

Product Data Sheet



True Color Clarity and Solar Control in One Brilliant, Affordable Package

What happens when you combine two of the most popular architectural glass products? The answer is *Solarban® 60 Starphire®* glass, a new standard product from Vitro Architectural Glass (formerly PPG Glass) that offers the unequalled transparency of *Starphire®* glass together with the proven solar control of the *Solarban® 60* solar control low-e coating in one competitively priced package.

Superior Energy Performance

Solarban® 60 Starphire® glass allows ultra-clear glass to be used for vision glass, skylights, atriums, storefronts and entryways without sacrificing energy performance. This product, used in an insulating glass unit, provides high visible light transmittance (74%) while offering superior solar control (0.41 SHGC).

Clearer than Clear

Used in a one-inch insulating glass unit with a *Starphire®* glass inboard lite, *Solarban® 60 Starphire®* glass is visibly clearer and has higher light transmittance than a conventional clear/clear low-e coated insulating unit. *Solarban® 60 Starphire®* glass also can be used in laminated glass applications and is ideal for safety, security and noise-reducing glazings. The unique clarity of *Solarban® 60 Starphire®* glass, when laminated with multiple layers of *Starphire Ultra-Clear®* glass, can dramatically reduce the greenish visual effect common with laminated clear glass.



Comcast Center

Location: Philadelphia, PA | Product: *Solarban® 60* Glass | Architect: Robert Stern Architects LLP | Glass Contractor: Enclos | Glass Fabricator: JE Berkowitz, LP

The clarity and environmental performance of *Solarban® 60 Starphire®* glass, fabricated by J.E. Berkowitz, LP, for glazing contractor, Enclos, and Robert Stern Architects LLP, are highlighted in the atrium, entryways, inset walls and crown of the soaring 62-story Comcast Tower in Philadelphia.

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 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	<i>Solarban® 60 Starphire®</i> 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® 60 Starphire Ultra-Clear® Glass

Fabrication and Availability

Solarban® 60 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® 60 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 (887-6457)** or visit samples.vitroglazings.com. For videos, design insights and technical education, visit the Vitro Glass Education Center at glossed.vitroglazings.com. For glass comparison and configuration tools, visit tools.vitroglazings.com.



Solarban® 60 Starphire® Glass Performance Comparison with Solarban® 60 on Clear Glass

Insulating Glass Unit Performance Comparisons 1-inch (25 mm) units with 1/2-inch (13 mm) airspace and two 1/4-inch (6 mm) lites								
Outdoor Lite: Coating if Any (Surface) Glass	Glass Type + Indoor Lite: Coating if Any (Surface) Glass	Visible Light Transmittance (VLT)%	Visible Light Reflectance		(BTU/hr ² ft ²⁰ F) NFRC U-Value		Solar Heat Gain Coefficient (SHGC)	Light-to-Solar Gain (LSG)
			Exterior %	Interior %	Winter Nighttime	Winter Argon		
Solarban® 60 Solar Control Low-E Glass								
	Solarban® 60 (2) Clear + Clear	70	11	12	0.29	0.24	0.39	1.79
	Solarban® 60 (2) Acuity™ + Acuity™	73	11	12	0.29	0.24	0.41	1.78
	Solarban® 60 (2) Starphire® + Starphire®	74	11	12	0.29	0.24	0.41	1.80

Solarban® 60 Starphire® Laminated Glass Performance

Solarban® 60 (2) Starphire® + interlayer + Starphire® - thicknesses as shown below												
Glass Thickness		Transmittance			Reflectance		U-Value (Imperial)		European U-Value	Shading Coefficient	Solar Heat Gain Coefficient (SHGC)	Light-to-Solar Gain (LSG)
inches	mm	Ultraviolet %	Visible %	Total Solar Energy %	Visible Light %	Total Solar Energy %	Winter Nighttime	Summer Daytime				
Solarban® 60 (2) Starphire®												
0.030" Lamination between 2-lites												
1/8	3	0	76	39	9	42	1.00	0.90	5.61	0.51	0.44	1.73
0.060" Lamination between 2-lites												
1/8	3	0	76	39	9	42	0.98	0.89	5.50	0.51	.44	1.73
1/4	6	0	76	38	9	40	0.96	0.87	5.36	0.51	0.44	1.73
0.090" Lamination between 2-lites												
1/4	6	0	76	38	9	40	0.93	0.85	5.25	0.51	0.44	1.72

* Data based on using Starphire® glass for both interior and exterior lites.

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.

For more information about Solarban® 60 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)**.

