Product Data Sheet

SOLARBAN®70
Solar Control Low-E Glass

Aesthetic Description

Solarban® 70 glass (formerly *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, magnetron sputter vacuum deposition (MSVD) coating, *Solarban®* 70 glass expands the design possibilities for buildings in two important ways. First, *Solarban®* 70 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 insulated glass unit (IGU).

Performance Options

When coupled with conventional clear glass in a one-inch IGU, *Solarban®* 70 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®* 70 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®* 70 glass can be coated on the second (#2) surface of nearly all of

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

Vitro Architectural Glass' (formerly PPG glass) wide range of tinted glasses to produce SHGCs as low as 0.19 and LSG ratios ranging from 1.68 to 2.15.

For more color and reflectivity choices, *Solarban®* 70 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.

Supporting Sustainable Design

Vitro Architectural Glass provides abundant opportunities for architects and building owners to realize their sustainability objectives.

Energy Use & Operating Cost Reduction: High-performance glasses by Vitro are engineered to facilitate downsized mechanical equipment costs, leading to reduced long-term energy costs. Visit **tools.vitroglazings.com** for glass comparison and configuration tools for analyzing glass products.

Sustainability Documentation: Vitro Architectural Glass is the first U.S. float glass manufacturer to have its entire selection of products recognized by the *Cradle to Cradle Certified™* program, and the first in North America to publish third-party verified Environmental Product Declarations (EPDs) for its Flat Glass and Processed Glass products.

For additional credit opportunities and supporting documentation, visit **vitroglazings.com/LEED**

LEED® Credit Opportunities			
Possible Points	**LEED Credit**	***Solarban®* 70 Feature**	**Path/Option Satisfied**
18	**Energy & Atmosphere (EA)** Optimize Energy Performance	Excellent SHGC, U-value and Tvis performance	Whole Building Energy Simulation (Option 1) or Prescriptive Compliance: ASHRAE Advanced Energy Design Guide (Option 2)
5	**Innovation (IN)** Innovation in Design	Exceeds minimum performance mandated by local energy codes	Innovation (Option 1), Pilot (Option 2) and Exemplary Performance (Option 3)
3	**Indoor Environmental Quality (EQ)** Daylight	Exhibits high light transmission	Simulation: Spatial Daylight Autonomy and Annual Sunlight Exposure (Option 1), Simulation: Illuminance Calculations (Option 2) or Measurement (Option 3)

Solarban® 70 Glass

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		
Solarban® 70 Solar Control Low-E Glass								
Solarban® 70 (2) + Clear		64	13	14	0.28	0.24	0.27	2.37
Solarban® 70 (2) Solexia® + Clear		56	11	14	0.28	0.24	0.26	2.15
Solarban® 70 (2) Atlantica® + Clear		49	10	13	0.28	0.24	0.23	2.13
Solarban® 70 (2) Azuria® + Clear		50	10	13	0.28	0.24	0.24	2.08
Solarban® 70 (2) Solarblue® + Clear		41	8	13	0.28	0.24	0.22	1.86
Solarban® 70 (2) Pacifica® + Clear		31	7	13	0.28	0.24	0.19	1.63
Solarban® 70 (2) Solarbronze® + Clear		39	8	13	0.28	0.24	0.20	1.95
Solarban® 70 (2) Optigray® + Clear		46	9	13	0.28	0.24	0.23	2.00
Solarban® 70 (2) Solargray® + Clear		32	7	13	0.28	0.24	0.19	1.68
Solexia® + Solarban® 70 (3) Clear		56	11	12	0.28	0.24	0.32	1.75
Atlantica® + Solarban® 70 (3) Clear		48	9	11	0.28	0.24	0.28	1.71
Azuria® + Solarban® 70 (3) Clear		49	9	11	0.28	0.24	0.29	1.69
Solarblue® + Solarban® 70 (3) Clear		41	8	12	0.28	0.24	0.27	1.52
Pacifica® + Solarban® 70 (3) Clear		31	6	10	0.28	0.24	0.22	1.41
Solarbronze® + Solarban® 70 (3) Clear		38	8	11	0.28	0.24	0.26	1.46
Optigray® + Solarban® 70 (3) Clear		46	9	12	0.28	0.24	0.28	1.64
Solargray® + Solarban® 70 (3) Clear		32	7	11	0.28	0.24	0.24	1.33
Graylite® II + Solarban® 70 (3) Clear		6	4	10	0.28	0.24	0.11	0.55
Vistacool® and Solarcool® with Solarban® 70 Solar Control Low-E (3)*								
Vistacool® (2) Azuria® + Solarban® 70 (3)		38	21	23	0.28	0.24	0.24	1.58
Vistacool® (2) Pacifica® + Solarban® 70 (3)		24	11	22	0.28	0.24	0.19	1.26
Solarcool® (2) Azuria® + Solarban® 70 (3)		19	19	27	0.28	0.24	0.16	1.19
Solarcool® (2) Solarblue® + Solarban® 70 (3)		16	14	28	0.28	0.24	0.15	1.07
Solarcool® (2) Pacifica® + Solarban® 70 (3)		12	10	27	0.28	0.24	0.13	0.92
Solarcool® (2) Solarbronze® + Solarban® 70 (3)		15	14	27	0.28	0.24	0.15	1.00
Solarcool® (2) Solargray® + Solarban® 70 (3)		13	11	27	0.28	0.24	0.14	0.93

*Solarban® 70 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 and represents center of glass performance data. For detailed information on the methodologies used to calculate the aesthetic and performance values in this table, please visit vitroglazings.com or request our Architectural Glass Catalog.

Fabrication and Availability

Solarban® 70 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® 70 glass is manufactured using the sputter-coating process and is available for annealed, heat-strengthened and tempered applications.

Additional Resources

To obtain samples of any Vitro Glass product, call **1-855-VTRO-GLS (877-6457)** or visit **samples.vitroglazings.com**. For videos, design insights and technical education, visit the Vitro Glass Education Center at **glassed.vitroglazings.com**. For glass comparison and configuration tools, visit **tools.vitroglazings.com.**

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