

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 1-inch IGU, **Solarban[®] 70XL** glass achieves 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 PPG's 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.

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



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

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
Energy & Atmosphere (EA)	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.
Materials & Resources (MR)	<i>Regional Sourcing</i> Cradle to Cradle Certified (Silver Level) <i>Published Corporate Sustainability Statement</i>	Can be sourced regionally throughout North America through PPG Certified Fabricator Network . Material ingredient optimization. Manufacturer has published a stated commitment to sustainable practices.
Indoor Environmental Quality (IEQ)	VLT: 32% to 64%	Provides ample visible light, connecting occupants to undistorted natural outdoor views.
Innovation in Design (IN)		Helps projects earn Innovation in Design credits by contributing to exemplary performance strategies through the selection of environmentally focused products.

Fabrication and Availability

Solarban® 70XL glass is available exclusively through the **PPG Certified Fabricator® Network**. PPG 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 just one of many **Ecological Solutions from PPG™**. For more information or to obtain samples of any PPG glass product, call **1-888-PPG-IDEA** or visit www.ppgideascales.com.



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

PPG IdeaScapes® Integrated products, people and services to inspire your design and color vision.

Solarban® 70XL Glass Performance — Commercial Insulating Glass Unit

Insulating Vision Unit Performance Comparisons 1-inch (25mm) units with 1/2-inch (13mm) airspace and two 1/4-inch (6mm) lites; interior lite clear unless otherwise noted											
Glass Type	Transmittance			Exterior Reflectance		U-Value (Imperial)		European U-Value	Shading Coefficient	Solar Heat Gain Coefficient	Light to Solar Gain (LSG)
	Ultra-violet %	Visible %	Total Solar Energy %	Visible Light %	Total Solar Energy %	Winter Night-time	Summer Day-time				
Coated											
SOLARBAN® 70XL Solar Control Low-E Glass*											
SOLARBAN 70XL (2)* + Clear	6	64	25	12	52	0.28	0.26	1.5	0.32	0.27	2.37
SOLARBAN 70XL (2) ATLANTICA + Clear	2	51	17	9	8	0.28	0.26	1.5	0.28	0.24	2.13
SOLARBAN 70XL (2) AZURIA + Clear	5	52	18	9	7	0.28	0.26	1.5	0.29	0.25	2.08
SOLARBAN 70XL (2) OPTIGRAY + Clear	4	47	18	8	18	0.28	0.26	1.5	0.28	0.24	1.96
SOLARBAN 70XL (2) PACIFICA + Clear	2	32	12	6	7	0.28	0.26	1.5	0.22	0.19	1.68
SOLARBAN 70XL (2) SOLARBLUE + Clear	4	42	17	8	15	0.28	0.26	1.5	0.26	0.23	1.83
SOLARBAN 70XL (2) SOLARBRONZE + Clear	3	40	15	7	19	0.28	0.26	1.5	0.25	0.21	1.90
SOLARBAN 70XL (2) SOLARGRAY + Clear	3	34	13	6	15	0.28	0.26	1.5	0.23	0.20	1.70
SOLARBAN 70XL (2) SOLEXIA + Clear	4	58	21	10	13	0.28	0.26	1.5	0.31	0.27	2.15
ATLANTICA + SOLARBAN 70XL (3)	2	49	17	10	8	0.28	0.26	1.5	0.32	0.28	1.75
AZURIA + SOLARBAN 70XL (3)	4	49	17	9	8	0.28	0.26	1.5	0.33	0.29	1.69
GRAYLITE II + SOLARBAN 70XL (3)	0	6	3	4	5	0.28	0.26	1.5	0.13	0.11	0.55
OPTIGRAY + SOLARBAN 70XL (3) STARPHIRE	3	45	17	9	18	0.28	0.26	1.5	0.33	0.29	1.55
PACIFICA + SOLARBAN 70XL (3)	2	31	12	6	7	0.28	0.26	1.5	0.26	0.22	1.41
SOLARBLUE + SOLARBAN 70XL (3)	3	40	16	8	16	0.28	0.26	1.5	0.32	0.27	1.48
SOLARBRONZE + SOLARBAN 70XL (3)	3	38	15	8	20	0.28	0.26	1.5	0.30	0.26	1.46
SOLARGRAY + SOLARBAN 70XL (3)	2	32	13	7	15	0.28	0.26	1.5	0.27	0.24	1.33
SOLEXIA + SOLARBAN 70XL (3)	3	56	20	11	13	0.28	0.26	1.5	0.37	0.32	1.75
VISTACOOOL® and SOLARCOOL® with SOLARBAN® 70XL Solar Control Low-E (3)*											
VISTACOOOL (2) AZURIA + Low-E	4	38	14	21	12	0.28	0.26	1.5	0.27	0.24	1.58
VISTACOOOL (2) PACIFICA + Low-E	1	24	9	11	9	0.28	0.26	1.5	0.22	0.19	1.26
SOLARCOOL (2) AZURIA + Low-E	1	19	6	19	10	0.28	0.26	1.5	0.18	0.15	1.27
SOLARCOOL (2) PACIFICA + Low-E	1	12	4	10	8	0.28	0.26	1.5	0.15	0.13	0.92
SOLARCOOL (2) SOLARBLUE + Low-E	1	16	6	14	16	0.28	0.26	1.5	0.18	0.15	1.07
SOLARCOOL (2) SOLARBRONZE + Low-E	1	15	6	14	19	0.28	0.26	1.5	0.17	0.15	1.00
SOLARCOOL (2) SOLARGRAY + Low-E	1	13	5	11	15	0.28	0.26	1.5	0.16	0.14	0.93
SOLARCOOL (2) SOLEXIA + Low-E	1	22	8	24	15	0.28	0.26	1.5	0.20	0.17	1.29

*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 6.3 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 www.ppgideascales.com or request our Architectural Glass Catalog.

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