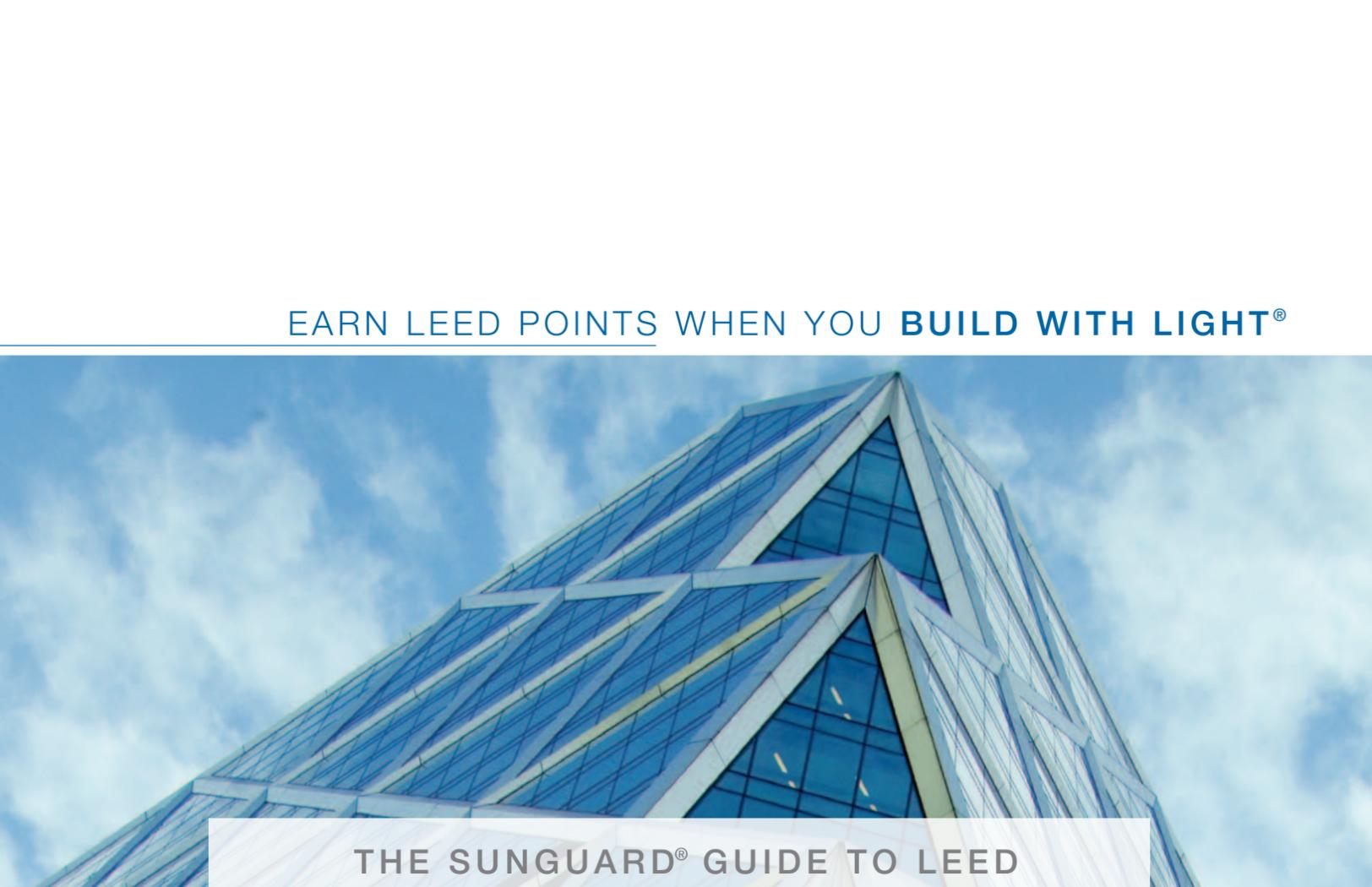


EARN LEED POINTS WHEN YOU **BUILD WITH LIGHT®**



THE SUNGUARD® GUIDE TO LEED

We make buildings greener. With Advanced Architectural Glass.

Updated for LEED Version 3





When you're looking at LEED, look to SunGuard from Guardian.

LEED means leadership in greener buildings.

Building design that enhances the indoor environment while protecting the natural environment – that's the goal of the Leadership in Energy and Environmental Design (LEED) rating system, developed by the U.S. Green Building Council.

The LEED system promotes sustainable buildings, awarding points for reducing energy use, improving indoor environmental quality and promoting a whole-building approach to sustainability.

In most cases, LEED compliance is voluntary, although more and more public- and private-sector clients are making it mandatory. In either case, we believe that ecologically responsible building is simply the right thing to do.

This brochure shows you how SunGuard Advanced Architectural Glass can help you earn credit points in five of the seven LEED categories. If you'd like more details, call Guardian at 1-866-GuardSG (482-7374).

Committed to the environment.

Guardian is proud to be a member of the U.S. Green Building Council, a coalition of building-industry leaders that promotes and creates environmentally responsible structures. Guardian is also part of the federal ENERGY STAR program, aimed at increasing energy efficiency and reducing greenhouse-gas emissions.



HEARST CORPORATION
NEW YORK, NY USA
ARCHITECT: Foster and Partners
GLAZIER: Permasteelisa
FABRICATOR: Zadra
GLASS: Guardian SunGuard SuperNeutral Series

SunGuard glass improves the environment – inside and out.

Few materials can make a building greener faster than high-performance glass. And as one of the world's leading producers of architectural glass, no one is better qualified to help your project earn LEED points than Guardian. Our SunGuard products offer the largest selection of post-temperable sputter-coated glass in the world, giving you the striking appearance you want, while delivering the comfort, functionality and energy savings you need.

Guardian SunGuard Manufacturing.

Guardian makes float glass and SunGuard coated products at multiple locations in North America.



Earning you LEED points in five categories.

LEED 2009 for New Construction v.3.0 is a voluntary standard for developing high-performance sustainable buildings. Using SunGuard glass can boost your LEED score in up to five categories. Some are very apparent; others you may not think of at first. But all of them can help you maximize your building's appearance without compromising its energy performance.

The LEED scoring system.

To qualify as LEED-certified, a building must score at least 40 of 110 possible points. Higher levels of compliance are possible, as shown below.

LEVEL OF COMPLIANCE	LEED POINTS
CERTIFIED	40-49
SILVER	50-59
GOLD	60-79
PLATINUM	80-110

Although LEED does not certify a specific product, using SunGuard Advanced Architectural Glass can help your project earn up to 34 LEED points.

LEED CATEGORY	LEED CREDIT	POSSIBLE POINTS
ENERGY AND ATMOSPHERE	Credit 1: Optimize Energy Performance	2-19
MATERIALS AND RESOURCES	Credit 4: Recycled Content Credit 5: Regional Materials	1-4
INDOOR ENVIRONMENTAL QUALITY	Credits 8.1 and 8.2: Daylight and Views	1-2
INNOVATION AND DESIGN PROCESS	Credit 1: Innovation in Design	1-5
REGIONAL PRIORITY	Credit 1: Regional Priority	1-4
GRAND TOTAL		UP TO 34

The charts on the following pages further illustrate the LEED categories, and credits as well as SunGuard Solutions for complying with LEED standards.

LEED CATEGORY	LEED CREDIT	LEED POINTS	THE INTENT
ENERGY AND ATMOSPHERE	Credit 1: Optimize Energy Performance.	2-19 LEED points.	To increase energy performance above the prerequisite standard, reducing the environmental impact of excessive energy use.
MATERIALS AND RESOURCES	Credit 4: Recycled Content 10% - 20% (post-consumer + 1/2 pre-consumer).	1-2 LEED points.	To increase demand for building products using recycled materials, reducing the need to extract and process new materials.
	Credit 5: Regional Materials: 10% - 20% extracted, processed and manufactured regionally.	1-2 LEED points.	To increase demand for building materials and products extracted or manufactured regionally, reducing the pollution caused by transporting them.
5.			

Here are three ways to comply:

- 1) Reduce energy costs compared to baseline performance rating per ANSI/ASHRAE/IESNA Standard 90.1-2007, as demonstrated by a whole-building simulation using the Building Performance Rating Method in Appendix G of the Standard.
- 2) Comply with the prescriptive measures of the ASHRAE Advanced Energy Design Guide appropriate to the project scope.
- 3) Comply with the prescriptive measures identified in the Advanced Buildings™ Core Performance™ Guide developed by the New Buildings Institute.

Our SuperNeutral®, High Performance and Solar Series give you a wide spectrum of beautiful, energy-saving choices, with varying degrees of light transmission and reflectivity. So you're truly able to build with light.

Choose from 11 types of SunGuard Advanced Architectural Glass. Most SunGuard Advanced Architectural Glass will meet the U.S. Department of Energy's "spectrally selective" definition: a light to solar gain (LSG) ratio of 1.25 or higher. SunGuard LSG ratios can approach 2.0.

SunGuard SuperNeutral 68 and SuperNeutral 54 are among the highest-performing coated glass products. With a visible light transmittance of 68% and 54%, respectively, SunGuard SuperNeutral 68 and SuperNeutral 54 can be used on the #2 surface for designs that call for a neutral appearance with maximum solar control. In addition, SuperNeutral 68 can be placed on the #3 surface in combination with a tinted or coated outboard lite for even more energy savings.

For varying degrees of color and solar heat gain coefficients, consider SunGuard's High Performance series: Light Blue 63, Royal Blue 40, Neutral 61, Neutral 50 & Neutral 40. AG 43 and AG 50 combine energy-efficient performance with medium reflectivity and light transmission.

And, of course, all SunGuard Advanced Architectural Glass:

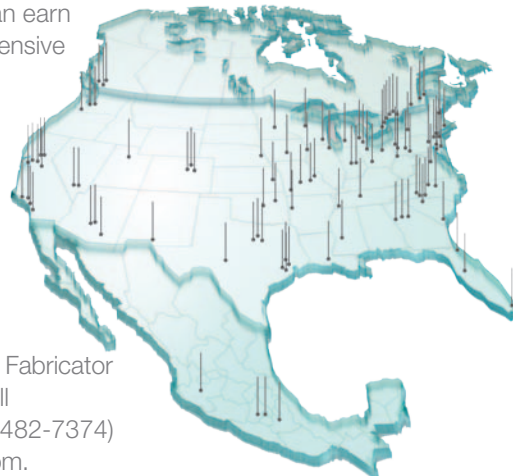
- Meets or exceeds local and/or national energy codes.
- Is available in clear or green substrates for a wider variety of color options. In addition, SuperNeutral Series coatings are available on low-iron UltraWhite™ glass, as well as, new CrystalGray®.

Use materials in such a way that the sum of post-consumer recycled content plus one-half of pre-consumer content constitutes at least 10% or 20%, based on cost, of the total value of materials in the project.

Guardian float glass, including SunGuard Advanced Architectural Glass, may contain recycled glass, of which a small amount may be pre-consumer content. Under LEED guidelines, only scrap glass brought in from other manufacturing facilities can qualify as pre-consumer, so the percentage varies depending on the location of the factory and available supply. To find the pre-consumer percentage for the Guardian factory nearest you, call 1-866-GuardSG (482-7374), or e-mail us at sunguard@guardian.com.

Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% or 20% (based on cost) of the total materials value. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) shall contribute to the region value.

The primary raw material for architectural glass is silica sand. Most Guardian plants are within 500 miles of their sand supply, which reduces energy spent in transit – and can earn LEED points. Also, with our extensive network of independent Guardian Select™ Fabricators, chances are excellent that there's one within 500 miles of your project – which can contribute to the 500-mile LEED credit. Guardian manufactures SunGuard coatings at multiple locations in the U.S. For a Guardian Select Fabricator near you (there are over 50), call SunGuard at 1-866-GuardSG (482-7374) or visit www.SunGuardGlass.com.



LEED CATEGORY	LEED CREDIT	LEED POINTS	THE INTENT
INDOOR ENVIRONMENTAL QUALITY	Credit 8.1: Daylight and Views: Daylight for 75% of spaces.	1 LEED point.	To provide a building's occupants with a connection between indoor and outdoor spaces, by allowing daylight into, and providing views from, regularly occupied spaces in the building.
	Credit 8.2: Daylight and Views: Views for 90% of spaces.	1 LEED point.	
INNOVATION AND DESIGN PROCESS	Credit 1: Innovation in Design.	1-5 LEED points.	To provide design teams and projects the opportunity to be awarded points for exceptional performance above LEED-NC requirements and/or innovative performance in Green Building categories not specifically addressed by the LEED-NC Green Building Rating System.
REGIONAL PRIORITY	Credit 1: Regional Priority.	1-4 LEED points.	To provide design teams and projects the opportunity to be awarded bonus points for achieving existing credits that USGBC chapters and regional councils have designated as important environmental issues facing the region in which the project is located.

THE REQUIREMENTS

To achieve daylight penetration to 75% of regularly occupied spaces. There are three ways to comply:

- 1) Achieve a minimum of 2% glazing factor by calculation method.
- 2) Computer simulation demonstrating a minimum daylight illumination level of 25 footcandles.
- 3) Records of indoor light measurements indicating a minimum of 25 footcandles.

Some spaces are excluded from these requirements, such as copy rooms, storage areas, mechanical plant rooms, laundry rooms and other low-occupancy support areas. Exceptions can also be made for areas where daylight could actually hinder tasks. Decisions are made based on the merits of each individual case.

Same as above but achieve a direct line of sight to vision glazing for building occupants in 90% of all regularly occupied spaces.

In writing, identify the intent of the proposed innovation credit, the proposed requirement for compliance, the proposed submittals to demonstrate compliance and the design approach (strategies) that might be used to meet the requirements.

Implement green building strategies that address the important environmental issues facing the region in which the project is located. There are six LEED credits that are prioritized, based on the environmental issues for each region and a project can be awarded as many as four extra points, one point each for achieving up to four of the six priority credits.

GUARDIAN SUNGUARD SOLUTIONS

SunGuard Advanced Architectural Glass provides a wide range of thermal and light control, giving you maximum design flexibility. SunGuard SuperNeutral 68 and SunGuard SuperNeutral 54 allow a visible light transmittance of 68% and 54%, respectively, yet are also among the highest-performing coated glass products.

Guardian also offers a variety of other SunGuard coated glass products with light transmission from 18% to over 60%.

And, of course, SunGuard Advanced Architectural Glass:

- Meets or exceeds local and/or national energy codes.
- Is available on clear, green or new CrystalGray® substrates.
- Meets the U.S. Department of Energy's "spectrally selective" definition with light to solar gain ratios of up to 1.93.

For more details, call a Guardian Architectural Sales Manager at 1-866-GuardSG (482-7374).

SunGuard Advanced Architectural Glass products can provide energy performance that substantially exceeds energy code requirements. Please contact your Guardian Architectural Sales Manager for more information on the right product for your project.

SunGuard Advanced Architectural Glass products can provide high transmittance of light with low solar heat gain to achieve priority credits.

The glass and coatings are also manufactured at several U.S. locations and distributed through a nationwide network of fabricators which may facilitate regional sourcing.





We'll help you build with light. And build LEED points, too.

Nobody offers more post-temperable sputter-coated glass options than Guardian. And our specialists are always available to help you find the best products and techniques to raise your LEED score. To find the Guardian Architectural Sales Manager nearest you, give Guardian a call at 1-866-GuardSG (482-7374) or visit www.SunGuardGlass.com.

Just some of the LEED-certified buildings using Guardian glass.

SunGuard Advanced Architectural Glass is improving the indoor and outdoor environments at these buildings, which have received or applied for LEED certification.

Azure Tower, Dallas, TX
Arundel Preserve, Hanover, MD
BioSquare D, Boston, MA
Collaboration 3, Greenville, SC
Cyan/PDX, Portland, OR
Ebeid Hospice Residence, Sylvania, OH
Fluor World Headquarters, Irving, TX
GVSU JC Kennedy Hall of Engineering, Grand Rapids, MI
Hearst Corporation, New York, NY
Heifer International, Little Rock, AR
Linden Grove Middle School, Kalamazoo, MI
National Business Park Building, Columbia, MD
Peregrine Financial, Waterloo, IA
Terrazzo, Nashville, TN
The Burnham Institute, Orlando, FL
The Proximity Hotel, Greensboro, NC
USAA Campus, Phoenix, AZ
Westminster Center South, New Westminster, BC
Winrock, Little Rock, AR

In addition, the following LEED-certified buildings use Guardian low-iron UltraWhite™ glass.

Clinton Library, Little Rock, AR
Seven World Trade Center, New York, NY

HEIFER INTERNATIONAL LITTLE ROCK, AR USA

ARCHITECT: WDSD
GLAZIER: Ace Glass
FABRICATOR: Wholesale Glass Distributors
GLASS: Guardian SunGuard SuperNeutral 68

SUNGUARD®

ADVANCED ARCHITECTURAL GLASS

www.SunGuardGlass.com

1-866-GuardSG (482-7374)



Please file in 088100 Glass.

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FSC LOGO HERE



Printed on paper containing recycled fiber.