

New Perspectives in Architectural Glass

Pilkington Architectural Glass Product Catalog



PILKINGTON

First in Glass

Pilkington Architectural Glass

Pilkington **Optifloat™** Clear Glass

Pilkington **Activ™**
Self-Cleaning Glass

Pilkington **Energy Advantage™**
Low-E Glass

Pilkington **Solar E™**
Solar Control Low-E Glass

NEW Pilkington Clear **Eclipse Advantage™**
Reflective Low-E Glass

Pilkington Grey **Optifloat™**
Tinted Float Glass

NEW Pilkington Grey **Eclipse Advantage™**
Reflective Low-E Glass

Pilkington **SuperGrey™**
High-Performance Tinted Float Glass

Pilkington Bronze **Optifloat™**
Tinted Float Glass

NEW Pilkington Bronze **Eclipse Advantage™**
Reflective Low-E Glass

Pilkington **Arctic Blue™**
High-Performance Tinted Float Glass

NEW Pilkington Arctic Blue **Eclipse Advantage™**
Reflective Low-E Glass

Pilkington Blue-Green **Optifloat™**
Tinted Float Glass

NEW Pilkington Blue-Green **Eclipse Advantage™**
Reflective Low-E Glass

Pilkington **EverGreen™**
High-Performance Tinted Float Glass

NEW Pilkington EverGreen **Eclipse Advantage™**
Reflective Low-E Glass

Pilkington **Optiwhite™**
Low Iron Float Glass

Pilkington **Texture™** Glass

Pilkington **Profilit™** Profiled Glass

Pilkington **Pyrostop™**
Fire-Resistant Glass

Pilkington **Mirropane T.M.™**
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Pilkington Advanced-Technology Glass Products

Since developing the float glass process by which virtually all modern glass is produced, Pilkington has been a global leader in advanced glass technology, a position that was enhanced with the acquisition of Libbey-Owens-Ford Company in 1986.

Today, Pilkington utilizes an international network of research, distribution, fabrication and support facilities to bring you a wide range of glass products to meet both your performance and aesthetic requirements, practically, efficiently and cost-effectively.

At the heart of Pilkington's advanced technology is our patented pyrolytic process, to create:

- **NEW** Pilkington **Eclipse Advantage™** Glass, the world's first pyrolytic reflective Low-E glass, combining the thermal and solar control properties that today's buildings demand with the high visible light transmittance, subtle reflectivity, glare control and crisp, consistent color that today's designs deserve.
- Pilkington **Energy Advantage™** Low-E Glass, providing excellent thermal performance with a consistently clear, color-neutral appearance.
- Pilkington **Solar E™** Solar Control Low-E Glass, with both solar and thermal performance in a single, practical solution.
- Pilkington **Activ™** Self-Cleaning Glass, the world's first solar-powered glass that actually uses energy from the sun, in combination with water, to destroy dirt and grime.

Because all of these Pilkington products are true pyrolytics, the aesthetic and performance properties are an integral part of the surface of the glass itself, not just a coating.

That means that these Pilkington products can be stored, handled, fabricated, tempered and even bent just like ordinary glass, but without ever sacrificing the consistent aesthetics that a pyrolytic product can give you.

In addition to the advanced technology pyrolytics, Pilkington also offers a selection of both standard and high performance tinted float glasses that, in addition to clear glass, can all be combined with an inboard lite of Pilkington **Energy Advantage™** Low-E Glass, to create an almost limitless range of aesthetic and performance options.

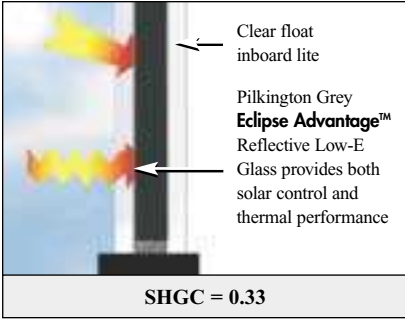
So with all of these different glazing options, how do you find the product or combination of products that's exactly right for your project?

We've made that easy, too, because we've put all this power at the tip of your finger at www.pilkington.com, your #1 source for glass and glazing information!

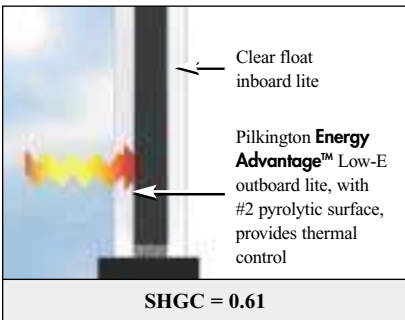
From a family of advanced-technology Low-E glass products, to reflective, high-performance tints and specialty glass products, Pilkington offers architects, specifiers and glaziers more glass solutions to choose from than ever before.

Clockwise from top right:
NEW Pilkington Arctic Blue™, Grey, Blue-Green, Bronze, Clear and EverGreen **Eclipse Advantage™** Glass.

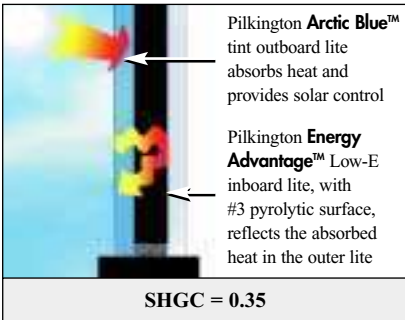




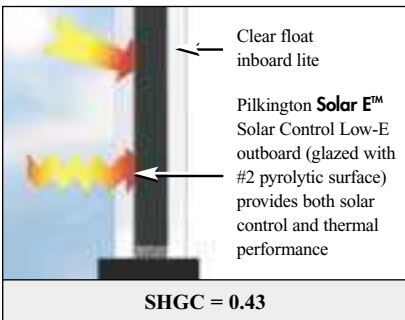
NEW Pilkington Eclipse Advantage™ Reflective Low-E Glass combines both solar control and thermal control in a single pyrolytic glass product that can be stocked, tempered, bent and handled just like ordinary glass.



When combined with a clear float inboard lite, **Pilkington Energy Advantage™ Low-E Glass** combines a clear, color-neutral aesthetic with high visible light transmittance.



Combining the solar control properties of a tinted or reflective outboard lite (such as the **Pilkington Arctic Blue™ High-Performance Tint** shown here) with the thermal control properties of **Pilkington Energy Advantage™ Low-E** gives you an almost limitless range of aesthetic and performance possibilities.



The solar control portion of the **Pilkington Solar E™ Glass** surface absorbs solar energy, which the Low-E insulating portion then retransmits to the outside.

The Most Advanced Ways to Manage the Sun!

Different kinds of glass have different performance and aesthetic characteristics.

That's the whole idea behind the Pilkington **Sun Management™ Glass System**: a family of Low-E, reflective, tints, and high-performance tinted glass products to give you the performance today's buildings demand – without sacrificing the aesthetics your designs deserve!

Not All Energy is the Same

To understand how revolutionary the Pilkington **Sun Management™ System** really is, you need to know a little bit about energy and heat as it applies to glass.

Heat gain comes from both the sun's direct short-wave radiation and from the transfer of energy from the exterior environment.

- **SOLAR CONTROL** refers to the ability of a glass to resist heat flow from the sun's direct radiation, including the short-wave energy that lies near visible light in the spectrum. Tinted or coated glass provides solar control by absorbing or reflecting a portion of the sun's energy, and is measured by its solar heat gain coefficient or SHGC.

Glass can provide solar control by either absorbing a portion of this energy (such as tinted glass), or reflecting a portion of it (reflective glass) or, in the case of **NEW Pilkington Eclipse Advantage™ Reflective Low-E Glass**, a combination of the two, as well as by driving the absorbed heat outwards by means of its low-emissivity coating.

- **THERMAL CONTROL** refers to the insulating value of the glass: its ability to resist the natural transfer of long-wave energy from the warmer to the cooler side by conductivity.

Low-E glass provides these thermal control properties, and its insulating ability is measured by its U-Factor.

Pilkington **Eclipse Advantage™ Reflective Low-E** and **Solar E™ Solar Control Low-E Glass** provide both solar and thermal control in a single glass, while the color-neutrality of Pilkington **Energy Advantage™ Low-E Glass** means you can combine it in an I.G. unit with a selection of other glass, including high-performance tints, to provide additional solar control.

The result is an almost limitless number of aesthetic and performance options.

The Pilkington Pyrolytic Advantage in Low-E

Whether you select Pilkington **Eclipse Advantage™ Reflective Low-E**, **Solar E™ Solar Control Low-E**, or **Energy Advantage™ Low-E Glass**, you'll have the benefits of Pilkington patented pyrolytic technology, and the very practical advantages that brings to every project.

Most Low-E glass is produced by simply applying a special coating to sheets of finished glass in a process called sputter coating. These "soft coat" products have some limitations. The coating can be scratched or damaged, and can potentially deteriorate with exposure to air, giving the product a limited shelf life. And much of the fabrication process, including bending and tempering, often must be done before the glass is coated.

But Pilkington Low-E glass products are produced by a patented pyrolytic process that exposes hot glass to chemical vapors during the actual float glass production, where they bond to the glass on the molecular level. So these properties are an integral part of the surface of the glass.

Having a hard "pyrolytic" surface fired on at over 1200°F, pyrolytic products are durable, bendable, post-temperable and, because the pyrolytic surface doesn't degrade like a sputtered coating, can be warehoused for ready availability.



At www.pilkington.com/sunmanagement, you'll find a wealth of resources, including ...

- Comprehensive product performance data ...
- Answers to frequently asked questions about glass and glazing ...
- Technical data including wind load data, design and uniform static load data and monolithic annealed glass sizes ...
- And even a number of on-line, interactive tools that can help you do your job better and faster!

The Pilkington Sun Management™ Calculator



Compare different glass and glazing options. Combine different inboard and outboard lites. Then the interactive Pilkington Sun Management™ Calculator will generate all the relevant performance numbers for you, in simple, easy-to-follow tables that you can print for future reference.

A Custom Glass Specification ... It's as Easy as 1-2-3!



Once you've found the perfect glazing combination for your project, the Pilkington Sun Management™ Calculator will even generate a custom glass specification for you, ready to copy and paste right into your project documents.

You can choose between a comprehensive, three-part CSI format specification, a short outline specification and glazing chart, or just drawing notes with a glazing chart.

No matter which format is right for you, the Pilkington Sun Management™ Calculator makes it as easy as 1-2-3.

The Stress Reliever



Not sure when you need to heat treat or temper different kinds of glass under different conditions?

Then the interactive Pilkington Sun Management™ Thermal Stress Calculator will help you determine that, too.

Just answer a few simple questions, and the Pilkington Thermal Stress Calculator will do all the hard work for you.



Save a Load of Work

We've even included an on-line Wind Load Calculator that lets you quickly check your design against ASTM E1300 Standard Practice for Determining Load Resistance.

Spend Some Time in the Photo Gallery



See for yourself how architects worldwide are harnessing the power of the Pilkington Sun Management™ System in unique and innovative ways with the Pilkington Photo Gallery, a photo database that you can search by color, glass type, project type, region or any combination of these.

Browse the Pilkington On-Line Library



Here, you'll find a wealth of resources, including the latest up-to-the-minute information on all our products ...

- The full Pilkington Architectural Glass Product Catalog, including comprehensive product performance information, technical data and product applications.
- Brochures and data sheets for specific products.
- An extensive selection of Pilkington Architectural Technical Bulletins.

... all available as pdf files for on-line research and consultation, or downloadable for future reference.

Manage the sun – with the tip of your finger.



The Pilkington Sun Management™ Glass System Kit and Website include three valuable interactive tools – the Pilkington Sun Management™ Calculator, the Pilkington Thermal Stress Calculator and the Pilkington Wind Load Calculator – as well as a wealth of other helpful resources.



Pilkington Reflective Low-E Glass

Now Pilkington advanced-technology brings you a whole new choice in glass, with the world's first pyrolytic reflective Low-E.

NEW Pilkington Eclipse Advantage™ Reflective Low-E Glass

Product Description

Combining both thermal and solar control in a single, durable, and readily-available pyrolytic product, Pilkington **Eclipse Advantage™** Reflective Low-E Glass provides the performance today's buildings demand with the aesthetics your designs deserve.

Available in a pleasing palette of popular colors – including Arctic Blue™, EverGreen™, Blue-Green, Grey, Bronze and Clear colors – **Eclipse Advantage™** Reflective Low-E is manufactured by the patented Pilkington pyrolytic process. In this on-line chemical vapor deposition process, a gas reacts with the semi-molten surface of a ribbon of float glass to form a reflective coating on clear and tinted substrates.

The result is a product that combines thermal and solar control with the high visible light transmittance, subtle reflectivity, glare control, and the crisp, consistent color that a pyrolytic product can provide.

Product Features

- *DESIGN FLEXIBILITY* Achieve a crisp, natural color with subtle reflectivity, high visible light transmittance and interior glare control when Pilkington **Eclipse Advantage™** Glass is glazed with a pyrolytic #2 surface. Or, where higher reflectivity is called for, the durable pyrolytic surface of Pilkington **Eclipse Advantage™** Glass can even be glazed on the #1 surface.
- *COMBINES HIGHER DAYLIGHT TRANSMITTANCE*, lower visible reflectance, and solar control properties in a single pyrolytic surface.
- *DURABLE PYROLYTIC SURFACE* All Pilkington **Eclipse Advantage™** Glass products can be handled, cut, insulated, laminated, heat-strengthened, tempered and bent using standard techniques.
- *HEAT-TREATABLE WITHOUT COLOR SHIFT* which can result in a significant reduction of lead times and production losses when heat-strengthening or tempering are required.
- *ENERGY EFFICIENT* combining low-emissivity with solar control for considerable energy cost reductions compared to ordinary glasses.

NEW Pilkington Clear Eclipse Advantage™ Reflective Low-E Glass

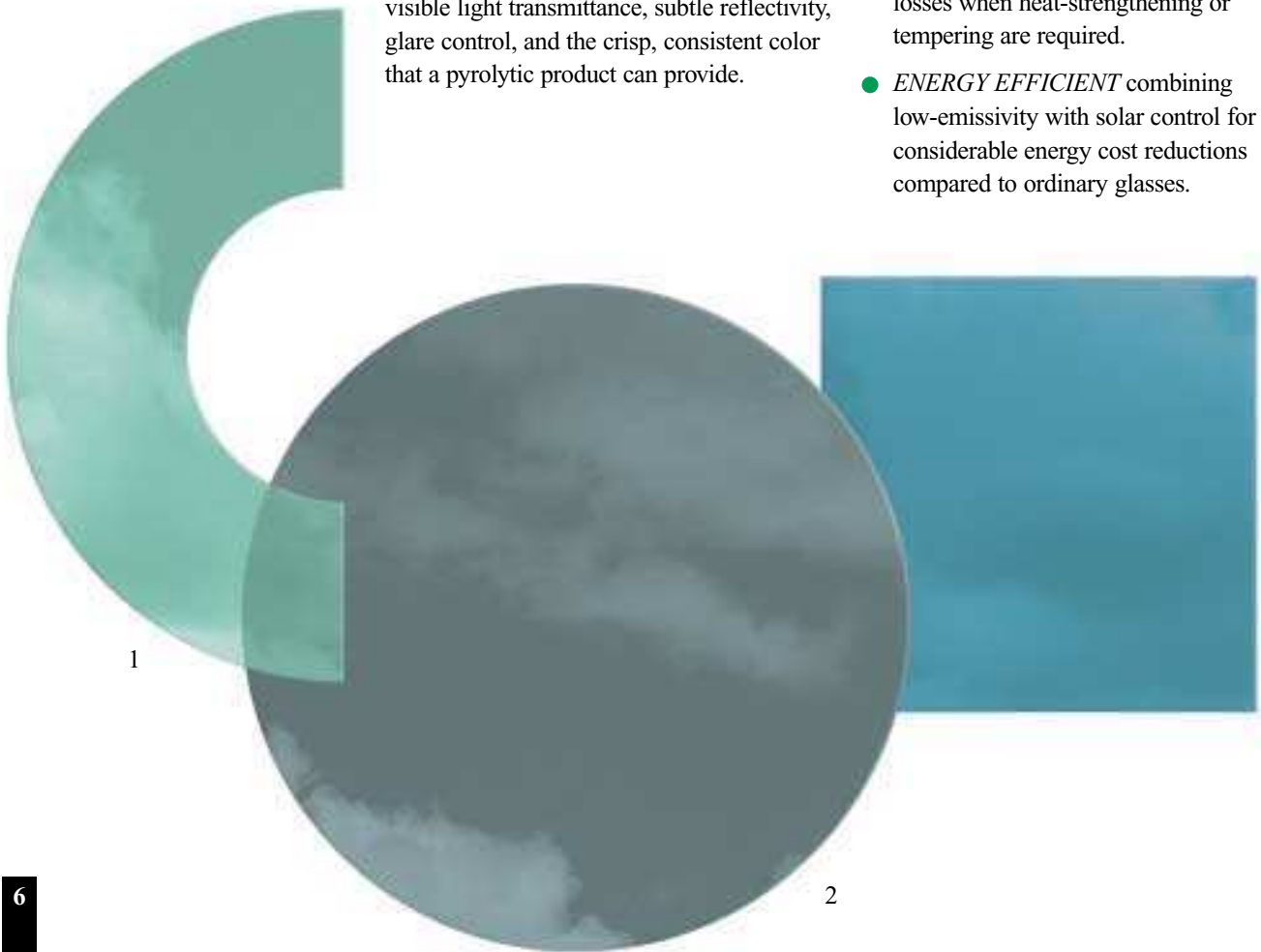
NEW Pilkington Grey Eclipse Advantage™ Reflective Low-E Glass

NEW Pilkington Bronze Eclipse Advantage™ Reflective Low-E Glass

NEW Pilkington Arctic Blue Eclipse Advantage™ Reflective Low-E Glass

NEW Pilkington Blue-Green Eclipse Advantage™ Reflective Low-E Glass

NEW Pilkington EverGreen Eclipse Advantage™ Reflective Low-E Glass





- **REDUCED UV TRANSMITTANCE**
lessens color fading and breakdown of plastic materials, with more of the sun's damaging radiation effectively blocked.
- **SEALANT COMPATIBLE** with I.G. sealing compounds and structural silicone sealants most commonly used, with no edge deletion required. Specific compatibility questions should be directed to the sealant manufacturer.
- **COLOR AND SURFACE UNIFORMITY** within each lite and consistency from run to run make Pilkington **Eclipse Advantage™** Glass ideal for new construction and replacement applications.
- **EXCELLENT AVAILABILITY** for significantly reduced lead times and better control of project costs.
- **AVAILABLE IN 1/4" (6mm)** standard thickness. Other thicknesses and sizes may be available upon request.

Vision Area Coating Quality Specifications

When viewing Pilkington **Eclipse Advantage™** Glass against a bright, uniform background, coating quality specifications apply to vision areas as stated in Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Glass ASTM C 1376-02.

Glazing Considerations

It will often be necessary to heat treat the outer glass in an I.G. unit when higher thermal performance is sought by fabricating Pilkington **Eclipse Advantage™** Glass into I.G. units.

Pilkington Arctic Blue **Eclipse Advantage™** and Pilkington EverGreen **Eclipse Advantage™** Glass are very high performing glasses and will typically need heat treatment in most installations to prevent thermal stress breakage when installed with the #2 surface coated in an I.G. unit.

- **ADDITIONAL RESOURCES**
 - Technical Bulletin ATS-173: “Pilkington **Eclipse Advantage™** Reflective Low-E Glass Thermal Stress Guidelines”
 - Technical Bulletin ATS-124: “Spandrel Panel Glazing”
 - Technical Brochure: “Good Glazing Guidelines”
 - Technical Bulletin ATS-139: “Thermal Stress for Pilkington Glazing Combinations”
 - Technical Bulletin ATS-172: “Washing Pilkington **Eclipse Advantage™** Reflective Low-E Glass”
 - Technical Bulletin ATS-176: “Handling, Inspecting, Fabricating and Glazing Pilkington **Eclipse Advantage™** Reflective Low-E Glass”
 - Pilkington Thermal Stress Calculator (www.pilkington.com/northamerica)
 - Pilkington Wind Load Calculator (www.pilkington.com/northamerica)
 - Pilkington **Sun Management™** Calculator including custom specifications in three different CSI formats (www.pilkington.com/northamerica)

For specific performance data, please refer to pages 18, 19, 20 and 21.



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1. Pilkington EverGreen **Eclipse Advantage™** Reflective Low-E Glass 2. Pilkington Grey **Eclipse Advantage™** Reflective Low-E Glass 3. Pilkington Arctic Blue **Eclipse Advantage™** Reflective Low-E Glass 4. Pilkington Clear **Eclipse Advantage™** Reflective Low-E Glass 5. Pilkington Bronze **Eclipse Advantage™** Reflective Low-E Glass 6. Pilkington Blue-Green **Eclipse Advantage™** Reflective Low-E Glass



Pilkington Solar Control Low-E Glass

The heart of the Pilkington **Sun Management™** Glass System, color neutral Pilkington **Solar E™** Solar Control Low-E Glass and Pilkington **Energy Advantage™** Low-E Glass offer exceptional thermal performance, improved solar control and a wealth of design possibilities.

Pilkington **Solar E™** Solar Control Low-E Glass

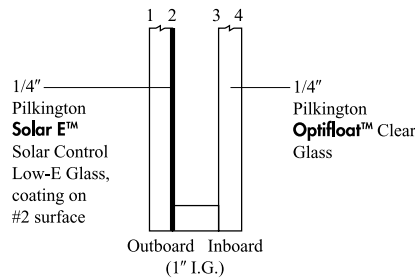
Pilkington **Energy Advantage™** Low-E Glass

Pilkington Solar E™ Solar Control Low-E Glass

Product Description

The world's first pyrolytic solar control Low-E glass, Pilkington **Solar E™** Glass is the perfect solution for meeting cooling load requirements and other energy code programs.

Manufactured using a unique chemical vapor deposition method, Pilkington **Solar E™** Glass features an integral pyrolytic surface which provides superior fabricating and handling qualities. As a result, the glass can be handled, cut and tempered, and offers unlimited shelf life. In addition, no edge deletion or special handling is required.



Product Features

- *OPTIMIZES SOLAR CONTROL* and energy efficiency of clear I.G. units to create an excellent Pilkington **Sun Management™** Glass System.
 - *REDUCES HEAT GAIN*, with an I.G. solar heat gain coefficient (SHGC) of only 0.43, compared to SHGCs of 0.70 for clear float and 0.61 for Pilkington **Energy Advantage™** Low-E Glass.
- DURABLE PYROLYTIC SURFACE* offers all the benefits of pyrolytic glass, including unlimited shelf life, excellent availability for reduced lead times, easy fabrication and heat treatment – and is so durable, it can be used in monolithic applications. Please see Pilkington Technical Bulletin ATS-143 for specific instructions on monolithic applications.
- *CONSISTENT COLOR AESTHETICS* maintained when Pilkington **Solar E™** Glass is combined with tints or reflective glasses.

- *GOOD LIGHT TRANSMITTANCE* for a solar control product. When glazed on the #2 surface in an I.G. unit, Pilkington **Solar E™** Glass provides 53% visible daylight transmittance for undistorted, natural views.
- *LOW EXTERIOR REFLECTANCE* makes Pilkington **Solar E™** Low-E Glass ideal for use where high reflectance is prohibited or undesirable.
- *EXCELLENT AVAILABILITY* for significantly reduced lead times, which translates into lower project costs.

For specific performance data, please refer to pages 18, 19, 20 and 21.

1" (25mm) I.G. with 1/4" (6mm) Pilkington **Solar E™** Solar Control Low-E Glass outboard, coating on #2 surface, and 1/4" (6mm) Pilkington **Optifloat™** Clear Glass inboard.

Ross & Baruzzini; Webster Groves, Missouri

Owner/Developer: Schlafly Corp.; St. Louis, Missouri

Architect: Ross & Baruzzini; Webster Groves, Missouri

General Contractor: Ross & Baruzzini; Webster Groves, Missouri

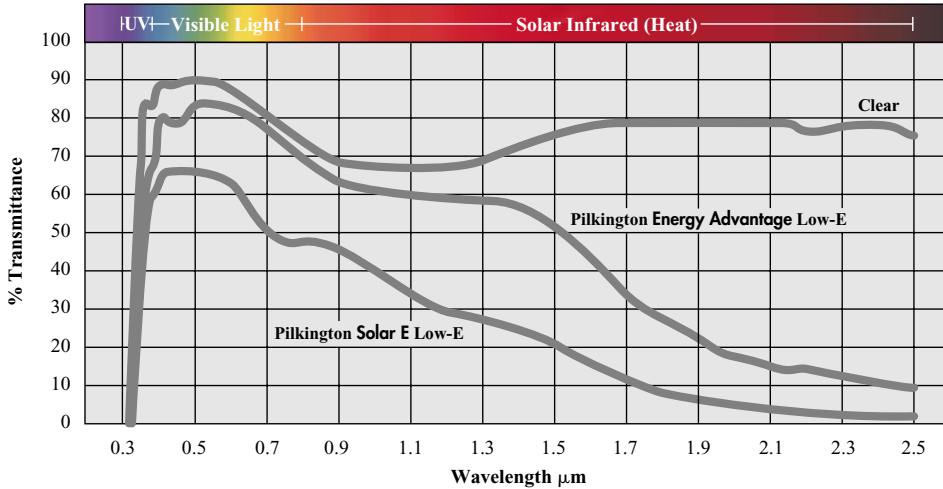
Glazing Contractor: St. Charles Glass; St. Louis, Missouri

Fabricator: SCG; St. Louis, Missouri

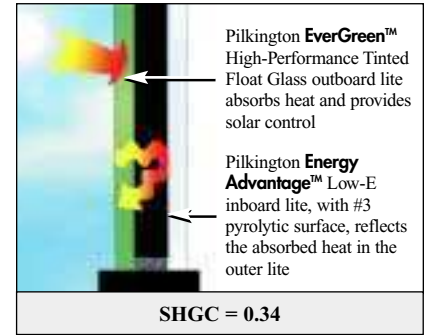




Solar Energy Transmittance – Pilkington 1/4" (6mm) Clear, Solar E™ and Energy Advantage™ Low-E Glass



This graph shows how Pilkington **Solar E™** Solar Control Low-E Glass reduces solar heat gain by blocking most of the solar infrared wavelengths while still transmitting a high percentage of visible light. Pilkington **Energy Advantage™** Low-E, by contrast, transmits significantly more visible and infrared energy. This is the beneficial passive solar energy that it contributes to heating dominated climates. Clear glass, by comparison, transmits the most energy, but, lacking a low emissivity coating, it cannot reduce unwanted summer heat gain or costly winter nighttime heat loss.



Because of its color neutrality, Pilkington **Energy Advantage™** Low-E Glass can be combined with a wide range of tinted and reflective outboard lites for excellent performance and high visible light transmittance.

Pilkington Energy Advantage™ Low-E Glass

Product Description

Created using a patented color suppression process, Pilkington **Energy Advantage™** Low-E Glass is consistently color neutral, and offers true high performance with emissivity 55% lower than first generation pyrolytics.

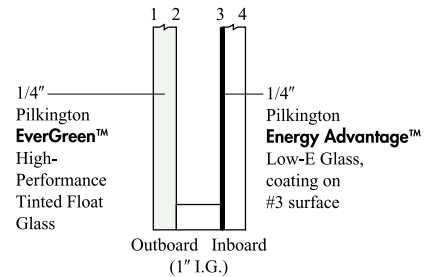
As a result, using Pilkington **Energy Advantage™** Low-E Glass as the inboard lite in an I.G. unit creates a superior Pilkington **Sun Management™** Glass System that optimizes the solar control and energy efficiency of any glass – from clear float to high-performance tints to Pilkington **Eclipse Advantage™** Reflective Glass.

Product Features

- **COLOR NEUTRAL** for compatibility with all buildings and added design flexibility.
- **DURABLE PYROLYTIC SURFACE** offers unlimited shelf life and can be warehoused for ready availability, and will not oxidize or change color over time.
- **ENERGY EFFICIENT** in all climates, providing one of the highest net overall thermal efficiency values of all available Low-E coatings.

- **EASILY FABRICATED**, it can be handled, cut, insulated, laminated, tempered and bent using standard float glass techniques. Plus, no edge deletion or special handling is required.
- **IMPROVED DESIGN FLEXIBILITY**, enhancing the color neutrality and popularity of Pilkington **Energy Advantage™** Low-E Glass for bent glass designs with two new thicknesses, 5/16" (8mm) and 3/8" (10mm), for a broader range of applications than ever before.
- **EXCELLENT AVAILABILITY** for significantly reduced lead times, which translates into lower project costs.
- **ADDITIONAL RESOURCES**

– Technical Bulletin ATS-135: "Handling, Inspecting and Fabricating Pilkington Low-E Glass"



1" (25mm) I.G. with 1/4" (6mm) Pilkington **EverGreen™** High-Performance Tinted Float Glass outboard and 1/4" (6mm) Pilkington **Energy Advantage™** Low-E Glass inboard, coating on #3 surface.

B.C. Hydro Edmonds Centre;
Vancouver, British Columbia, Canada

Owner/Developer: British Columbia Hydro;
Vancouver, B.C., Canada

Architect: Aitken Wreglesworth Associates
Architects Limited; Vancouver, B.C., Canada

General Contractor: Lorlea Architectural Systems;
Edmonton, Alberta, Canada

Fabricator: International Factory Sales;
Vancouver, B.C., Canada

For specific performance data, please refer to pages 18, 19, 20 and 21.





Pilkington High-Performance Tinted Float Glass

Color, unique aesthetics, performance and comfort unite in three high-performance tints specially created with the interior environment in mind.

Pilkington Arctic Blue™ High-Performance Tinted Float Glass

Pilkington EverGreen™ High-Performance Tinted Float Glass

Pilkington SuperGrey™ High-Performance Tinted Float Glass

Pilkington Arctic Blue™ Glass

Pilkington EverGreen™ Glass

Pilkington SuperGrey™ Glass

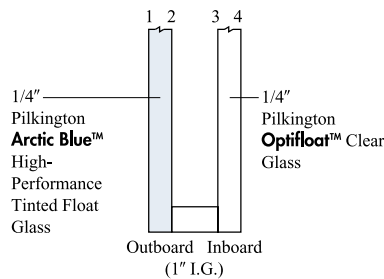
Product Descriptions

Soft rich blue. Soothing green. Deep cool grey. These are the aesthetics of Pilkington's high-performance tinted float glass.

- Pilkington **Arctic Blue™** Glass is a unique blue tinted float engineered for high daylight transmittance, good solar control and cool, comfortable color. It also provides a soft, undistorted, natural view from the interior.
- Pilkington **EverGreen™** Glass is an uncoated tinted float with high daylight transmittance that reduces the need for artificial light inside buildings. Yet it offers nearly 20% less solar heat gain than other green tints.
- Pilkington **SuperGrey™** Glass enhances visual privacy, reduces read-through from the outside, softens bright daylight and reduces glare inside, making it "user friendly" and ideal for use near computer screens and in skylight applications.

Product Features

- **EXCELLENT THERMAL CHARACTERISTICS**
 - Pilkington **Arctic Blue™** Glass outperforms traditional tinted float glass, without sacrificing daylight transmittance.
 - Pilkington **EverGreen™** Glass has shading coefficient and solar heat gain levels among the lowest of any 1/4" (6mm) uncoated tinted float, with a greater daylight transmittance than shading coefficient.
 - Pilkington **SuperGrey™** Glass provides the lowest shading coefficient of any float glass, which enhances interior comfort and reduces cooling loads.
- **COLOR-NEUTRAL VISIBILITY** means Pilkington **SuperGrey™** High-Performance Tinted Glass provides a soft, undistorted, natural view from the interior.
- **OPTIMIZE SOLAR AND THERMAL CONTROL** by combining any of these high-performance tints with Pilkington **Energy Advantage™** Low-E Glass in an I.G. unit. The result is year-round comfort.
- **LOW EXTERIOR REFLECTANCE** makes these high-performance tinted float glasses ideal for use where high reflectance is prohibited.



1" (25mm) I.G. with 1/4" (6mm) Pilkington Arctic Blue™ High-Performance Tinted Float Glass outboard and 1/4" (6mm) Pilkington Optifloat™ Clear Glass inboard.

Schafer Gear Works Inc.; South Bend, Indiana

Owner/Developer: Schafer Gear Works Inc.;

South Bend, Indiana

Architect: Panzica Construction Group;

South Bend, Indiana

General Contractor: Panzica Construction Group;

South Bend, Indiana

Glazing Contractor: US Aluminum Wall Framing

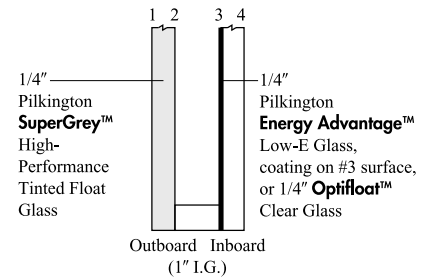
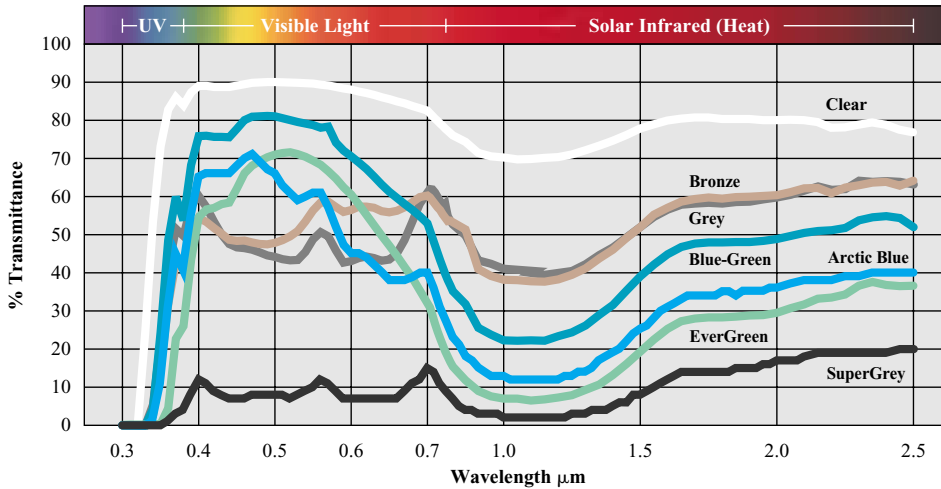
Fabricator: Oldcastle Glass Perrysburg; Perrysburg, Ohio



Pilkington High-Performance Tinted Float Glass



Solar Energy Transmittance – Pilkington Float Glasses



1" (25mm) I.G. with 1/4" (6mm) Pilkington **SuperGrey™** High-Performance Tinted Float Glass outboard and either 1/4" (6mm) heat-strengthened Pilkington **Energy Advantage™** Low-E Glass inboard, coating on #3 surface, or 1/4" (6mm) Pilkington **Optifloat™** Clear Glass inboard.

Border's Group Inc. World Headquarters;
Ann Arbor, Michigan

Owner/Developer: Border's Group Inc.;
Ypsilanti, Michigan

Architect: Stucky & Vitale Architects;
Royal Oak, Michigan

General Contractor: Walz Harman Huffman
Construction, Inc.; Wichita, Kansas

Glazing Contractor:
Huron Valley Glass Company L.L.C.;

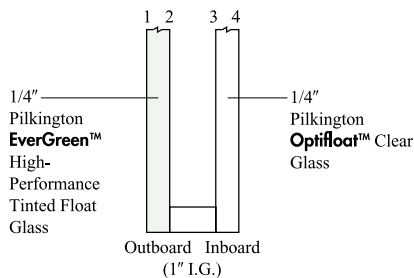
Ypsilanti, Michigan
Fabricator: Oldcastle Glass
Perrysburg; Perrysburg, Ohio

Solar energy contains many different wavelength ranges of energy including ultraviolet (UV) radiation, visible light and infrared (IR) heat. A glazing needs to minimize UV radiation, because it causes about 60% of the fading and deterioration to interior furnishings. A glazing that allows high visible light transmittance will reduce the need for artificial light. And IR heat passage through a glazing is a major source of solar heat gain.

This chart shows what percent of each energy wavelength is transmitted through Pilkington 1/4" (6mm) monolithic float glasses. Most tinted glasses reduce the visible light and the infrared heat as a means of controlling solar heat gain. Pilkington **EverGreen™** Glass transmits more visible light than Grey or Bronze tinted glasses, yet blocks more of the I.R. heat and damaging UV rays. Pilkington **SuperGrey™** Glass combines exceptional control over solar heat gain with enhanced control over bright daylight and interior glare.

- **LOW UV TRANSMITTANCE** outperforms other tinted glass products and blocks most of the sun's damaging UV rays. In fact, 1/4" (6mm) Pilkington **SuperGrey™** Glass blocks 99% of these rays.
- **EASILY FABRICATED** into I.G. units.
- **EXCELLENT AVAILABILITY** for easy inventory and short lead times.
- **AVAILABLE GLASS THICKNESS**
 - Pilkington **Arctic Blue™** Glass: 5/32" (4mm), 1/4" (6mm), 3/8" (10mm)
 - Pilkington **EverGreen™** and Pilkington **SuperGrey™** Glass: 1/8" (3mm), 3/16" (5mm), 1/4" (6mm)

For specific performance data, please refer to pages 18, 19, 20 and 21.



Vision Glass: 1" (25mm) I.G. with 1/4" (6mm) Pilkington **EverGreen™** High-Performance Tinted Float Glass outboard and 1/4" (6mm) Pilkington **Optifloat™** Clear Glass inboard.

Corridors One; Downers Grove, Illinois

Owner/Developer: The Alter Group; Lincolnwood, Illinois
Architect: Solomon Cordwell Buenz; Chicago, Illinois

General Contractor: Alter Design Builders;
Lincolnwood, Illinois

Glazing Contractor: Chicago Heights Glass;
South Holland, Illinois

Fabricator: Interpane Glass Company;
Clinton, North Carolina





NEW

Pilkington Self-Cleaning Glass

The world's first solar-powered self-cleaning glass.



The photocatalytic action of Pilkington **Activ™** Glass (*upper*) gradually breaks down and loosens dirt, while the hydrophilic surface (*lower*) causes rain to sheet on the glass, leaving a clean exterior surface with minimal spotting or streaking. (Illustration shows cross-section of glass I.G. unit. Outboard lite is shown magnified to demonstrate the effect of the **Activ™** Glass surface.)



The hydrophilic action of **Activ™** Glass (*left*) causes water to sheet rather than spot, as it does on ordinary glass (*right*).

Pilkington **Activ™** Self-Cleaning Glass

For clean windows ... naturally!

Product Description

Now, there's a revolutionary new kind of glass that actually uses the power of the sun to clean itself ... Pilkington **Activ™** Self-Cleaning Glass.

Not just a coating, but an integral part of the surface of the glass, Pilkington **Activ™** Self-Cleaning Glass features a pyrolytic surface applied to clear float glass using an on-line chemical vapor deposition method.

Manufactured with the same advanced pyrolytic technology utilized in the production of glass panels for electronic and photovoltaic solar cell applications, Pilkington **Activ™** Self-Cleaning Glass uses UV energy from the sun – which is abundant even on cloudy, overcast days – to keep windows clean naturally with:

1. A *photocatalytic process* that gradually breaks down and loosens dirt and other organic residue so that it doesn't adhere to the glass.
2. A *hydrophilic action* that causes rain to sheet on the glass, carrying dirt away with minimal spotting or streaking.

So under most conditions, natural rain is sufficient to keep the window clean. And in dry weather, a quick spray with a hose will achieve the same result.

And since these advanced properties are an integral part of the surface of the glass, rather than just a coating, they aren't susceptible to peeling, separation or disintegration over time, and are resistant to liquid glass cleaners.*

Combined in an I.G. unit with an inboard lite of either Pilkington **Energy Advantage™** Low-E Glass or Pilkington **Solar E™** Solar Control Low-E for excellent energy performance, Pilkington **Activ™** Self-Cleaning Glass can dramatically reduce or eliminate window cleaning, while providing crisp, clear vistas and an unspoiled exterior aesthetic.

Product Features

- **SELF-CLEANING PROPERTIES** reduce the cost and hazards of window-washing services and provide clearer vision.
- **DURABLE PYROLYTIC SURFACE** won't peel, discolor or wear off, ensuring long-term self-cleaning characteristics, backed by the same warranty as all Pilkington North America glass products.
- **NEVER NEEDS RE-TREATING**, because the pyrolytic self-cleaning surface is an inherent part of the glass, not a coating that washes away.
- **COLOR NEUTRAL** for compatibility with all buildings and added design flexibility.
- **EASILY FABRICATED**, due to the proprietary Pilkington pyrolytic process, Pilkington **Activ™** Self-Cleaning Glass can be cut, insulated, laminated and tempered using standard float glass techniques, and no edge deletion is required.
- **IDEAL FOR** exterior applications in commercial facades and residential windows, as well as conservatories and sloped glazing applications.
- **PERFORMANCE DATA** is available on request.
- **AVAILABLE IN** thicknesses ranging from 3/32" (2.5mm) to 1/4" (6mm) and glass sizes up to 130" x 204" (3302mm x 5182mm).

For additional information regarding new Pilkington **Activ™** Self-Cleaning Glass including performance data, please visit www.pilkington.com/northamerica.

Glazing Information

For glazing recommendations, contact Pilkington via phone at 419 247 3731, fax at 419 247 4517, or e-mail at building.products@us.pilkington.com.

* Contact Pilkington for complete handling and cleaning information.

Pilkington Float Glass



Product Descriptions

Pilkington **Optifloat™** Clear Glass offers excellent optical properties, transmitting up to 90% of the sun's visible spectrum to reduce artificial lighting needs. Ideal when specialty glass isn't required, Clear Float is available from 3/32" (2.5mm) to 1/4" (6mm) to meet performance and aesthetics requirements where high light transmittance and visibility are desired.

Pilkington **Optifloat™** Heavy Clear Glass – the only complete heavy float line manufactured in the U.S. – is available 5/16" (8mm) to 3/4" (19mm) thick for a wide variety of commercial glazing possibilities. Ideal for large, frameless expanses of glass in lobby and entrance area applications, it offers superior strength, greater spans, reduced deflection, high daylight transmittance and enhanced noise suppression.

Pilkington **Optifloat™** Tinted Glass reduces unwanted heat gain while admitting high natural daylight to enhance visual performance and lower artificial lighting needs. Available in Blue-Green, Grey and Bronze, Pilkington **Optifloat™** Tinted Glass is aesthetically pleasing and performance driven, with significantly reduced solar heat and UV light transmittance as compared to uncoated clear glass products.

Product Features

- **AN EXCEPTIONAL COMBINATION** of high visible light and low solar heat transmittance is available with Blue-Green Tinted Pilkington **Optifloat™** Glass. While most glass products that reduce solar heat transmittance also reduce daylight transmittance, a 1/4" (6mm) lite of Pilkington **Optifloat™** Blue-Green Glass has a solar heat gain coefficient of 0.62 and a visible light transmittance of 75%.

- **AESTHETICS AND APPLICATIONS**

– As thicknesses increase, colors appear deeper, giving architects and designers countless design options.

– In 5/16" (8mm) and 3/8" (10mm) thicknesses, Pilkington **Optifloat™** Blue-Green Glass is ideal for furniture, interior partitions and glazing areas requiring glass greater than 1/4" (6mm) thick.

- **QUALITY SPECIFICATIONS**, Pilkington **Optifloat™** Clear and Tinted glasses meet the quality specifications of the *ASTM C 1036-01 Standard Specification for Flat Glass*.
- **PERFORMANCE DATA**, such as daylight transmittance and shading coefficient vary, according to tint and thickness. See your Pilkington representative for relevant performance information.

- **AVAILABLE THICKNESSES**

- Pilkington **Optifloat™** Clear Glass: 3/32" (2.5mm) to 3/4" (19mm)
- Pilkington **Optifloat™** Grey and Bronze Tinted Glass: 1/8" (3mm) to 1/2" (12mm)
- Pilkington **Optifloat™** Blue-Green Glass: 1/4" (6mm), 5/16" (8mm), 3/8" (10mm)
- Also see "Monolithic Annealed Glass Sizes" chart on page 22.

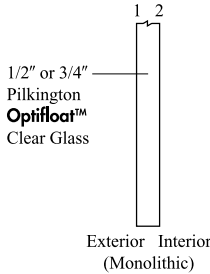
For specific performance data, please refer to pages 18, 19, 20 and 21.

*Monolithic 1/2" (12mm) and 3/4" (19mm) Pilkington **Optifloat™** Heavy Clear Glass. One of the largest suspended glass walls in the U.S. – 57' or five stories high – this project utilizes more than 50,000 sq. ft. of 1/2" and 3/4" clear fully tempered/heat-soaked glass.*

Hawaii Convention Center; Honolulu, Hawaii
Owner/Developer: City of Honolulu; Honolulu, Hawaii
Architect: Wimberly, Allison, Tong, & Goo; Honolulu, Hawaii
General Contractor: Nordic/PCL (a joint venture); Honolulu, Hawaii
Glazing Contractor: Apex Curtainwall Group; Honolulu, Hawaii
Fabricator: Oldcastle Glass Perrysburg; Perrysburg, Ohio

One of the world's most comprehensive float glass lines, Pilkington's **Optifloat™** Glass family includes clear, heavy clear and tinted float glass products for use in almost any residential and commercial application imaginable.

- Pilkington **Optifloat™** Clear Glass
- Pilkington **Optifloat™** Blue-Green Tinted Glass
- Pilkington **Optifloat™** Grey Tinted Glass
- Pilkington **Optifloat™** Bronze Tinted Glass





Created for unobtrusive observation in interior applications and perfect for multiple-image “infinity” mirror effects, or to camouflage office areas, wet bars and entertainment centers.

Pilkington
Mirropane T.M.™
Transparent Mirror



**Pilkington Mirropane T.M.™
Transparent Mirror**

Product Description

Ideal for surveillance, security and administrative applications where discreet observation is required, Pilkington **Mirropane T.M.™** Transparent Mirror looks like a mirror in a well-illuminated room but works like an ordinary tinted window from the other side.

Product Features

- **DURABLE PYROLYTIC SURFACE** offers exceptional scratch and abrasion resistance, and is perfect when sputtered products aren’t acceptable. Formed by chemical vapor deposition on 1/4” (6mm) Pilkington **Optifloat™** Grey Tinted Glass, Pilkington **Mirropane T.M.™** Transparent Mirror can be laminated with the pyrolytic side out for higher security.
- **POST HEAT-TREATABLE** for maximum strength, it can be handled, cut, insulated, laminated and tempered. However, some optical distortion may occur from heat-treating.
- **HIGH REFLECTIVITY AND LIGHT TRANSMITTANCE** allow privacy with crisp, unobtrusive vision into the observed room.
- **EXCELLENT AVAILABILITY** for easy inventory and replenishment.
- **AVAILABLE IN 1/4”** (6mm) thickness.
- **IDEAL FOR SURVEILLANCE**, security in commercial settings and correctional institutions, hospital observation, worker monitoring and distinctive interior designs.

Design Considerations

- **ORIENTATION:** Install transparent mirror with the reflective surface facing the brightly lit subject-side.
- **TYPE OF LIGHTING:** Subject-side should be evenly lit over the walls and furnishings. Do not direct light toward or on the glass. Observer-side lighting should be dim. Opaque lamp shades are recommended.
- **BACKGROUND COLORS:** Subject-side should be bright and light in color. Observer-side walls, furnishings and floors must be subdued, nonreflective, dark and uniform. Patterns should be minimized and contrasting colors avoided.
- **DISTANCES AND LIGHT LEVELS:** On the subject-side, keep people at a distance. A 8:1 light ratio is recommended, with subject-side brightly lit and observer-side dimly lit.
- **MINIMIZING READ-THROUGH:** On the observer-side, keep people, objects and lights as far back as possible. To further minimize read-through, add a 1/8” (3mm) lite of Pilkington **Optifloat™** Grey Tinted Glass to the observer-side.
- **ADDITIONAL RESOURCES**
 - Technical Bulletin ATS-125: “Pilkington **Mirropane T.M.™** Transparent Mirror Guidelines”
 - For cleaning transparent mirror, follow the guidelines in Technical Bulletin ATS-180: “Washing Pilkington **Mirropane T.M.™** Transparent Mirror ”

Vision Area Coating Quality Specifications

Coating quality specifications are the same as those for Pilkington **Eclipse Advantage™** Reflective Low-E Glass. See page 7 in this brochure.

Pilkington Mirropane T.M.™ Performance Data^{1,10}

Nominal Thickness		Glass Substrate	Visible ² Transmittance	Visible ² Reflectance On The Coated Side	Recommended Light Ratio	Proper Glazing
in.	mm	Grey	%	%	8:1 Subject-side:Observer-side	Mirror coating toward subject-side
1/4	6		11	72		

For footnotes, please refer to page 21.



Pilkington Pyrostop™ Fire-Resistant Glass and Pilkington Pyrodur™ Fire-Protection Glass

Product Description

Specifically designed to provide high levels of fire protection, Pilkington **Pyrostop™** and Pilkington **Pyrodur™** offer the full range of properties traditionally associated with glass: primarily natural lighting and transparency, along with options to maximize solar control, reduce building heat loss and to provide decoration, impact safety, security protection and acoustic insulation.

Pilkington **Pyrostop™** and Pilkington **Pyrodur™** are composed of multiple layers of float glass and a special transparent intumescent interlayer, which is totally compatible and optically homogeneous with the glass. When exposed to fire, the pane facing the flames fractures but remains in place and as the heat penetrates the glass, the interlayers react by foaming to form a thick, opaque, resilient and tough insulating shield that blocks the radiant heat of the blaze.

The Pilkington **Pyrostop™** and Pilkington **Pyrodur™** range includes performances from 20 minutes up to 120 minutes depending on the product chosen. Pilkington **Pyrostop™** and Pilkington **Pyrodur™** must always be used as a part of an approved fire-resistant framing assembly. Pilkington **Pyrostop™** and Pilkington **Pyrodur™** are available through Technical Glass Products (TGP). Please ask Pilkington or Technical Glass Products for further details.

Product Features

- **TOTALLY CLEAR**, Pilkington **Pyrostop™** and Pilkington **Pyrodur™** are aesthetically superior to other fire-rated products, 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 gasses.
- **STAYS IN PLACE** and acts as an insulating fire wall when installed in an appropriately rated fire-resistant framing assembly.
- **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 transmittance and optical quality of the thicker laminates.
- **ESTABLISHED TRACK RECORD** of performance proven over more than 20 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 fire hose stream test for physical resilience under fire conditions as required by U.S. standards.
- **LISTED WITH** Underwriters Laboratories (UL).
- **ACCEPTED FOR USE**, City of New York, Dept. of Buildings, MEA #241-00-M.
- **AVAILABLE IN THE U.S.** in thicknesses from 0.39" (10mm) to 2.2" (56mm). Please ask your Pilkington or TGP representative for further details.
- **MEETS IMPACT PERFORMANCE REQUIREMENTS** of ANSI Z97.1 and CPSC 16CFR1201 (Categories I and II).
- **DESIGNED TO** be combined with the full range of Pilkington glasses.
- **SECURITY AND** bullet-resistant products available.

Pilkington **Pyrostop™** and Pilkington **Pyrodur™** are fire-rated and impact safety-rated glasses to protect people and valuables against fire.



Reaction of Pilkington **Pyrostop™** and Pilkington **Pyrodur™** During a Fire



Fractured Glass Foam

For Additional Information

Pilkington **Pyrostop™** and Pilkington **Pyrodur™** are available through **TECHNICAL GLASS PRODUCTS**. For additional information, contact TGP at 800 426 0279, or fax inquiries to 800 451 9857. Or visit TGP's Website at www.fireglass.com. Information is also available from Pilkington at 419 247 4802, fax 419 247 4810 or www.pilkington.com/fire.



Enhanced composition:
Now more than ever, the
clear choice in colorless
flat glass.

Pilkington
Optiwhite™
Low Iron Float Glass

Pilkington Optiwhite™ Low Iron Float Glass

German engineered by Pilkington, **Optiwhite™** Glass is now stocked and available in North America.

Product Description

When true color is of paramount importance, Pilkington **Optiwhite™** Float Glass is the perfect solution.

Noticeably clearer than ordinary standard clear float glass, the colorlessness of Pilkington **Optiwhite™** Float Glass is especially apparent when it is combined with white or light colors, and when exposed, polished edges are in view.

As a result, Pilkington **Optiwhite™** Glass offers enhanced clarity and aesthetics for everything from photovoltaic modules and solar collectors to showroom and furniture applications. It is also ideal for use with glass which is to be ceramically decorated, because the true colors of the decorations will show through the glass.



Standard Clear Float Glass

Pilkington Optiwhite™ Float Glass

Product Features

- *PRACTICALLY COLORLESS*, thanks to its low iron content, Pilkington **Optiwhite™** Float Glass virtually eliminates the green cast inherent in standard clear float, which is especially noticeable on exposed, polished edges, particularly in thicker glasses. It also allows the true color of ceramic decoration to show through.
- *UNLIMITED VERSATILITY* and the absence of color make Pilkington **Optiwhite™** Glass ideal for applications such as security glazing laminates, I.G. units, photovoltaic modules, solar collectors, projection room windows, storefronts, appliances, shelving, display cases, zoo and aquarium enclosures, and tabletops.
- *IMPROVED LIGHT TRANSMITTANCE* makes this product ideal for applications which can benefit from more light. Compared to standard clear float, visible light transmittance for Pilkington **Optiwhite™** Glass is 7% higher for 1/2" (12mm) glass.
- *EXCELLENT AVAILABILITY* for significantly reduced lead times and better control of project costs.
- *AVAILABLE IN* thicknesses ranging from 1/8" (3mm) to 3/4" (19mm). See page 22 for standard sizes for Pilkington **Optiwhite™** Glass.

Pilkington Optiwhite™ Monolithic Glass Performance Data¹⁻⁴

Nominal Glass Thickness		Visible Light		Total Solar Energy		UV Transmittance %	U-Factor			Solar Heat Gain Coefficient ²	Shading Coefficient ³
		Transmittance %	Reflectance %	Transmittance %	Reflectance %		U.S. Summer	U.S. Winter	European		
in.	mm										
1/8	3	91	8	90	8	87	0.94	1.04	5.8	0.91	1.04
3/16	5	91	8	89	8	85	0.93	1.03	5.8	0.90	1.04
1/4	6	91	8	89	8	84	0.93	1.02	5.7	0.90	1.03
3/8	10	90	8	87	8	81	0.91	1.00	5.6	0.89	1.02
1/2	12	90	8	86	8	79	0.90	0.99	5.5	0.88	1.01
5/8	15	90	8	85	7	77	0.88	0.97	5.5	0.87	1.00
3/4	19	89	8	83	7	74	0.86	0.95	5.3	0.86	0.99

1. All performance values are center-of-glass values calculated by using the LBNL Window 5.2 program. To obtain metric U-Factor (W/sq-m °C), multiply by 5.678. The wavelength ranges of the sun's energy used to calculate properties: UV from 0.30 to 0.38 microns, visible from 0.38 to 0.78 microns and Total Solar from 0.30 to 2.5 microns.

2. Solar Heat Gain Coefficient or SHGC: The ratio of the total solar heat gain through the glass relative to the incident solar radiation. The solar heat gain includes both the solar energy directly transmitted through the glass, plus the solar energy absorbed by the glass and subsequently convected and thermally radiated inward.

3. Shading Coefficient or SC is the ratio of solar heat gain through the glass relative to that through 1/8" (3mm) clear glass at normal incidence.

4. Typical values of Pilkington production are provided.



Pilkington Texture™ Glass

Product Description

The Pilkington line of **Texture™** Glass products provides a range of designs and varying degrees of translucency. These products combine elegance and decorative effects, and give architects and designers functional options that emphasize the natural light-enhancing properties of glass.

Pilkington **Texture™** Glass is a rolled, textured glass which has a specific pattern or design impressed into one surface. Pilkington **Texture™** Glass allows the passage of light, but varying levels of obscuration, depending on the depth and configuration of the pattern. It's available in numerous designs and finishes, including an antique style that recreates the unique appearance of traditional hand-blown glasses.

Product Features

- **DESIGN FLEXIBILITY** ensures there is a pattern to complement every architectural style. Choose from numerous Pilkington **Texture™** Glass designs.

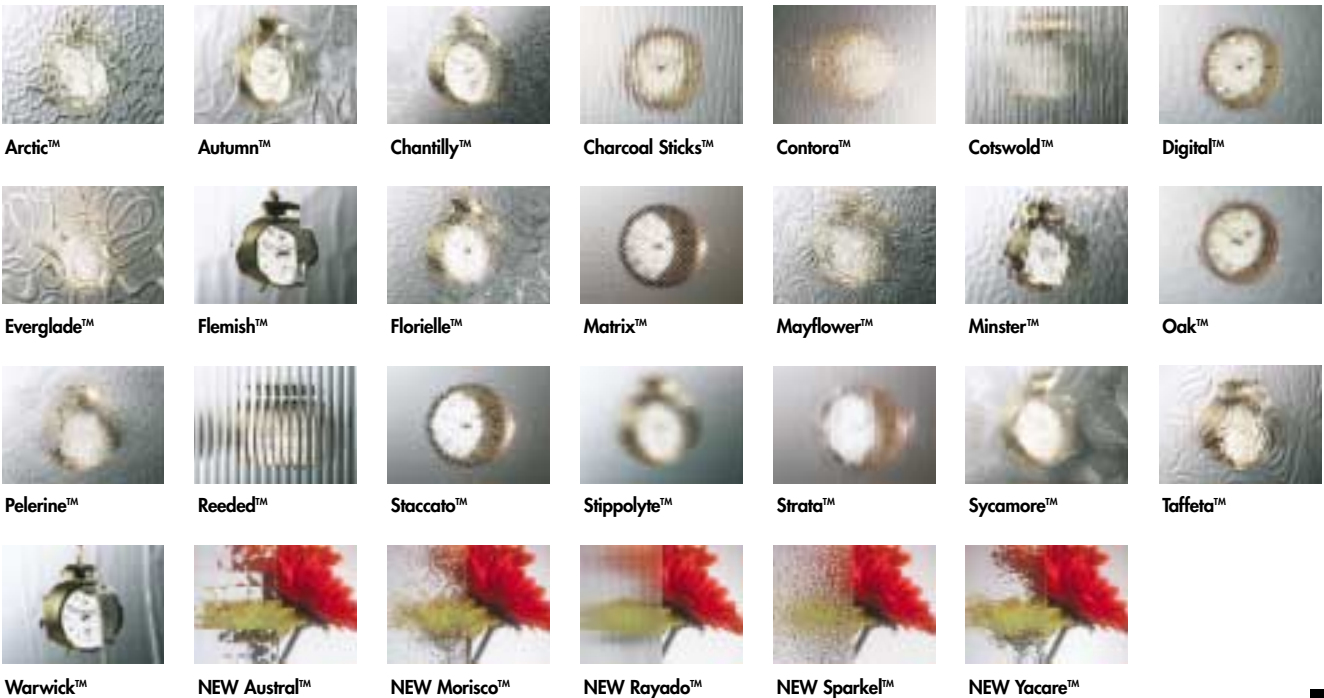
- **UNIQUE VISUAL EFFECTS** are possible using focused lighting and different levels of privacy and obscuration.
- **OPTIMIZE DAYLIGHT** while designing with pressed patterns that provide obscuration yet emphasize the natural light-enhancing properties of glass.
- **FOR APPLICATION VERSATILITY**, Pilkington **Texture™** Glass can be incorporated into insulating units for thermal insulation and noise control.
- **IDEALLY SUITED** for interior and exterior use, including doors, windows, sidelites, entrances, hallways, partitions, bathrooms, stairs and conservatories.
- **FOR SAFETY AND SECURITY**, all Pilkington **Texture™** Glass products can be tempered and laminated.
- **AVAILABLE IN A RANGE OF THICKNESSES**: Contact Pilkington or see our website for further details. Also please contact Pilkington regarding availability of specific patterns as product stock is subject to change.

Exercise your imagination with Pilkington **Texture™** Glass, available for interior and exterior applications in a wide range of traditional and contemporary designs.

Pilkington Texture™ Glass



Pilkington Texture™ Glass



Monolithic Glass Performance Data^{1, 10}

Product	Nominal Glass Thickness		Visible Light ²			Total Solar Energy ²			U-Factor ⁵						Solar Heat Gain Coefficient ⁷	Shading Coefficient ⁸
			Transmittance ³ %	Reflectance ⁴ %		Transmittance ³ %	Reflectance ⁴ %	UV Transmittance ² %	U.S. Summer		U.S. Winter		European ⁶			
	in.	mm		Outside	Inside				Air	Argon	Air	Argon	Air	Argon		

Pilkington Uncoated Float Glass

Optifloat Clear	3/32	2.5	90	8	8	86	8	75	0.95	–	1.05	–	5.9	–	0.87	1.00
	1/8	3	90	8	8	84	8	72	0.94	–	1.04	–	5.8	–	0.86	0.99
	5/32	4	89	8	8	81	7	68	0.94	–	1.04	–	5.8	–	0.84	0.97
	3/16	5	89	8	8	80	7	65	0.93	–	1.03	–	5.8	–	0.83	0.96
	1/4	6	88	8	8	77	7	62	0.93	–	1.02	–	5.7	–	0.81	0.94
	5/16	8	87	8	8	73	7	57	0.92	–	1.01	–	5.7	–	0.79	0.91
	3/8	10	86	8	8	70	7	54	0.91	–	1.00	–	5.6	–	0.77	0.88
	1/2	12	84	8	8	64	6	49	0.89	–	0.98	–	5.5	–	0.73	0.84
	5/8	16	83	8	8	59	6	45	0.88	–	0.97	–	5.4	–	0.70	0.81
3/4	19	81	7	7	55	6	41	0.86	–	0.95	–	5.3	–	0.67	0.78	
Optifloat Grey Tint	1/8	3	61	6	6	59	6	35	0.94	–	1.04	–	5.8	–	0.69	0.8
	3/16	5	50	6	6	48	5	26	0.93	–	1.03	–	5.8	–	0.62	0.71
	1/4	6	43	5	5	40	5	20	0.93	–	1.02	–	5.7	–	0.57	0.66
	5/16	8	33	5	5	31	5	14	0.92	–	1.01	–	5.7	–	0.50	0.59
	3/8	10	28	5	5	26	5	11	0.91	–	1.00	–	5.6	–	0.47	0.55
	1/2	12	19	4	4	17	4	7	0.89	–	0.98	–	5.5	–	0.42	0.49
Optifloat Bronze Tint	1/8	3	68	6	6	65	6	37	0.94	–	1.04	–	5.8	–	0.73	0.84
	3/16	5	59	6	6	55	6	28	0.93	–	1.03	–	5.8	–	0.67	0.77
	1/4	6	53	5	5	49	5	23	0.93	–	1.02	–	5.7	–	0.62	0.72
	5/16	8	44	5	5	39	5	16	0.92	–	1.01	–	5.7	–	0.56	0.65
	3/8	10	39	5	5	34	5	13	0.91	–	1.00	–	5.6	–	0.53	0.61
	1/2	12	29	5	5	25	4	8	0.89	–	0.98	–	5.5	–	0.47	0.55
Optifloat Blue-Green Tint	1/4	6	75	7	7	48	5	31	0.93	–	1.02	–	5.7	–	0.62	0.72
	5/16	8	70	7	7	40	5	25	0.92	–	1.01	–	5.7	–	0.57	0.66
	3/8	10	67	6	6	36	5	21	0.91	–	1.00	–	5.6	–	0.54	0.63
EverGreen High-Performance Tint	1/8	3	76	7	7	49	6	27	0.94	–	1.04	–	5.8	–	0.62	0.72
	3/16	5	73	7	7	42	5	21	0.93	–	1.03	–	5.8	–	0.58	0.67
	1/4	6	66	6	6	33	5	14	0.93	–	1.02	–	5.7	–	0.51	0.60
Arctic Blue High-Performance Tint	5/32	4	65	6	6	45	5	31	0.94	–	1.04	–	5.8	–	0.60	0.69
	1/4	6	55	6	6	34	5	22	0.93	–	1.02	–	5.7	–	0.52	0.61
	3/8	10	39	5	5	20	5	12	0.91	–	1.00	–	5.6	–	0.43	0.51
SuperGrey High-Performance Tint	1/8	3	25	5	5	23	4	6	0.94	–	1.04	–	5.8	–	0.45	0.52
	3/16	5	12	4	4	11	4	2	0.93	–	1.03	–	5.8	–	0.37	0.44
	1/4	6	9	4	4	8	4	1	0.93	–	1.03	–	5.7	–	0.35	0.41

Pilkington Eclipse Advantage™ Reflective Low-E Glass Outer Lite (#2 Surface)

Eclipse Advantage Clear	1/4	6	66	22	27	56	17	28	0.53	–	0.67	–	3.8	–	0.61	0.71
Eclipse Advantage Grey	1/4	6	32	9	26	29	8	10	0.53	–	0.67	–	3.8	–	0.41	0.48
Eclipse Advantage Bronze	1/4	6	40	11	26	35	9	11	0.53	–	0.67	–	3.8	–	0.46	0.53
Eclipse Advantage Blue-Green	1/4	6	56	17	27	35	10	16	0.53	–	0.67	–	3.8	–	0.45	0.53
Eclipse Advantage EverGreen	1/4	6	49	14	26	23	8	7	0.53	–	0.67	–	3.8	–	0.37	0.43
Eclipse Advantage Arctic Blue	1/4	6	41	11	26	24	8	11	0.53	–	0.67	–	3.8	–	0.37	0.44

Pilkington Solar E™ Solar Control Low-E Glass (#2 Surface)⁹

Solar E Solar Control Low-E	3/32	2.5	61	7	9	47	8	51	0.49	–	0.65	–	3.7	–	0.55	0.64
	1/8	3	60	7	9	46	7	47	0.49	–	0.65	–	3.6	–	0.53	0.62
	5/32	4	60	7	9	44	7	44	0.49	–	0.64	–	3.6	–	0.52	0.61
	3/16	5	60	7	9	44	7	45	0.49	–	0.64	–	3.6	–	0.52	0.61
	1/4	6	60	7	9	42	7	41	0.49	–	0.64	–	3.6	–	0.51	0.59
	5/16	8	60	8	9	41	7	40	0.48	–	0.63	–	3.6	–	0.50	0.58

For footnotes, please refer to page 21.

Monolithic Glass Performance Data^{1,10} Continued

Product	Nominal Glass Thickness		Visible Light ²			Total Solar Energy ²			U-Factor ⁵						Solar Heat Gain Coefficient ⁷	Shading Coefficient ⁸
			Transmittance ³ %	Reflectance ⁴ %		Transmittance ³ %	Reflectance ⁴ %	UV Transmittance ² %	U.S. Summer		U.S. Winter		European ⁶			
	in.	mm		Outside	Inside				Air	Argon	Air	Argon	Air	Argon		

Pilkington Energy Advantage™ Low-E Glass (#2 Surface)⁹

Energy Advantage Low-E	3/32	2.5	83	11	11	71	11	60	0.5	–	0.65	–	3.7	–	0.74	0.85
	1/8	3	82	11	12	69	11	57	0.5	–	0.65	–	3.7	–	0.72	0.83
	5/32	4	82	10	11	68	10	55	0.49	–	0.65	–	3.6	–	0.71	0.82
	3/16	5	83	11	12	68	10	53	0.49	–	0.65	–	3.6	–	0.71	0.82
	1/4	6	82	10	11	66	10	49	0.49	–	0.64	–	3.6	–	0.70	0.80
	5/16	8	81	10	11	62	9	45	0.49	–	0.64	–	3.6	–	0.67	0.77
	3/8	10	80	10	11	60	9	43	0.49	–	0.63	–	3.6	–	0.65	0.75

For footnotes, please refer to page 21.

Insulating Glass Performance Data^{1,10}

[Insulating units constructed of equal glass thicknesses and 1/2" (12.7mm) airspace]

Product	Nominal Glass Thickness		Visible Light ²			Total Solar Energy ²			U-Factor ⁵						Solar Heat Gain Coefficient ⁷	Shading Coefficient ⁸
			Transmittance ³ %	Reflectance ⁴ %		Transmittance ³ %	Reflectance ⁴ %	UV Transmittance ² %	U.S. Summer		U.S. Winter		European ⁶			
	in.	mm		Outside	Inside				Air	Argon	Air	Argon	Air	Argon		

Pilkington Uncoated Float Glass Outer Lite and Clear Float Glass Inner Lite

Optifloat Clear	3/32	2.5	82	15	15	74	14	61	0.51	–	0.48	–	2.8	–	0.78	0.90
	1/8	3	81	15	15	71	13	57	0.51	–	0.48	–	2.8	–	0.76	0.88
	5/32	4	80	15	15	67	12	52	0.50	–	0.48	–	2.8	–	0.74	0.85
	3/16	5	79	15	15	64	12	50	0.50	–	0.48	–	2.8	–	0.72	0.83
	1/4	6	78	14	14	60	12	46	0.50	–	0.47	–	2.8	–	0.70	0.81
Optifloat Grey Tint	1/8	3	55	9	13	50	9	29	0.51	–	0.48	–	2.8	–	0.58	0.67
	3/16	5	45	8	13	39	7	21	0.50	–	0.48	–	2.8	–	0.50	0.58
	1/4	6	38	7	12	32	6	16	0.50	–	0.47	–	2.8	–	0.44	0.51
Optifloat Bronze Tint	1/8	3	62	10	13	55	9	31	0.51	–	0.48	–	2.8	–	0.63	0.72
	3/16	5	53	9	13	45	8	23	0.50	–	0.48	–	2.8	–	0.55	0.64
	1/4	6	47	8	12	38	7	18	0.50	–	0.47	–	2.8	–	0.50	0.58
Optifloat Blue-Green Tint	1/4	6	66	12	14	39	8	25	0.50	–	0.47	–	2.8	–	0.50	0.58
EverGreen High-Performance Tint	1/8	3	69	12	14	42	8	23	0.51	–	0.48	–	2.8	–	0.51	0.59
	3/16	5	65	11	14	35	7	18	0.50	–	0.48	–	2.8	–	0.46	0.53
	1/4	6	58	10	13	27	6	11	0.50	–	0.47	–	2.8	–	0.39	0.45
Arctic Blue High-Performance Tint	1/4	6	49	8	13	28	6	18	0.50	–	0.47	–	2.8	–	0.40	0.46
SuperGrey High-Performance Tint	1/8	3	23	5	12	19	5	6	0.51	–	0.48	–	2.8	–	0.32	0.37
	3/16	5	11	4	12	9	4	2	0.50	–	0.48	–	2.8	–	0.24	0.28
	1/4	6	8	4	11	6	4	1	0.50	–	0.47	–	2.8	–	0.21	0.25

Pilkington Eclipse Advantage™ Reflective Low-E Glass Outer Lite (#2 Surface) and Clear Float Glass Inner Lite

Eclipse Advantage Clear	1/4	6	60	26	30	45	20	22	0.35	0.30	0.34	0.30	1.9	1.7	0.54	0.62
Eclipse Advantage Grey	1/4	6	29	9	28	23	9	8	0.35	0.30	0.34	0.30	1.9	1.7	0.33	0.39
Eclipse Advantage Bronze	1/4	6	36	12	29	28	10	9	0.35	0.30	0.34	0.30	1.9	1.7	0.38	0.44
Eclipse Advantage Blue-Green	1/4	6	51	20	29	29	11	13	0.35	0.30	0.34	0.30	1.9	1.7	0.38	0.44
Eclipse Advantage EverGreen	1/4	6	44	16	29	20	9	6	0.35	0.30	0.34	0.30	1.9	1.7	0.29	0.34
Eclipse Advantage Arctic Blue	1/4	6	37	13	29	20	8	9	0.35	0.30	0.34	0.30	1.9	1.7	0.30	0.34

Pilkington Solar E™ Solar Control Low-E Glass Outer Lite (#2 Surface) and Clear Float Glass Inner Lite

Solar E Solar Control Low-E	3/32	2.5	55	10	16	41	10	41	0.33	0.28	0.33	0.29	1.9	1.6	0.48	0.55
	1/8	3	55	10	15	39	9	38	0.33	0.28	0.33	0.29	1.9	1.5	0.46	0.53
	5/32	4	54	10	15	37	9	34	0.33	0.28	0.33	0.28	1.8	1.5	0.45	0.51
	3/16	5	54	10	15	36	9	34	0.33	0.28	0.33	0.28	1.8	1.5	0.45	0.51
	1/4	6	53	10	15	33	9	31	0.32	0.27	0.33	0.28	1.8	1.5	0.43	0.49
	5/16	8	53	11	15	31	9	29	0.32	0.27	0.32	0.28	1.8	1.5	0.42	0.48

For footnotes, please refer to page 21.

Energy Advantage™ Low-E Insulating Glass Performance Data^{1,10}

[Insulating units constructed of equal glass thicknesses and 1/2" (12.7mm) airspace]

Product	Nominal Glass Thickness		Visible Light ²			Total Solar Energy ²			U-Factor ⁵						Solar Heat Gain Coefficient ⁷	Shading Coefficient ⁸
			Transmittance ³	Reflectance ⁴ %		Transmittance ³	Reflectance ⁴ %	UV Transmittance ²	U.S. Summer		U.S. Winter		European ⁶			
	in.	mm		%	Outside				Inside	%	Air	Argon	Air	Argon		

Pilkington Uncoated Float Glass Outer Lite and Energy Advantage™ Low-E Glass Inner Lite (#3 Surface)

Optifloat Clear	3/32	2.5	76	18	17	62	17	48	0.33	0.28	0.34	0.29	1.9	1.6	0.73	0.84
	1/8	3	75	18	17	59	16	45	0.33	0.28	0.33	0.29	1.9	1.6	0.71	0.82
	5/32	4	74	17	16	56	16	42	0.33	0.28	0.33	0.29	1.9	1.6	0.69	0.80
	3/16	5	74	17	17	55	15	41	0.33	0.28	0.33	0.29	1.9	1.6	0.68	0.79
	1/4	6	73	17	16	52	14	36	0.33	0.28	0.33	0.29	1.8	1.6	0.66	0.76
	5/16	8	71	16	15	47	13	32	0.33	0.28	0.33	0.28	1.9	1.5	0.63	0.72
Optifloat Grey Tint	3/8	10	69	16	15	44	12	30	0.32	0.28	0.33	0.28	1.9	1.5	0.60	0.70
	1/8	3	50	10	15	41	11	24	0.33	0.28	0.33	0.29	1.8	1.6	0.53	0.61
	3/16	5	42	8	15	32	8	17	0.33	0.28	0.33	0.29	1.9	1.6	0.45	0.51
Optifloat Bronze Tint	1/4	6	35	7	14	27	7	13	0.33	0.28	0.33	0.29	1.9	1.6	0.39	0.45
	1/8	3	57	12	15	45	12	25	0.33	0.28	0.33	0.29	1.8	1.6	0.57	0.66
	3/16	5	49	10	15	38	10	19	0.33	0.28	0.33	0.29	1.8	1.6	0.50	0.58
Optifloat Blue-Green Tint	1/4	6	44	9	14	32	8	14	0.33	0.28	0.33	0.29	1.9	1.6	0.45	0.52
	1/4	6	62	13	15	34	9	20	0.33	0.28	0.33	0.29	1.9	1.6	0.45	0.52
EverGreen High-Performance Tint	1/8	3	64	14	16	35	9	18	0.33	0.28	0.33	0.29	1.8	1.6	0.46	0.53
	3/16	5	61	13	16	31	8	14	0.33	0.28	0.33	0.29	1.8	1.6	0.41	0.47
	1/4	6	54	11	14	24	7	9	0.33	0.28	0.33	0.29	1.9	1.6	0.34	0.39
Arctic Blue High-Performance Tint	1/4	6	45	9	14	24	7	14	0.33	0.28	0.33	0.29	1.9	1.6	0.35	0.40
SuperGrey High-Performance Tint	1/8	3	21	5	14	15	5	4	0.33	0.28	0.33	0.29	1.8	1.6	0.26	0.30
	3/16	5	10	4	14	7	4	2	0.33	0.28	0.33	0.29	1.7	1.6	0.18	0.21
	1/4	6	7	4	13	5	4	1	0.33	0.28	0.33	0.29	1.7	1.6	0.15	0.18

Pilkington Eclipse Advantage™ Reflective Low-E Glass Outer Lite (#2 Surface) and Energy Advantage™ Low-E Glass Inner Lite (#3 Surface)

Eclipse Advantage Clear	1/4	6	56	27	29	39	21	18	0.30	0.25	0.31	0.26	1.7	1.4	0.51	0.59
Eclipse Advantage Grey	1/4	6	27	10	28	20	9	7	0.30	0.25	0.31	0.26	1.7	1.4	0.31	0.36
Eclipse Advantage Bronze	1/4	6	33	12	28	24	11	7	0.30	0.25	0.31	0.26	1.7	1.4	0.36	0.41
Eclipse Advantage Blue-Green	1/4	6	47	21	28	25	12	10	0.30	0.25	0.31	0.26	1.7	1.4	0.36	0.41
Eclipse Advantage EverGreen	1/4	6	41	17	28	18	9	5	0.30	0.25	0.31	0.26	1.7	1.4	0.27	0.31
Eclipse Advantage Arctic Blue	1/4	6	34	13	28	18	8	7	0.30	0.25	0.31	0.26	1.7	1.4	0.28	0.32

Pilkington Energy Advantage™ Low-E Glass Outer Lite (#2 Surface) and Clear Float Glass Inner Lite

Energy Advantage Low-E	3/32	2.5	76	17	18	62	16	48	0.33	0.28	0.34	0.29	1.9	1.6	0.67	0.77
	1/8	3	75	17	18	59	15	45	0.33	0.28	0.33	0.29	1.9	1.6	0.65	0.75
	5/32	4	74	16	17	56	14	42	0.33	0.28	0.33	0.29	1.8	1.6	0.63	0.73
	3/16	5	74	17	17	55	14	41	0.33	0.28	0.33	0.29	1.8	1.6	0.63	0.73
	1/4	6	73	16	17	52	13	36	0.33	0.28	0.33	0.29	1.8	1.6	0.61	0.71
	5/16	8	71	15	16	47	12	32	0.33	0.28	0.33	0.28	1.8	1.5	0.58	0.67
	3/8	10	69	15	16	44	12	30	0.32	0.28	0.33	0.28	1.8	1.5	0.56	0.65

For footnotes, please refer to page 21.

Performance Data

- SOME COMBINATIONS OR INSTALLATIONS MAY REQUIRE HEAT TREATING TO PREVENT GLASS BREAKAGE FROM THERMAL STRESS.**
- Visible, Total Solar and UV data are based on laboratory spectrophotometric measurements weighted by an appropriate weighting function(s) using LBNL Window 5.2 software. Wavelength ranges of the sun's energy used to calculate properties: Visible from 0.38 to 0.78 microns, Total Solar from 0.30 to 2.5 microns and UV from 0.30 to 0.38 microns.
- Transmittance – Percentage of normally incident visible light or solar energy passing directly through the glazing.
- Reflectance – Percentage of normally incident visible light or solar energy reflected away from the glazing.
- U-Factor (Btu/hr/sq-ft/°F) – Measure of the heat gain or loss through glazing due to environmental differences between the outdoor and indoor air. U-Factors given are center-of-glass values calculated using LBNL Windows 5.2. Winter U-Factors are based on an outdoor temperature of -0.4°F (-18°C), an indoor temperature of 69.8°F (21°C) and a 12.3mph (5.5m/s) wind velocity with no sun. Summer U-Factors are based on an outdoor temperature of 89.6°F (32°C), an indoor temperature of 75.2°F (24°C), a solar intensity of 248.2 Btu/hr/sq-ft (783 W/sq-m) and a 6.3mph (2.8m/s) wind. To obtain metric U-Factor (W/sq-m/°C), multiply by 5.678.

“U-Factor” is identical to the previously known term of “U-Value”.
- European U-Factor (W/sq-m/K) is based on EN 673 standard.
- Solar Heat Gain Coefficient or SHGC – The ratio of the total solar heat gain through the glass relative to the incident solar radiation. The solar heat gain includes both the solar energy directly transmitted through the glass, plus the solar energy absorbed by the glass and subsequently convected and thermally radiated inward.
- Shading Coefficient or SC – The ratio of solar heat gain through the glass relative to that through 1/8" (3mm) clear glass at normal incidence. Note that Relative Heat Gain or RHG (Btu/hr/sq-ft), which is the amount of heat gained through the glass at assumed conditions, can be calculated using the following equation: $RHG = SC(200) + U\text{-Factor} (14)$. To obtain metric RHG (W/sq-m), multiply by 3.154.
- Use of Pilkington **Energy Advantage™** Low-E or **Solar E™** Glass with the coating on the exposed interior surface may increase the possibility of condensation formation during winter conditions.
- Typical values of Pilkington production are provided.

Technical Data

- **WIND LOAD DATA**
 - For wind load charts and comprehensive technical data, please visit the Pilkington **Sun Management™** Website: www.pilkington.com/sunmanagement.
- **DESIGN AND UNIFORM STATIC LOADS**
 - ASTM Standard Practice E 1300-02 contains design load evaluation procedures for different glass thickness failure probabilities. For a copy of this standard, write to: ASTM, 100 Bar Harbor Drive, West Conshohocken, PA 19428.
 - For design and uniform static loads and comprehensive technical data, please visit the Pilkington **Sun Management™** Website: www.pilkington.com/sunmanagement.
- **Pilkington **Activ™** SELF-CLEANING GLASS PERFORMANCE DATA**
 - For **Activ™** Self-Cleaning Glass performance data, please visit the Pilkington Website: www.pilkington.com/northamerica, and refer to **Activ™** literature on the Architectural Literature Resource page.
- **TEMPERED GLASS**
 - On rare occasions, heat-treated (tempered and sometimes even heat-strengthened) glass can break spontaneously, without any applied load, due to small inclusions that may be present in all float glasses.

Monolithic Glass Standards

Pilkington Monolithic Annealed Glass Sizes

Product	Quality Levels ¹	Nominal Glass Thickness		Approx. Weight ⁴		Thickness Tolerance Range ¹				Maximum Standard Size ^{2,3}	
		in.	mm	lb/ft ²	kg/m ²	in.		mm		in.	mm
						min.	max.	min.	max.		
Optifloat Clear, Energy Advantage Low-E, Solar E Solar Control Low-E Glass, or Activ Self-Cleaning Glass	Q3	3/32 (SS)	2.5	1.2	6	0.085	0.101	2.16	2.57	96x130	2438x3302
		1/8 (DS)	3	1.6	8	0.115	0.134	2.92	3.40	102x130	2591x3302
		5/32	4	2.1	10	0.149	0.165	3.78	4.19	130x180	3302x4572
	Q1/Q3	3/16	5	2.5	12	0.180	0.199	4.57	5.05	130x204	3302x5182
	Q2/Q3	1/4	6	3.1	15	0.228	0.244	5.80	6.20		
Optifloat Heavy Clear, Energy Advantage Low-E or Solar E Solar Control Low-E Glass	Q3	5/16	8	4.1	20	0.303	0.327	7.70	8.30	130x204	3302x5182
		3/8	10	5.0	24	0.355	0.406	9.02	10.31		
Optifloat Heavy Clear		1/2	12	6.6	32	0.469	0.531	11.91	13.49	130x240	3302x6096
		5/8	16	8.2	40	0.595	0.656	15.09	16.66	130x204	3302x5182
	3/4	19	9.9	48	0.719	0.781	18.26	19.84			
Optifloat Blue-Green Tint*, EverGreen High-Performance Tint or SuperGrey High-Performance Tint	Q3	1/8* (DS)	3	1.6	8	0.115	0.134	2.92	3.40	102x130	2591x3302
		3/16*	5	2.5	12	0.180	0.199	4.57	5.05	130x204	3302x5182
		1/4	6	3.1	15	0.228	0.244	5.80	6.20		
Arctic Blue High-Performance Tint	Q3	5/32	4	2.1	10	0.149	0.165	3.78	4.19	130x180	3302x4572
		1/4	6	3.1	15	0.228	0.244	5.80	6.20	130x204	3302x5182
		3/8	10	5.2	25	0.382	0.406	9.70	10.30		
Optifloat Heavy Blue-Green Tint	Q3	5/16	8	4.1	20	0.292	0.332	7.42	8.43	130x204	3302x5182
		3/8	10	5.0	24	0.355	0.406	9.02	10.31		
Optifloat Grey Tint or Bronze Tint	Q3	1/8 (DS)	3	1.6	8	0.115	0.134	2.92	3.40	102x130	2591x3302
		3/16	5	2.5	12	0.180	0.199	4.57	5.05	130x204	3302x5182
		1/4	6	3.1	15	0.228	0.244	5.80	6.20		
Optifloat Heavy Grey Tint or Bronze Tint	Q3	5/16	8	4.1	20	0.292	0.332	7.42	8.43	130x204	3302x5182
		3/8	10	5.0	24	0.355	0.406	9.02	10.31		
		1/2	12	6.6	32	0.469	0.531	11.91	13.49	130x240	3302x6096
Eclipse Advantage Reflective Low-E Glass or Mirrorpane T.M. Transparent Mirror	Q3	1/4	6	3.1	15	0.228	0.244	5.80	6.20	130x204	3302x5182
Optiwhite Low Iron Float Glass	Q3	1/8	3	1.6	7.6	0.110	0.126	2.80	3.20	88.6x126.4	2250x3210
		3/16	5	2.6	13	0.189	0.205	4.80	5.20		
		1/4	6	3.1	15	0.228	0.244	5.80	6.20		
		3/8	10	5.2	25	0.382	0.406	9.70	10.30		
		1/2	12	6.2	30	0.461	0.484	11.70	12.30	126.4x200.8	3210x5100
		5/8	15	7.8	38	0.571	0.610	14.50	15.50		
Texture Glass (all products except as noted below)	Q5	5/32	4	2.0	10	0.142	0.157	3.60	4.00	52.0x83.9	1320x2130
		1/4	6	3.1	15	0.228	0.244	5.70	6.30		
Reeded (Texture Glass) (4mm)	Q5	5/32	4	2.1	10	0.150	0.165	3.80	4.20	52.0x83.9	1320x2130
Austral and Morisco (Texture Glass)	Q5	5/32	4	2.0	10	0.142	0.157	3.80	4.20	63.0x98.4	1600x2500
Rayado , Sparkel and Yacare (Texture Glass)	Q5	5/32	4	2.0	10	0.142	0.157	3.80	4.20	57.1x88.6	1450x2250

1. Per ASTM C 1036-01 or ISO / EN 572-2; with exception of **Texture**TM.
 2. Sizes listed may, in some cases, be too large to meet applicable static load requirements.
For comprehensive technical data, visit our Website at www.pilkington.com/sunmanagement.
 3. Certain other thicknesses and sizes may be available upon request.
 4. Based on the mean of the thickness tolerance range. Note glass density = 158 lb/cu.ft.
- * Pilkington **Optifloat**TM Blue-Green Glass: 1/8" and 3/16" are not standard products.

Warranty Information

Pilkington North America Building Products Warranties

This warranty covers Pilkington **Activ™** Self-Cleaning Glass, **Eclipse™**, **Eclipse Advantage™** Reflective Low-E Glass, **Energy Advantage™** Low-E Glass, **Mirropane T.M.™** Transparent Mirror Coated Glass Products, **Optifloat™** Clear and Tinted Glass, **Solar E™** Solar Control Low-E Glass, **TEC™** Glass, **Texture™** Glass, Tempered Glass and all Pyrolytically Coated Float Glass Products.

Glass Warranty

PILKINGTON NORTH AMERICA (“PNA”) warrants that, with proper handling and maintenance, each of its above named glass building products (or in the case of pyrolytically surfaced glass products, the glass to which the coating is applied) will meet PNA’s own published specifications (current as of the date of original factory shipment by PNA), including requirements of ASTM C 1036 and ASTM C 1048, standard specifications for flat glass and tempered glass, respectively, as made applicable by such specifications. This warranty shall extend for a period of ten (10) years from the date of original factory shipment.

Coating Warranty

PILKINGTON NORTH AMERICA (“PNA”) further warrants that, with proper handling and maintenance, the PNA applied coating on each of its above named pyrolytically surfaced glass building products will not peel under normal conditions for a period of ten (10) years from the date of original factory shipment by PNA.

Requirements for Proper Handling and Maintenance; Copies of Instructions

Each of the foregoing warranties is subject to the products having been fabricated, transported, installed, used, cleaned and maintained all in accordance with PNA’s published instructions. It is essential that fabricators, glazing contractors and providers of cleaning services be familiar with such instructions.

Copies of such instructions will be provided free of charge at any time, upon request to:

Pilkington North America
811 Madison Avenue, P.O. Box 799
Toledo, OH 43697-0799
Attn: Marketing Department
Fax: 419 247 4517

Limitation of Remedy; Inspection

PILKINGTON NORTH AMERICA’s liability under either of the foregoing warranties shall be limited to replacement of the glass with the same delivery terms as applied to the original shipment or, at PNA’s option, to refund of the purchase price. If PNA elects to replace the glass, glass furnished as such replacement will carry the same warranties for the balance of the original warranty period, and the same delivery terms that applied to the original shipment.

Such replacement or refund is the **sole remedy** provided under each of the foregoing warranties. **In no event shall PNA be responsible for glass breakage, for glass degradation or coating damage caused by seal failure in an insulating unit or ceramic frits fired onto either surface of the glass, or in any case for any costs of removal, installation or reinstallation, for loss of use, or for incidental, consequential or other damages of any kind.**

PNA reserves the right to have any glass to which the foregoing warranties apply field inspected by a qualified representative, or to have samples returned to PNA for examination and laboratory analysis.

Other Warranties Disclaimed

THE FOREGOING ARE THE ONLY WARRANTIES FOR THE ABOVE NAMED PRODUCTS. IN RESPECT TO EACH SUCH PRODUCT, PILKINGTON NORTH AMERICA MAKES NO WARRANTY OF MERCHANTABILITY, NO WARRANTY THAT SUCH PRODUCT IS FIT FOR ANY PARTICULAR PURPOSE OR USE, AND NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED.

Pilkington Pyrostop™ Glass Warranty

Pilkington **Pyrostop™** Glass warranty information is available upon request. Please contact Pilkington via fax at 419 247 4810, or call Technical Glass Products at 800 426 0279.

*1" (25mm) I.G. with 1/4" (6mm) Pilkington **Optifloat™** Blue-Green Tinted Float Glass outboard and 1/4" (6mm) Pilkington **Energy Advantage™** Low-E Glass inboard, coating on #3 surface.*

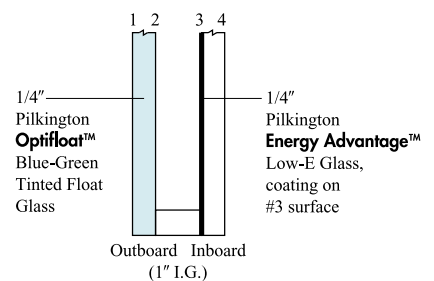
Home Mission Board of the Southern Baptist Convention; Alpharetta, Georgia

*Owner/Developer: Home Mission Board; Alpharetta, Georgia
Architect: Jova Daniels Busby, Inc.; Atlanta, Georgia*

General Contractor: Metric Constructors; Marietta, Georgia

Glazing Contractor: JAMco; Atlanta, Georgia

Fabricator: Tempered Glass, Inc.; Austell, Georgia





Pilkington Profiled Glass

An exciting alternative to glass block and other translucent materials, Pilkington **Profilit™** Profiled Glass offers a wide range of design options.



Pilkington **Profilit™** Profiled Glass

Pilkington **Profilit™** Profiled Glazing System

The Pilkington **Profilit™** Glazing System consists of unique self-supporting glass channels and an extruded metal perimeter frame, which combine to create opaque but light-transmitting walls, facades and partitions.

- **Profilit™ PROFILED GLASS** actually is an elongated “U-shaped” cast glass providing structural properties beyond normal flat glass.
- **PERIMETER FRAME** and self-supporting channels offer excellent flexibility to meet many radii and a wide range of design options.
- **SIMILAR TO** Pilkington **Texture™** Glass, Pilkington **Profilit™** Glass naturally transmits a high level of daylight, yet provides privacy due to its translucency.

- **EXCELLENT ALTERNATIVE** to glass block and other translucent materials for use in commercial and residential applications.
- **IDEAL FOR** large exterior glass facades, interior walls and glass partitions in a wide range of building types.
- **PROVEN PERFORMANCE**, the Pilkington **Profilit™** Glazing System has been widely used in Europe for more than 30 years.

Engineering, installation and technical support for Pilkington **Profilit™** Glass is coordinated by **Westcrowns, Inc.** For additional information, visit www.westcrowns.com or telephone 910 579 4441.

Your #1 Source for Glass and Glazing Information



PILKINGTON

First in Glass

Pilkington Building Products

North America

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www.pilkington.com

It's All Just a Few Keystrokes Away

All this and more are waiting for you at www.pilkington.com, your #1 source for glass and glazing information.



For more personalized assistance, to talk to one of our sales representatives, or request samples or technical information, please call Pilkington domestic sales at 800 221 0444.

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Note: Due to reproduction and printing limitations, photos may vary from actual glass colors. Please see glass samples from Pilkington.

Activ™ Glass, **Arctic Blue™** Glass, **Eclipse™** Glass, **Eclipse Advantage™** Glass, **Energy Advantage™** Glass, **EverGreen™** Glass, **Optifloor™** Glass, **Optiwhite™** Glass, **Profilit™** Glass, **Pyrostop™** Glass, **Solar E™** Glass, **Sun Management™** Glass System and **SuperGrey™** Glass are trademarks of Pilkington.

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