-Rating: 45/60/120 Minutes**

Fireframes Curtainwall Series allows for large, multi-story expanses of glass in interior and exterior applications. This system may incorporate Fireframes Designer Series or Fireframes Heat Barrier Series doors by TGP. Select profiles in this system are available in brushed stainless steel for an additional design option.

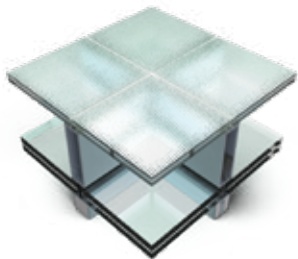


## Fireframes SG Curtainwall® Series

**Silicone Glazed, Fire-Resistive-Rated Frames**

**Fire-Rating: 45/60/120 Minutes**

Create large, fire-rated glazed walls with the smooth, monolithic appearance of a structural silicone glazed system. The patented fire-rated toggle retention system allows for rapid installation of fire-rated Pilkington Pyrostop® transparent wall panels while being completely hidden once installed. These features, combined with narrow steel frames allow high strength, clean sightlines and is available for both interior and exterior applications.



## Fireframes ClearFloor® System

**Fire-Resistive-Rated, Safety-Rated Glass Floor System**

**Fire-Rating: 60/120 Minutes**

This advanced glass floor system featuring Pilkington Pyrostop® fire-rated transparent wall panels allows light to penetrate deep into a buildings' interior. The system features a durable, non-slip walking surface and is approved for loads up to 150 psf. Fireframes ClearFloor System is available for interior applications.







<b>Project</b>	Christopher Newport University Student Success Center
<b>Location</b>	Newport News, VA
<b>Architect</b>	Glavé & Holmes Architecture
<b>Product</b>	Fireframes ClearFloor® fire-rated glass floor system with Pilkington Pyrostop® fire-rated transparent wall panels





# CASE STUDY

## Johnson & Wales University Center for Physician Assistant Studies

**Location**

Providence, RI

**Architect**

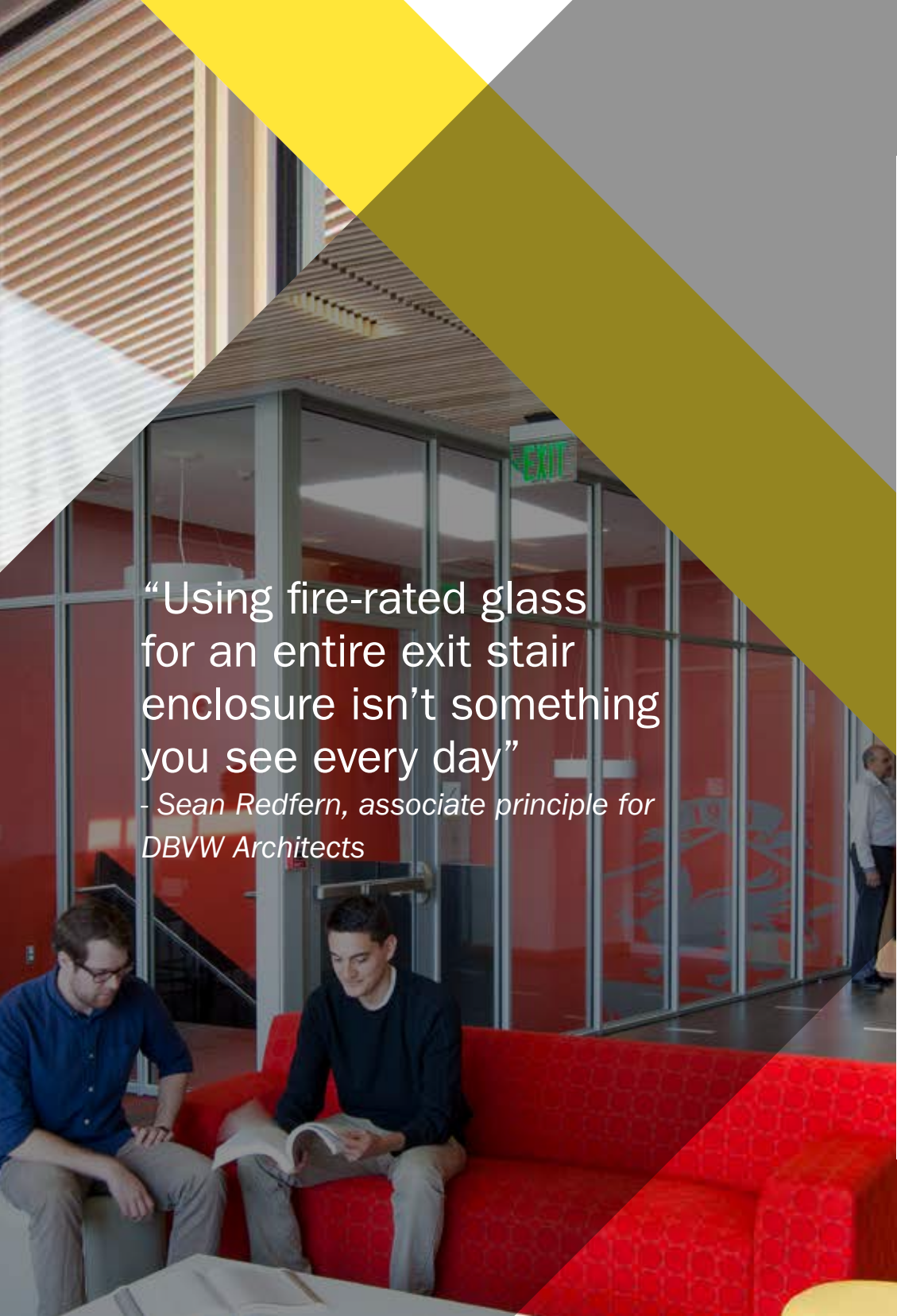
DBVW Architects

**Product**

Fireframes® Aluminum Series frames and Fireframes Designer Series doors with Pilkington Pyrostop® fire-rated transparent wall panels

**Photo Credit**

Heidi Gumula-DBVW Architects

A photograph of a modern building interior. In the foreground, two men are sitting on a bright red, textured sofa. The man on the left is wearing a blue shirt and glasses, looking down at a book or document. The man on the right is wearing a dark sweater and is also looking at a book or document. Behind them is a large glass wall with a grid pattern, reflecting the interior. The ceiling is made of wooden slats. The overall atmosphere is bright and modern.

“Using fire-rated glass for an entire exit stair enclosure isn’t something you see every day”

- Sean Redfern, associate principle for DBVW Architects

## Fire-Rated Framing System Makes the Grade at Johnson & Wales University Center

### Challenge:

A key component of DBVW Architects’ plans to turn a historic jewelry factory into a high-tech facility for Johnson & Wales University physician assistant students was creating an open, vibrant atmosphere. To achieve the desired transparency, the firm opened up the building’s exterior walls along the southeast street, and developed a new, porous entry with floor-to-ceiling glass. The first floor of the entry features a lounge and lobby, with a prominent stairway leading up to the second floor. For the lobby and stairs to successfully work together to create a clear circulation path for people coming into the building, the firm faced the challenge of finding a fire-rated glazing system that satisfied building codes while also supporting transparency to the entry.

### Solution:

DBVW Architects found the solution by combining Fireframes® Aluminum Series fire-rated frames with Pilkington Pyrostop® transparent fire-rated glazing, both supplied by TGP. The precision engineering of TGP’s Fireframes Aluminum Series creates narrow profiles and crisp sightlines, providing an attractive, modern alternative to traditional hollow metal frames for fire-rated applications. The flexibility to use custom aluminum face caps allowed the design team to further match the building’s clean, open aesthetic. DBVW Architects selected custom, H-shaped aluminum cover caps, creating a framing system with sleek, linear profiles.





<b>Project</b>	Audi Dealership of Birmingham
<b>Location</b>	Birmingham, MI
<b>Architect</b>	HED Design
<b>Product</b>	Fireframes® Curtainwall Series and Pilkington Pyrostop® fire-rated transparent wall panels





<b>Project</b>	Tulsa Central Library
<b>Location</b>	Tulsa, OK
<b>Architect</b>	Meyer, Scherer & Rockcastle
<b>Product</b>	Fireframes® Aluminum Series with Pilkington Pyrostop® fire-rated transparent wall panels and Fireframes® Designer Series doors





<b>Project</b>	Fulton Center
<b>Location</b>	New York, NY
<b>Architect</b>	Grimshaw Architects
<b>Product</b>	Fireframes® Curtainwall Series with Pilkington Pyrostop® fire-rated transparent wall panels



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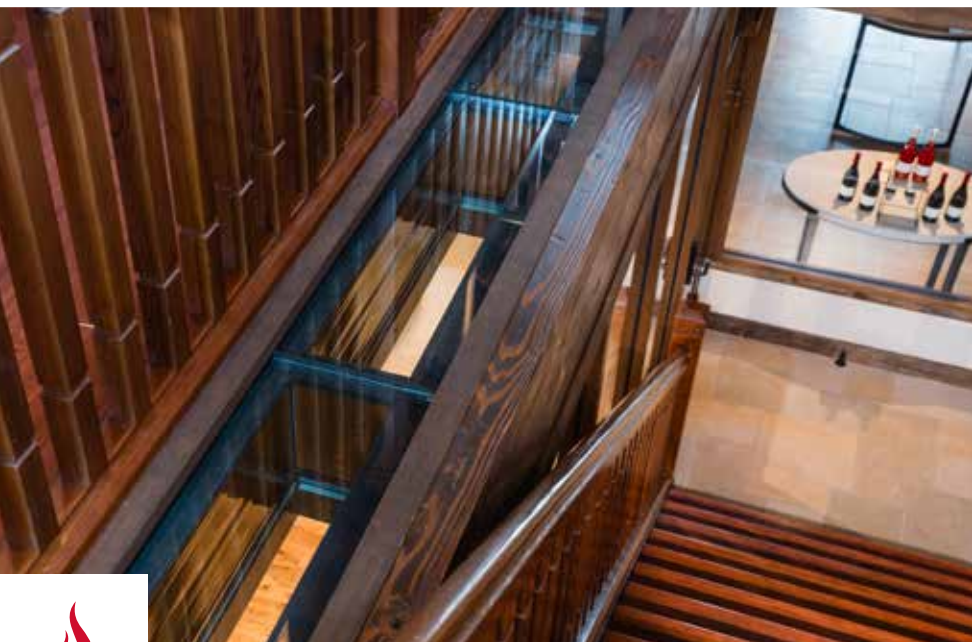
110'

**TGP's products help transmit sunlight 110 ft down into Fulton Center's lowest levels.**

To create matching curtain walls in the Fulton Center, TGP used steel framing members shaped in an extrusion-like process that allows for a wide range of narrow mullion profiles. Because the same manufacturing method can be applied to fire-rated frames using steel back members, it was possible for the fire-rated curtain wall system to match the slender frame profiles of the non-rated system.







<b>Project</b>	La Crema Estate at Saralee's Vineyard
<b>Location</b>	Windsor, CA
<b>Architect</b>	Brayton Hughes Design Studios
<b>Product</b>	Fireframes TimberLine® Series with Pilkington Pyrostop® fire-rated transparent wall panels and Fireframes® Heat Barrier Series door; Fireframes ClearFloor® System









<b>Project</b>	Northwestern University Engineering Life Sciences
<b>Location</b>	Evanston, IL
<b>Architect</b>	Flad Architects
<b>Product</b>	Fireframes ClearFloor® fire-rated glass floor system with Pilkington Pyrostop® fire-rated transparent wall panels and Fireframes® Hardwood Series frames





**Project** Grant Thornton Tower

**Location** Chicago, IL

**Architect** Stantec Architecture

**Product** Fireframes® Curtainwall Series with Pilkington Pyrostop® fire-rated transparent wall panels

**Photo Credit** Chris Barrett

### **Pilkington Profilit™ Family of Channel Glass Systems**

Pilkington Profilit™

Pilkington Profilit™ OW (Low-Iron)

Pilkington Profilit™ Hurricane

Pilkington Profilit™ Insulation

Pilkington Profilit™ with TGP ProColor®

### **SteelBuilt Family of Products**

SteelBuilt Curtainwall® Systems

SteelBuilt Curtainwall Infinity™ System

SteelBuilt Window & Door® Systems

### **Cyrstallized Glass Ceramic Panels**

Neopariés®

Neopariés® LT





# Pilkington Profilit®

## Channel Glass System



Pilkington Profilit™

### Pilkington Profilit™

Think outside of the window frame: Pilkington Profilit allows you to incorporate soaring walls of glass for dramatic effect and maximum natural daylight. Perfect for commercial and institutional applications, the Pilkington Profilit channel glass system consists of unique, self-supporting cast-glass channels and an extruded aluminum perimeter frame. The glass can be installed vertically or horizontally, in lengths up to 23 feet. It is available in a variety of beautiful colors and textures with varying translucency (from deep waves to no visible texture and metallic choices), allowing for the passage of diffuse natural light without the loss of privacy. Optional functional coatings can be applied to improve U-values and solar heat gain. For greater energy efficiency, Lumira® aerogel insulation can be added.

TGP ProColor® high performance color coating is also available to enhance your design. It does not require tempering and is bonded to the glass with remarkably high adhesion strength. The durable color coating is available in a wide array of opaque or metallic colors with varying translucency.

### Pilkington Profilit™ Hurricane

Pilkington Profilit Hurricane is the only tested and approved hurricane impact channel glazing system in North America, approved by Miami-Dade County and the state of Florida. It can be used in applications between ground level and 30 feet above ground level with large missile impact resistant requirements. It is dual glazed for exterior applications.

### Pilkington Profilit™ OW (Low-Iron)

Pilkington Profilit OW consists of an extruded perimeter frame and self-supporting low-iron oxide cast glass channels. The lower iron content allows for higher light and solar transmission and a less green appearance than is typical of standard glass. Pilkington Profilit OW is available in a variety of textures and coatings, and can be sandblasted for added privacy.

### DIGITAL TOOLBOX

Explore the options available when building with Pilkington Profilit. **Go to [tgpamerica.com](http://tgpamerica.com)** and check out the Pilkington Profilit Design Options tool.







<b>Project</b>	Temple Beth Shalom
<b>Location</b>	Santa Ana, CA
<b>Architect</b>	Berliner Architects
<b>Product</b>	Pilkington Profilit™ translucent channel glass system




# CASE STUDY

University of San Francisco,  
John Lo Schiavo, S.J. Center  
for Science and Innovation

<b>Location</b>	San Francisco, CA
<b>Architect</b>	NBBJ
<b>Product</b>	Pilkington Profilit™ translucent channel glass system with Lumira® aerogel insulation
<b>Photo Credit</b>	NBBJ





Pilkington Profilit helps improve safety on campus by allowing borrowed light to spill out from the building on to a frequently traversed area.

## Channel Glass Illuminates Science at the University of San Francisco

### Challenge:

For NBBJ architects, the inspiration for The University of San Francisco's new John Lo Schiavo Center for Science and Innovation (CSI) came from the faculty's desire to bring passion to the study of science within the academic curriculum. "A key driver behind the CSI was to put science on display and create buzz within the student body," says Lilian Asperin-Clyman, principal at NBBJ. In implementing the design vision, one challenge was to create an attention-grabbing, garden-level façade that embodied this mission while satisfying acoustic and thermal performance demands.

### Solution:

NBBJ found their solution with Pilkington Profilit™ channel glass. The linear, "U"-shaped, cast-glass channels are self-supporting and mounted in an extruded metal perimeter frame. In the case of CSI, they were installed vertically, forming tight radii as they animate and follow the curve of the building's adjacent walkway. A second layer of channel glass mirrors a portion of the exterior channel glass façade to create a glazed corridor. It improves safety on campus by allowing borrowed light to spill out from the building on to a frequently traversed area. In select locations, the use of Lumira® aerogel in the channels helps enhance energy performance and reduce sound transmission.

"By using unique, structurally sound and high-performing materials like Pilkington Profilit channel glass, we were able to experiment with geometry, layering and lighting to create spaces that not only attract students, but also satisfy the facility's highest functional requirements," concludes Asperin-Clyman.



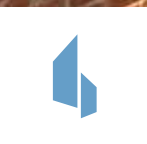
<b>Project</b>	NewYork-Presbyterian Morgan Stanley Adult Emergency Department
<b>Location</b>	New York, NY
<b>Architect</b>	Davis Brody Bond Architects and Planners
<b>Product</b>	Pilkington Profilit™ translucent channel glass system





<b>Project</b>	Building 115
<b>Location</b>	Seattle, WA
<b>Architect</b>	Graham Baba Architects
<b>Product</b>	Pilkington Profilit™ with Lumira® aerogel insulation





<b>Project</b>	1000 Sansome
<b>Location</b>	San Francisco, CA
<b>Architect</b>	Lundberg Design & MacCracken Architects
<b>Product</b>	Pilkington Profilit™ translucent channel glass system
<b>Photo Credit</b>	Rien Van Rijthoven



1910

**Channel glass helped modernize a brick and timber warehouse originally built in 1910.**

An expansive translucent channel glass system helped give the lobby of the historic industrial 1000 Sansome building a facelift. The Pilkington Profilit channel glass system modernizes and brightens the space, evenly dispersing light deep into the interior while still maintaining privacy.





<b>Project</b>	Hollywood Casino
<b>Location</b>	Columbus, OH
<b>Architect</b>	Marnell
<b>Product</b>	Pilkington Profilit™ Low-Iron, Wave channel glass with TGP ProColor®





<b>Project</b>	Parc on Powell
<b>Location</b>	Emeryville, CA
<b>Architect</b>	Kava Massih Architects
<b>Product</b>	Pilkington Profilit™ translucent channel glass system
<b>Photo Credit</b>	© 2015 Tim Griffith

# SteelBuilt

Family of Products



STEELBUILT



## SteelBuilt Curtainwall® Systems

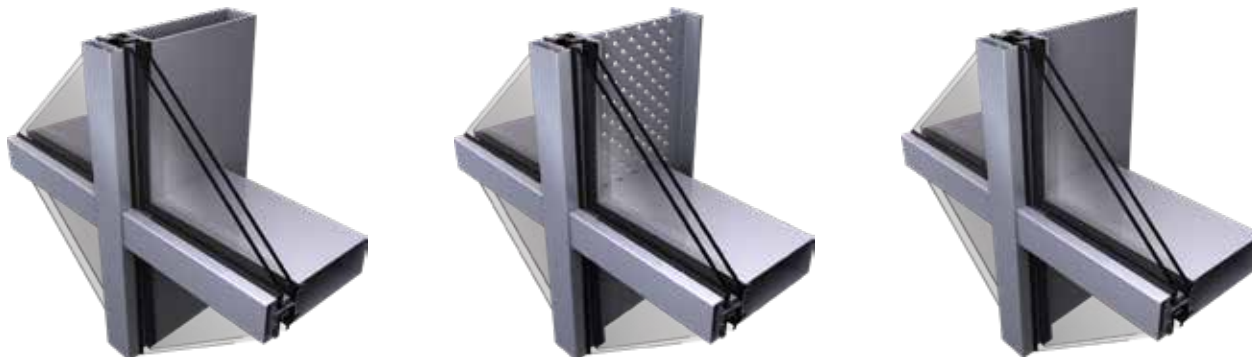
**SS** Envision expansive window openings, with more glass and less frame. Imagine a curtain wall system that only requires frame profiles one-third the size of traditional aluminum systems, while also providing outstanding thermal performance.

Now that dream is a reality. SteelBuilt Curtainwall Systems give you all the advantages of steel: exceptional strength, increased glass sizes, smaller frame profiles and significantly larger free spans. Utilized throughout Europe for many years, these systems are now tested to North American standards and available for tremendous new design opportunities.



## SteelBuilt Curtainwall Infinity™ System

**SS** SteelBuilt Curtainwall Infinity System can use as a back mullion almost any type of custom steel member, such as stainless steel, box, I-beams, T-shapes and custom profiles. The system offers all the advantages of steel, while its design flexibility allows curtain walls to be incorporated into a nearly limitless range of building types, designs, and performance requirements. SteelBuilt Curtainwall Infinity helps inspire a whole new world of creativity.







## SteelBuilt Curtainwall® SSG Systems

**SS** SteelBuilt Curtainwall SSG is a steel-based, structural silicone glazed system that achieves a smooth, monolithic exterior aesthetic. Structural silicone glazing seals the building from the elements while transferring wind load to the supporting structure and promotes sound and heat insulation by eliminating unnecessary metal and thermal breaks. Steel back members are narrow and allow large areas of glass and greater free spans than are possible with aluminum curtain wall systems. Steel back members can be rectangular, tubular, I-, U-, T-shaped or custom designed to meet your project requirements.



## SteelBuilt Window & Door® Systems

**SS** SteelBuilt Window & Door Systems incorporate precise European engineering, providing a sleek, modern alternative to traditional storefront and hollow metal frames. Using narrow steel profiles, SteelBuilt Window & Door Systems exceed traditional frame systems in aesthetics and performance. These frames are available in brushed stainless steel or powder coated at the factory to match your desired color scheme.



## DIGITAL TOOLBOX

Explore the options available when building with SteelBuilt. **Go to [tgpamerica.com](https://www.tgpamerica.com)** and check out the SteelBuilt Design Options interactive tool.





**Project** | Benteler Steel/Tube Administration Building

**Location** | Shreveport, LA

**Architect** | SSOE in conjunction with Middough and Siemens

**Product** | SteelBuilt Curtainwall Infinity™ System





<b>Project</b>	Dallas City Performance Center
<b>Location</b>	Dallas, TX
<b>Architect</b>	Skidmore, Owings + Merrill LLP and Corgan Associates
<b>Product</b>	SteelBuilt Curtainwall Infinity™ System and SteelBuilt Window & Door® Systems






# CASE STUDY

## Butte County Courthouse

<b>Location</b>	Chico, CA
<b>Architect</b>	TSK Architects
<b>Glazier</b>	McCumber's Glass
<b>Product</b>	SteelBuilt Curtainwall Infinity™ System
<b>Photo Credit</b>	© Bruce Damonte. All rights reserved.







“TGP’s steel curtain wall system made it possible for us to meet the project’s unique geometrical needs without compromising on appearance.”

- Windom Kimsey, design principal and president of TSK Architects

## Steel Curtain Wall System a Landmark for Justice in Butte County

### Challenge:

In Chico, California, a new 67,433 square-foot courthouse rises out of the ground like the picturesque buttes in the area’s surrounding foothills. While its expansive curtain wall and cupola are central to the landmark building, developing the distinctive entry first required overcoming several complexities. “Our challenge wasn’t just getting the geometry right,” explains Windom Kimsey, design principal and president of TSK Architects. “It was also to create a welcoming space that would accommodate people waiting for courthouse services. Heat is a factor in Chico, and we wanted people to be able to wait inside in a comfortable, light-filled setting.”

### Solution:

To successfully overcome these challenges, TSK Architects worked with TGP to design a curtain wall and cupola that was adaptable enough to follow the butte’s tall, geometrical shape, yet also strong enough to support large free spans of glazing to flood the entry with daylight. The solution was TGP’s SteelBuilt Curtainwall Infinity™ System. It is approximately three times stronger than traditional aluminum curtain wall assemblies and can use as a back mullion nearly any type of structural member. In this instance, the system uses custom, laser welded steel back mullions that were 3 1/8 inches wide by 12 inches deep. Due to steel’s strength, the slender system is able to support large lites of glass to ensure courthouse visitors receive ample daylight while waiting inside.



<b>Project</b>	NewYork-Presbyterian Morgan Stanley Adult Emergency Department
<b>Location</b>	New York, NY
<b>Architect</b>	Davis Brody Bond Architects and Planners
<b>Product</b>	SteelBuilt Curtainwall Infinity™ SSG System; Pilkington Profilit™ translucent channel glass system



**80,000**  
patients

**This emergency room services approximately 80,000 patients per year.**

The design team selected SteelBuilt Curtainwall Infinity™ SSG System to provide an open and light-filled exterior vestibule for patients and visitors entering the ER. In addition, a curved Pilkington Profilit™ channel glass wall obscures vision but allows light to pass through in the waiting room.







<b>Project</b>	Southbridge Middle/High School
<b>Location</b>	Southbridge, MA
<b>Architect</b>	Tappé Associates
<b>Product</b>	SteelBuilt Curtainwall Infinity™ System





<b>Project</b>	Trumbull High School Auditorium
<b>Location</b>	Trumbull, CT
<b>Architect</b>	JCJ Architecture
<b>Product</b>	SteelBuilt Curtainwall Infinity™ SSG System

# Neopariés®

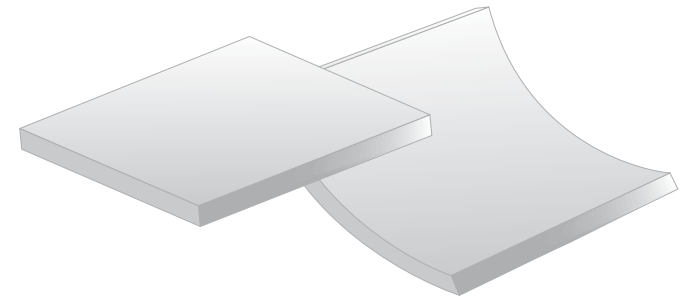
Crystallized Glass Ceramic Panels



neopariés®  
neopariés® LT

## Neopariés®

Neopariés is a technological breakthrough in surfacing materials. The panels are formed from glass that has been crystallized, giving it a unique beauty and unparalleled performance. Compared to natural stone, Neopariés panels are more reflective, more resistant to weather, water and abrasion, and significantly lighter weight for comparable strength. Neopariés can easily be formed into curved panels.



## Neopariés® LT

Neopariés LT panels are thinner than standard Neopariés and have a smooth, uniform appearance. Weather resistance and zero water absorption ensure the material will not be subject to staining, even after years of exposure.

## Colors

The uniform, marble-like appearance features a smooth, shiny surface providing a timeless look. Neopariés is featured in four colors including black, white, light grey and light beige. Neopariés LT is available in white and features an ultra smooth and shiny surface.

Neopariés®



Neopariés® LT







<b>Project</b>	Dallas Love Airport
<b>Location</b>	Dallas, TX
<b>Architect</b>	Corgan Associates
<b>Product</b>	Neopariés® crystallized glass panels






# CASE STUDY

## One Park Place

<b>Location</b>	Kansas City, MO
<b>Architect</b>	Skidmore, Owings + Merrill (original), Black & Veatch (retrofit)
<b>Product</b>	Neopariés® crystallized glass panels







“I periodically have a crew wash as much of the Neopariés as they can without hanging over the side of the building,” said Mike Gunter, facilities manager, in a company project write-up. “The only other maintenance required is the monitoring of the caulking.”

## **Neopariés Preserves Modern Aesthetic of Celebrated One Park Place Building**

### **Challenge:**

In Kansas City, Missouri, One Park Place building, formerly known as the BMA Tower, has been a landmark since Skidmore, Owings & Merrill (SOM) designed it in 1961. In 1985, the building’s original white marble cladding began to warp from the corners, causing several panels to fall from the building.

To preserve the building’s famed Modernist appearance and maintain its dramatic presence in the Kansas City skyline, Black & Veatch, a local engineering, procurement and construction firm was tasked with replacing the dilapidated marble with an aesthetically similar, yet structurally improved cladding material.

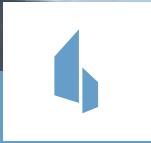
### **Solution:**

The firm selected white Neopariés® crystallized glass ceramic panels from Technical Glass Products (TGP). The panels have a lower thermal expansion rate, meet stricter engineering guidelines and are lighter and stronger than natural stone, making them an ideal cladding material for a building subject to Kansas City’s extreme temperature changes and harsh weather conditions. Aesthetically, the crystallized ceramic panels have a bright, smooth appearance that closely resembles One Park Place’s original marble. Today, after more than 25 years, Neopariés crystallized glass ceramic panels are still keeping the exterior of Kansas City’s landmark One Park Place in top form for city residents.



<b>Project</b>	The Delegation of the Ismaili Imam
<b>Location</b>	Ottawa, Ontario, Canada
<b>Architect</b>	Maki and Associates in association with Moriyama & Teshima Architects
<b>Product</b>	Neopariés® crystallized glass panels





<b>Project</b>	Hoffman Building One
<b>Location</b>	Alexandria, VA
<b>Architect</b>	Noritake Associates
<b>Product</b>	Neopariés® crystallized glass panels

# CONTACT US

Ready to talk about how our innovative products will support your next project? Get in touch with our dedicated, in-house experts who will provide a clear solution.

P 800.426.0279

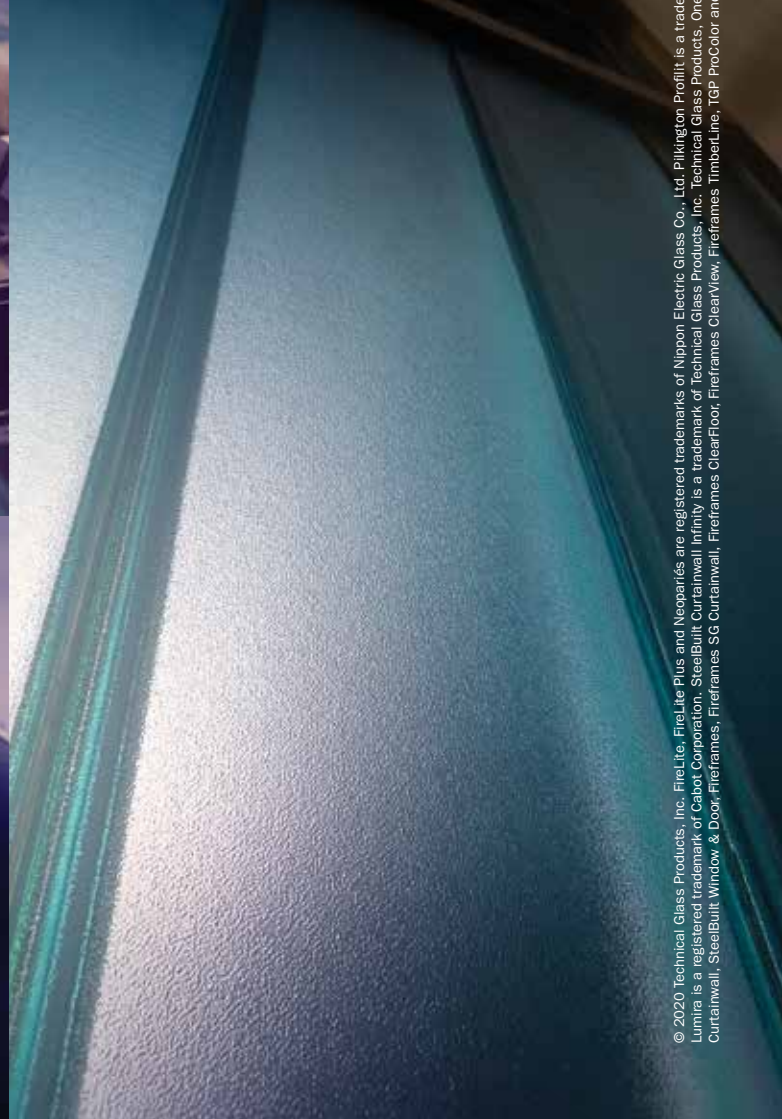
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