

# Product Data Sheet



## Aesthetic Description

*Solarban*® 70XL glass is a solar control, low-e glass that brilliantly combines the clear appearance of transparent, color-neutral glass with an exceptional combination of solar control and visible light transmittance (VLT).

The world’s first triple-silver, magnetic sputter vacuum deposition (MSVD) coating, *Solarban*® 70XL glass expands the design possibilities for buildings in two important ways. First, *Solarban*® 70XL glass enables architects to incorporate vast areas of vision glass into their designs without a corresponding increase in cooling equipment capacity.

Second, architects can specify a clear aesthetic while achieving solar control performance that was once attainable only through the use of tinted glass and a solar control, low-e coating in an insulating glass unit (IGU).

## Performance Options

When coupled with conventional clear glass in a one-inch IGU, *Solarban*® 70XL glass achieves a Visible Light Transmittance (VLT) of 64 percent and a Solar Heat Gain Coefficient (SHGC) of 0.27 to produce a Light to Solar Gain (LSG) ratio of 2.37, making it one of the industry’s highest-performing glasses.

The clear aesthetic of *Solarban*® 70XL glass also makes the product exceptionally versatile, offering architects an extensive array of performance and appearance options. For instance, for projects that require advanced solar control performance, *Solarban*® 70XL glass can be coated on the second (#2) surface of nearly all of Vitro Architectural Glass’ (formerly PPG glass) wide range of tinted glasses to produce SHGCs of as low as 0.19 and LSG ratios ranging from 1.68 to 2.15.

For more color and reflectivity choices, *Solarban*® 70XL glass may be specified on the third (#3) surface of an IGU behind a tinted lite or in combination with *Solarcool*® reflective or *Vistacool*® subtly reflective color-enhanced glasses.



Photo courtesy of Wes Thompson

The Cirque

Location: Dallas, TX | Product: *Solarban*® 70XL Glass | Architect of Record: PageSoutherlandPage | Design Architect: Gromatzky Dupree & Associates | Glass Fabricator: Trulite Glass and Aluminum Solutions | Glazing Contractor: Haley-Greer

## LEED and Sustainable Building

The center-of-glass insulating performance of *Solarban*® 70XL glass enables most glazing designs to meet the most stringent regional and local energy standards when used as part of a well-designed and constructed glazing system. In addition, *Solarban*® 70XL glass can contribute to achieving credit under LEED v4 (and earlier versions) in the categories of Energy and Atmosphere (EA), Materials and Resources (MR), Indoor Environmental Quality (IEQ) and Innovation in Design (IN) as detailed below.

Category	Feature	Benefit
<b>Energy &amp; Atmosphere (EA)</b>	SHGC: 0.19 to 0.27  U-Value: 0.26 (Summer) 0.28 (Winter)	Helps projects achieve Minimum Energy Performance and ASHRAE 50% Advanced Energy Design Guide (AEDG) energy efficiency targets in LEED v4. Exceptional solar control performance enables buildings to use less energy and control long-term energy costs.
<b>Materials &amp; Resources (MR)</b>	Regional Sourcing Cradle to Cradle Certified™ (Silver Level) Published Corporate Sustainability Statement	Can be sourced regionally throughout North America through Vitro Certified™ Fabricators. Cradle to Cradle Silver certification (Material Ingredient Optimization). Manufacturer has published a stated commitment to sustainable practices.
<b>Indoor Environmental Quality (IEQ)</b>	VLT: 32% to 64%	Provides ample visible light, connecting occupants to undistorted natural outdoor views.
<b>Innovation in Design (IN)</b>		Helps projects earn Innovation in Design credits by contributing to exemplary performance strategies through the selection of environmentally focused products.



Solarban® 70XL Glass

**Fabrication and Availability**

Solarban® 70XL glass is available exclusively through the Vitro Certified™ Network. Vitro Certified™ Fabricators can meet tight construction deadlines and accelerate the delivery of replacement glass before, during and after construction. Solarban® 70XL glass is manufactured using the sputter-coating process and is available for annealed, heat-strengthened and tempered applications.

**Additional Resources**

Solarban® 70XL glass is Cradle to Cradle Certified™. For more information or to obtain samples of any Vitro Glass product, call **1-855-VTRO-GLS (887-6457)** or visit **vitroglazings.com**.

Vitro Architectural Glass is the first U.S. float glass manufacturer to have its products recognized by the Cradle to Cradle Certified™ program, and offers more C2C-certified architectural glasses than any other float glass manufacturer.

Insulating Glass Unit Performance Comparisons | 1-inch (25mm) units with 1/2-inch (13mm) airspace and two 1/4-inch (6mm) lites

Glass Type Outdoor Lite: Coating if Any (Surface) Glass + Indoor Lite: Coating if Any (Surface) Glass	Visible Light Transmittance (VLT)	Visible Light Reflectance		(BTU/hr·ft²·°F) NFRC U-Value		Solar Heat Gain Coefficient (SHGC)	Light to Solar Gain (LSG)
		Exterior %	Interior %	Winter Nighttime	Winter Argon		
<b>Solarban® 70XL Solar Control Low-E Glass</b>							
Solarban® 70XL (2) + Clear	64	12	13	0.28	0.24	0.27	2.37
Solarban® 70XL (2) Solexia® + Clear	58	10	13	0.28	0.24	0.27	2.15
Solarban® 70XL (2) Atlantica® + Clear	51	9	12	0.28	0.24	0.24	2.13
Solarban® 70XL (2) Azuria® + Clear	52	9	12	0.28	0.24	0.25	2.08
Solarban® 70XL (2) Solarblue® + Clear	42	8	12	0.28	0.24	0.23	1.83
Solarban® 70XL (2) Pacifica® + Clear	32	6	12	0.28	0.24	0.19	1.68
Solarban® 70XL (2) Solarbronze® + Clear	40	7	12	0.28	0.24	0.21	1.90
Solarban® 70XL (2) Optigray® + Clear	47	8	12	0.28	0.24	0.24	1.96
Solarban® 70XL (2) Solargray® + Clear	34	6	12	0.28	0.24	0.20	1.70
Solexia® + Solarban® 70XL (3) Clear	56	11	12	0.28	0.24	0.32	1.75
Atlantica® + Solarban® 70XL (3) Clear	49	10	11	0.28	0.24	0.28	1.75
Azuria® + Solarban® 70XL (3) Clear	49	9	11	0.28	0.24	0.29	1.69
Solarblue® + Solarban® 70XL (3) Clear	40	8	11	0.28	0.24	0.27	1.48
Pacifica® + Solarban® 70XL (3) Clear	31	6	10	0.28	0.24	0.22	1.41
Solarbronze® + Solarban® 70XL (3) Clear	38	8	11	0.28	0.24	0.26	1.46
Optigray® + Solarban® 70XL (3) Clear	45	9	11	0.28	0.24	0.29	1.55
Solargray® + Solarban® 70XL (3) Clear	32	7	11	0.28	0.24	0.24	1.33
Graylite® II + Solarban® 70XL (3) Clear	6	4	10	0.28	0.24	0.11	0.55

**Vistacool® and Solarcool® with Solarban® 70XL Solar Control Low-E (3)\***

Vistacool® (2) Azuria® + Solarban® 70XL (3)	38	21	23	0.28	0.24	0.24	1.58
Vistacool® (2) Pacifica® + Solarban® 70XL (3)	24	11	22	0.28	0.24	0.19	1.26
Solarcool® (2) Solexia® + Solarban® 70XL (3)	22	24	27	0.28	0.24	0.17	1.29
Solarcool® (2) Azuria® + Solarban® 70XL (3)	19	19	27	0.28	0.24	0.15	1.27
Solarcool® (2) Solarblue® + Solarban® 70XL (3)	16	14	27	0.28	0.24	0.15	1.07
Solarcool® (2) Pacifica® + Solarban® 70XL (3)	12	10	27	0.28	0.24	0.13	0.92
Solarcool® (2) Solarbronze® + Solarban® 70XL (3)	15	14	27	0.28	0.24	0.15	1.00
Solarcool® (2) Solargray® + Solarban® 70XL (3)	13	11	27	0.28	0.24	0.14	0.93

\*Solarban® 70XL glass for annealed applications is applied to Starphire® glass, heat treated applications will require either clear or Starphire® glass depending on manufacturing process. All performance data calculated using LBNL Window 7.3 software, except European U-value, which is calculated using WinDat version 3.0.1 software. For detailed information on the methodologies used to calculate the aesthetic and performance values in this table, please visit [vitroglazings.com](http://vitroglazings.com) or request our Architectural Glass Catalog.

For more information about Solarban® low-e glass and other Cradle to Cradle Certified™ architectural glasses by Vitro Glass, visit [vitroglazings.com](http://vitroglazings.com), or call **1-855-VTRO-GLS (887-6457)**.

