

REMARKS

Applicant filed its Application Serial No. 87/315,018 (the “Application”) for the mark GLASS ANALYTICS for “Online non-downloadable software for designing, modeling and visualizing building glass products, for evaluating the optical, thermal, aesthetic and other characteristics thereof, and for generating reports relating to the foregoing; Online non-downloadable software for designing, modeling and visualizing building glass products, for evaluating the optical, thermal, aesthetic and other characteristics thereof, for calculating and comparing energy cost and consumption associated with such products based on characteristics of the glass, installation thereof, building parameters and site location, and for generating reports relating to the foregoing” in International Class 42 (“Applicant’s Mark”).

On April 21, 2017, the Examining Attorney issued an Office Action with a Section 2(e)(1) refusal, rejecting the Application on the basis that Applicant’s Mark merely describes a feature of Applicant’s goods and services. On October 23, 2017, Applicant filed a response arguing that Applicant’s Mark is suggestive instead of descriptive. Subsequently, the Examining Attorney issued a final Office Action on November 7, 2017 maintaining the 2(e)(1) refusal. In response, Applicant submitted a Request for Reconsideration on May 7, 2018, and argued that Applicant’s Mark has become distinctive of the goods and services identified in the Application through Applicant’s exclusive and continuous use of the mark in the U.S. commerce for over five years.

On May 9, 2018, the Examining Attorney issued the most recent Office Action, stating that because the wording in Applicant’s Mark is highly descriptive of the services identified in the Application, Applicant must provide additional evidence to support the claim of acquired distinctiveness. Additionally, the Examining Attorney maintained the Section 2(e)(1) refusal. For the reasons below, Applicant respectfully requests that the Examining Attorney’s refusal be withdrawn and that the Application be approved for publication.

I. DISCUSSION

A. Applicant's Mark is Not Merely Descriptive.

Applicant continues to disagree with the Examining Attorney's determination that Applicant's Mark is merely descriptive. Applicant renews the arguments made in its response filed on October 23, 2017 and maintains that Applicant's Mark is suggestive. Applicant also emphasizes that the Board has often stated "there is a thin line of demarcation between a suggestive mark and a merely descriptive one, with the determination of which category a mark falls into frequently being a difficult matter involving a good measure of subjective judgment." *Anheuser-Busch, Inc.*, 92 U.S.P.Q.2d 1101 (T.T.A.B. Sept. 16, 2009). "[W]here reasonable men may differ, it is the Board's practice to resolve the doubt in applicant's favor and publish the mark for opposition." *In Re Intelligent Med. Sys. Inc.*, 5 U.S.P.Q.2d 1674 (T.T.A.B. Oct. 7, 1987) (holding that the mark INTELLIGENT MEDICAL SYSTEMS for "electronic thermometers for measuring human body temperature" is not merely descriptive).

B. Alternatively, Applicant's Mark has Acquired Secondary Meaning Based on Applicant's Continuous, Exclusive and Extensive Use of the Mark in a Very Specialized Niche Market in U.S. Commerce for Over Five Years, such that the Relevant Purchasing Public Associates Applicant's Mark with Applicant and its Services.

Alternatively, Applicant submits that Applicant's Mark has acquired secondary meaning and become distinctive through continuous, exclusive and extensive use in commerce for over five years since 2011 and that the relevant purchasing public associates the GLASS ANALYTICS mark with Applicant and its services. To support this claim, Applicant attaches as evidence a copy of an executed Declaration of Eric Woodward ("Woodward Declaration"). The Declaration and enclosed exhibits demonstrate that Applicant's Mark has been in exclusive, continuous and extensive use in the commerce for over five years, and is widely recognized in the small, highly specialized niche industry in which Applicant operates—the industry of glass and glazing systems for building facades—as a mark that identifies Applicant as the source of Applicant's comprehensive suite of web-based software tools that engineer and analyze glass and glaze systems as well as the services offered in connection therewith.

1. Over 5 Years of Exclusive and Continuous Use of a Mark is *Prima Facie* Evidence of Acquired Distinctiveness.

Under Section 2(f) of the Trademark Act, proof of substantively exclusive and continuous use of a designation as a mark by an applicant in commerce for over five years before the date on which the claim of distinctiveness is made may be accepted as *prima facie* evidence of a mark's acquired distinctiveness. 15 U.S.C. 1052; TMEP 1212.05. Applicant has previously confirmed through investigation and submitted that Applicant's Mark has been in exclusive and continuous use in commerce in connection with the Class 42 services currently identified in the Application since 2011. Applicant's length of use in excess of 5 years is re-affirmed through the sworn testimony contained in the attached Woodward Declaration, as well as copies of unsolicited media coverage of the services offered in connection with Applicant's Mark dating back to as early as July 2013. Woodward Declaration, ¶ 3, Ex. D. Such evidence of exclusive and continuous use of over five years is *prima facie* evidence that Applicant's Mark has acquired distinctiveness.

2. Applicant Has Made Extensive Use of Applicant's Mark in a Small, Highly Specialized Market and the Relevant Purchasing Public, Market and Industry Recognize and Associate Applicant's Mark With Applicant and Applicant's Services.

Additionally, pursuant to the Examining Attorney's request, Applicant is submitting additional evidence to support its claim of acquired distinctiveness. Acceptable evidence for a claim of acquired distinctiveness may include "copying, advertising expenditures, sales success, length and exclusivity of use, unsolicited media coverage, and consumer studies (linking the name to a source)." *In re Change Wind Corp.*, 123 USPQ2d 1453, 1467 (TTAB 2017) (internal quotation marks omitted). As the Examining Attorney acknowledges, no single factor is determinative in establishing acquired distinctiveness. Office Action for Application Serial No. 87/315,018 Dated May 9, 2018 (citing *In re Steelbuilding.com*, 415 F.3d at 1300, 75 USPQ2d at 1424; TMEP §§1212.06 et seq.).

As the Woodward Declaration demonstrates, Applicant has used Applicant's Mark substantially, exclusively and continuously, and invested significant resources into promoting the GLASS ANALYTICS mark and the relevant goods and services through various channels, including marketing on the Internet

and presenting at national conferences and tradeshows. For example, Applicant advertises its goods and services in connection with the GLASS ANALYTICS mark on its website and has demonstrated its GLASS ANALYTICS goods and services in connection with the at the American Institute of Architect (“AIA”) Conference on Architecture, the largest annual gathering of architects and design professionals in the United States. Woodward Declaration, ¶ 5, Exs. D and H-K. Generally, hundreds of exhibitors present their products at this conference and tens of thousands of participates attend the conference. *Id.* at ¶ 5.

Moreover, the relevant purchasing public—again, a small, highly specialized sector—has frequently encountered and is well aware of Applicant’s Mark and associated goods and services. The amount and frequency of the uses of the services offered in connection with Applicant’s Mark are the strongest evidence that the relevant purchasers are familiar with Applicant’s Mark and associated goods and services, especially considering the highly specialized and discrete nature of the industry that Applicant’s Mark targets. As Eric Woodward – Treasurer of Applicant – testifies in the Woodward Declaration, Applicant’s customers, other relevant potential purchasers, industry stakeholders and Applicant’s own employees in this niche market use the services offered in connection with Applicant’s Mark and encounter Applicant’s Mark extensively and daily. Woodward Declaration, ¶ 4. The aggregate user sessions of the services offered in connection with Applicant’s Mark since 2011 are over 400,000, and in recent months of 2018, user sessions have exceeded 14,000 per month. *Id.* at Ex. C. The users who are customers, other relevant potential purchasers and industry stakeholders (i.e., those who are unrelated to Applicant) consistently exceed 70% of the total user activity, translating to more than 280,000 aggregate user sessions during the past seven years since Applicant’s Mark was first in use in 2011. *Id.* at ¶ 4. These numbers are significant when considered in the context of the small and highly specialized market of architects and design professionals that Applicant’s Mark targets (as is evidenced by the fact that the membership of AIA—the primary organization for professionals in this market—consists of fewer than 100,000 licensed architects and associated professionals throughout all of the United States, *id.* at ¶ 5). *See In re Steelbuilding.com*, 415 F.3d 1293, 1300 (Fed. Cir. 2005) (stating that a determination of acquired distinctiveness should “examine[] all of the circumstances involving the use of the mark”).

As a result of Applicant's extensive investment and marketing efforts and use of the GLASS ANALYTICS mark in connection with associated goods and services, and the relevant purchasing public's encounters with Applicant's Mark, Applicant's Mark is widely recognized in the small, niche market in which Applicant operates and has acquired distinctiveness. The high industry recognition is apparent from the various awards Applicant has received for the GLASS ANALYTICS goods and services and the significant amount of unsolicited media attention. Woodward Declaration, Exs. E-I and L-U.

II. CONCLUSION

Based on the foregoing, Applicant hereby submits that Application Serial No. 87/315,018 for the mark GLASS ANALYTICS is in condition for publication and respectfully requests action consistent therewith. Applicant requests that the Examining Attorney contact the Applicant's undersigned counsel if a telephone conference might be of assistance.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Registration of:
Guardians Industries, LLC

Filed: January 26, 2017

International Class: 42

Mark: GLASS ANALYTICS

Application No.: 87315018

Trademark Examining Attorney: Crystal Haein Yi

DECLARATION OF ERIC WOODWARD

I, Eric Woodward, make the following declaration based upon personal knowledge or information and belief and declare as follows:

1. I am Treasurer at Guardian Industries, LLC (“Applicant”). I am authorized to sign documents on behalf of Applicant in connection with the above-referenced U.S. trademark application. I make this declaration to support Applicant’s claim of acquired distinctiveness in response to the Office Action issued on May 9, 2018 in connection with Application Serial No. 87/315,018 for the GLASS ANALYTICS mark (“Application”).

2. The services offered in connection with the GLASS ANALYTICS mark (the “Services”) are the services of conducting glass and glazing system analysis for building facades through Applicant’s global suite of web-based software tools.

3. Applicant developed the non-downloadable software that offers the Services (the “Software”) in 2011, and has made continuous and exclusive use of the GLASS ANALYTICS mark in commerce for over five years. The Services are used by both the relevant purchasing public and Applicant’s employees. The relevant purchasing public is able to access the Software and the Services through registering at <https://glassanalytics.guardian.com>. Exhibit A. When the relevant purchasing public accesses this website, they see the GLASS ANALYTICS mark prominently displayed. Applicant’s employees can access and use a private version of the Software through registering at <https://performancecalculator.guardian.com>, and can also invite

non-employees to use this private version. Exhibit B. The private version differs from the public version of the Software by having enhanced functionality and a significant library of competitive products.

4. Applicant's data show that its employees, customers, and industry stakeholders in the very specialized and discrete market for engineering and designing glass and glazing systems for building facades use the Services – and therefore encounter the GLASS ANALYTICS mark -- extensively and daily. The aggregate user sessions since 2011 are over 400,000, and in recent months of 2018, user sessions have exceeded 14,000 per month. Among the users of the Services, users who are members of the relevant purchasing public not related to Applicant consistently exceed 70% of the total user activity, translating to more than 280,000 aggregate user sessions during the past seven years. Average annual usage of the Services – and encounters with the GLASS ANALYTICS mark -- is summarized in Exhibit C.

5. Since the launch of the Software and the Services, Applicant has invested significant efforts and resources in marketing and advertising the Software and the Services in connection with the GLASS ANALYTICS mark through various channels, including on the Internet and at conferences and trade shows. Below is a representative list of articles evidencing Applicant's efforts promoting the Software and the Services in connection with the GLASS ANALYTICS mark and raising the awareness of the mark with the relevant purchasing public:

- Product sheet from Applicant dated 2013 detailing the Software and the Services. Exhibit D.
- *Retrofit Magazine* web article dated July 8, 2013 announcing Applicant's release of web-based tool as part of the complete set of the Software. Exhibit E.

- Announcement showing the Software as a winner of the 2013 Architectural Products Magazine Product Innovation Awards (PIA), which honored innovation in products, materials, systems, and product applications across the non-residential design sector. Exhibit F.
- *theBIMhub* web article dated April 8, 2015 reporting Applicant's launch of the BIM Generator as part of the Software. Exhibit G.
- *Architizer Journal* article announcing Applicant's demonstration of the Software and the Services at the AIA ("American Institute of Architects") National Conference in Atlanta, Georgia in 2015. Exhibit H. The AIA membership constitutes of more than 90,000 licensed architects and associated professionals, and the AIA National Conference is the largest annual gathering of architects and design professionals. Approximately 800 exhibitors, as well as tens of thousands of visitors, were reported to be at the AIA National Conference in 2015.
- *Architizer Journal* additional article reporting Applicant's demonstration of the Software and the Services at the AIA National Conference in Orlando, Florida in 2017. Exhibit I. Approximately 800 manufacturers and vendors, as well as tens of thousands of visitors, were reported to be at the AIA National Conference in 2015.
- Applicant's brochure dated 2017 promoting various goods and services including the Software and the Services. Exhibit J.
- Webpage from Applicant's website dated 2018 detailing the Software and the Services. Exhibit K.

- National Glass Association's *Glass Magazine* web article dated 2018 announcing Applicant's launch and demonstration of new Guardian Glass Visualizer as part of the Software in Las Vegas, Nevada. Exhibit L.

6. It is particularly worth noting that Applicant developed Guardian Sustainability Calculator in 2017 as a new component of the Software in North America and the success of Guardian Sustainability Calculator further raised the awareness of Applicant's Software and Services and the GLASS ANALYTICS mark in the industry and among relevant purchasers. Guardian Sustainability Calculator is an easy-to-use digital program that allows users to see how Guardian glazing make-ups can help a project earn certification from green building rating systems. Because of its high efficiency and efficacy, Guardian Sustainability Calculator has quickly gained widespread attention and already won multiple awards since its launch, including:

- *Architectural Record*: Winner for Record Products in the Facades category;
- National Glass Association's *Glass Magazine*: 2017 Most Innovative Web Tool, App or Software Product Award; and
- *USGlass Magazine*: Readers Choice Award for Most Significant Website/Resource.

Exhibits M, N, O; *see also* Exhibit P.

7. Because Guardian Sustainability Calculator is and is always introduced as the new component of the Software, its success has drawn significant media attention and, as a result, greatly increased media exposure to the Software, the Services and the GLASS ANALYTICS mark. Below is a representative list of third-party articles discussing the Guardian Sustainability Calculator as a new component of the Software:

- *Metal Architecture* web article dated July 5, 2017 announcing launch of Sustainability Calculator. Exhibit Q.

- *Bloomberg* article dated July 6, 2017 announcing launch of Guardian Sustainability Calculator. Exhibit R.
- *Commercial Construction and Renovation* web article announcing launch of Sustainability Calculator. Exhibit S.
- *Building Enclosure* web article dated July 11, 2017 announcing launch of Sustainability Calculator. Exhibit T.
- *Healthcare Facilities Today* web article dated July 20, 2017 announcing launch of Sustainability Calculator. Exhibit U.
- *Glass Magazine* web article dated August 28, 2017 announcing 2017 Most Innovative Web Tool, App or Software Product Award for Sustainability Calculator. Exhibit P.
- *GlassOnline.com* web article dated January 10, 2018 listing awards won by Sustainability Calculator. Exhibit M.
- *PRISM* web article dated January 10, 2018 listing awards won by Sustainability Calculator. Exhibit N.
- *Intelligent Glass Solutions Magazine* web article listing awards won by Sustainability Calculator. Exhibit O.

8. As a result of the substantial use of the mark – and Applicant’s investment of efforts and resources in developing, improving and promoting the Software and the Services in connection with the GLASS ANALYTICS mark – the GLASS ANALYTICS mark is widely recognized in the industry and has acquired distinctiveness to indicate the Applicant as the source of Applicant’s Software and Services to the relevant purchasing public.

I declare under penalty of perjury that the foregoing is true and correct. Executed in Auburn Hills,
Michigan, USA on November 9, 2018.



Eric Woodward, Treasurer
Guardian Industries, LLC

EXHIBIT A



Guardian Glass Analytics is a comprehensive suite of Web-based software tools that demonstrate the advantages of high performance glass in building facades.

The Guardian Performance Calculator tool provides modeling of the thermal and optical properties for glass make-ups ranging from monolithic uncoated glass to highly complex combinations of float glass substrates, coatings and interlayers. Once a make-up has been generated in the Performance Calculator tool, users have the ability to request project specific custom BIM content using the Guardian BIM Generator tool. In addition, you can archive project information and generate client-ready reports. Once a make-up has been generated in the Performance Calculator, users have the ability to request project specific custom BIM content using the new Guardian BIM Generator.

Login to access Guardian Glass Analytics software tools.

Log In

Username / Email Address:

Password:

Remember me next time.

[Don't have an account yet? Click here to register.](#)

[Forgot your password? Click here to reset it.](#)

EXHIBIT B



Guardian Industries

Log into your Guardian Account

Username:

Password:

[Lost Username or Password?](#)

This is a confidential and proprietary system that is being provided by Guardian Industries for the exclusive use of its employees and authorized trading partners. System contacts may be monitored, traced, and recorded for the purpose of verifying that you are an authorized user. Unauthorized entry will result in civil and criminal liability.

www.guardian.com

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EXHIBIT C

Guardian Glass Analytics Average Annual Usage - Total vs. Guardian Personnel

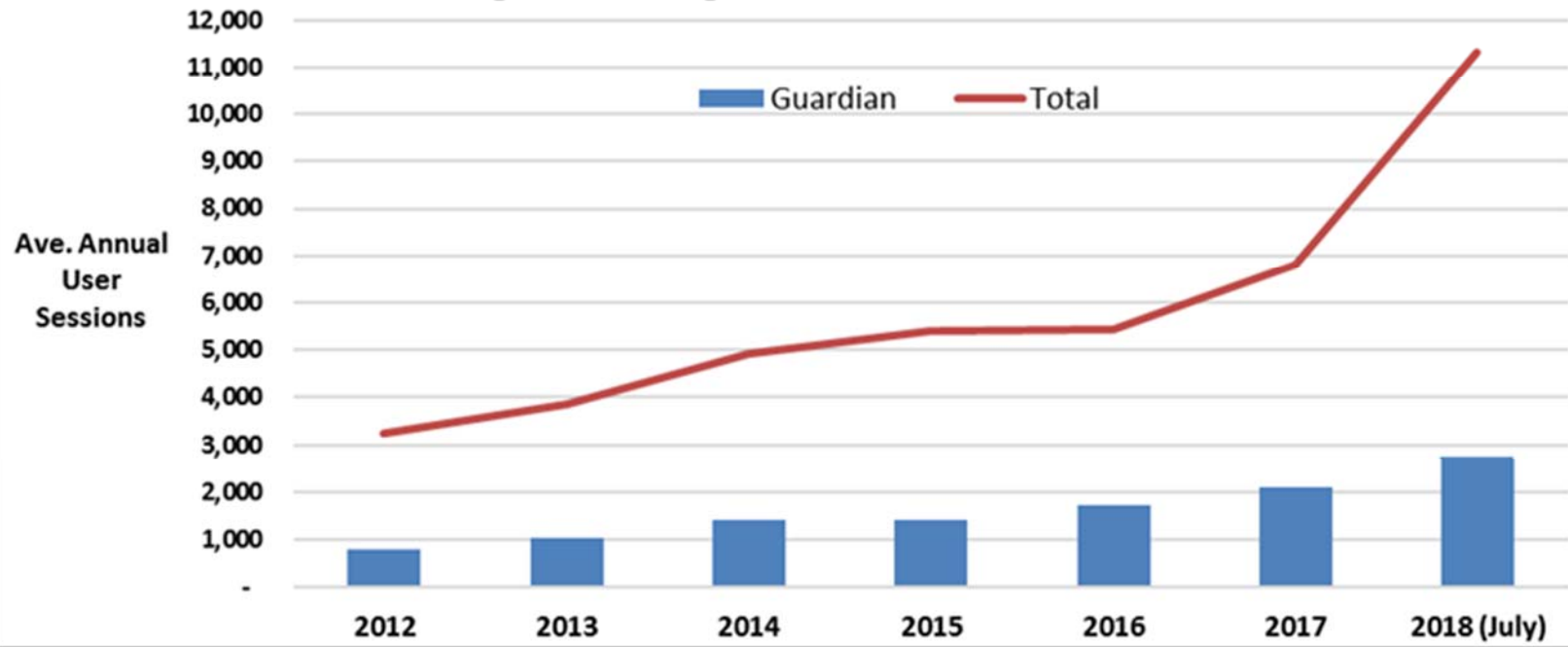


EXHIBIT D

NEW FROM GUARDIAN

Glass Analytics

ONLINE SUITE OF ENGINEERING AND ANALYTIC TOOLS FOR GLASS

Guardian Industries has developed easy-to-use, advanced software for glass and glazing system analysis. These online tools offer a comprehensive suite of engineering and analytical reports that demonstrate the advantages of high performance glass in building facades.

Guardian Glass Analytic Tools

- *Customize* product options using the *Performance Calculator*
- *Analyze* building performance using the *Building Energy Calculator*
- *Visualize and specify* using Guardian's *BIM Generator*

Customize

SunGuard's **Performance Calculator** simplifies creation of glass make-ups through a simple point-and-click, web-based interface. You can use the calculator to model the thermal and optical properties for a glass make-up ranging from monolithic uncoated glass to highly complex combinations of float glass substrates, coatings and interlayers. Easily create client-ready reports comparing glass options.



Analyze

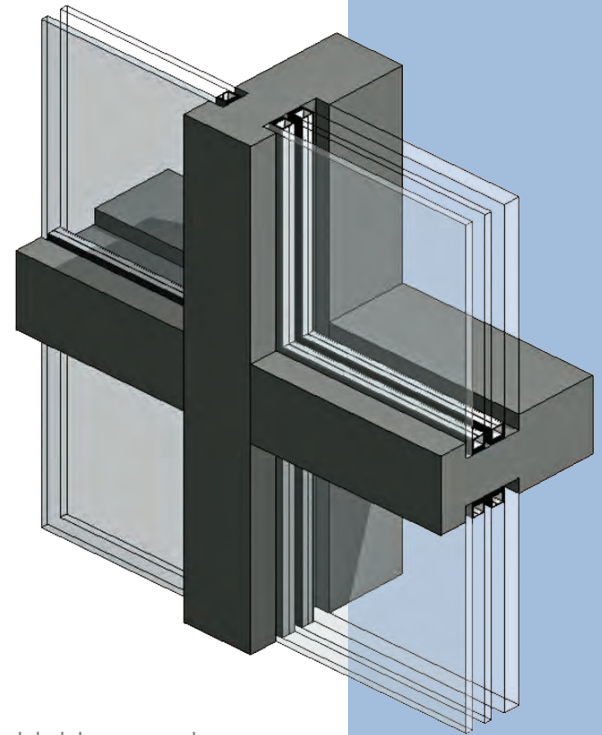
The **Building Energy Calculator** uses the make-ups created in the Performance Calculator to compare energy cost, consumption and financial payback information based on hourly simulations of glazing options, building parameters and project location. The Building Energy Calculator can be used as a schematic design tool to compare annual energy costs for a variety of exterior envelope scenarios.

Glass Analytics

ONLINE SUITE OF ENGINEERING AND ANALYTIC TOOLS FOR GLASS

Visualize

The Guardian **BIM Generator** provides thermal and optical performances of the project specific custom IG makeups. It is highly detailed content with visibility settings to control the level of detailing depending on the scale of the view. The content is created for Revit 2013 to take advantage of the material analytics within Revit for energy simulations. Parameters give the ability to control the dimensions of the spacer systems as well as control the glass bite of the unit. Any fabrication needs for heat treatment or lamination can be specified which allows for a much more detailed glazing schedule and material takeoffs.



NEW BIM Generator at a glance:

- Models project specific glass make-ups from simple to highly complex with unprecedented detail and control.
- Toggle from accurate reflectance and transmission colors with accurate reflections for amazing renderings.
- Populates content with both thermal and optical data based on installation slope for a complete picture of glass performance.
- Generates standard or custom BIM content for the entire SunGuard product line.
- Models inboard and outboard lites for accurate material takeoffs.
- Content available as Revit curtainwall panels or window-based generic models.
- Only available at SunGuardGlass.com from Guardian.

To learn more, email us at BIMhelp@guardian.com,
call us at **1-866-GuardSG (482-7374)** or
visit us online www.SunGuardGlass.com



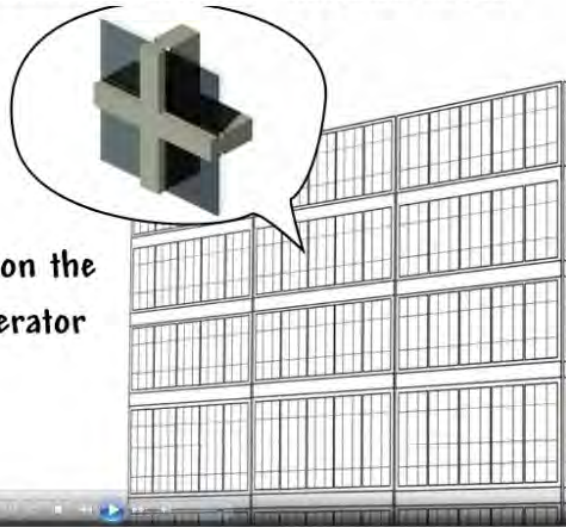
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EXHIBIT E

Online Tool Populates Glass Manufacturer Data in BIM Format

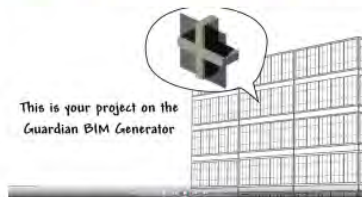
TOPICS: BIM BIM Generator Guardian Industries Online Tool Revit Seek Autodesk Web-Based



This is your project on the Guardian BIM Generator

Guardian Industries' web-based BIM Generator

POSTED BY: RETROFIT MAGAZINE EDITOR JULY 8, 2015



Guardian Industries' web-based BIM Generator

Guardian Industries has launched its web-based BIM Generator at sunguardglass.com. It populates manufacturer data for thermal and optical performances of project-specific customer IG makeups in the BIM format.

By working with the Guardian Performance Calculator, and as a part of the complete online Glass Analytics suite of tools, the tool can produce project-specific custom content. The BIM Generator creates highly detailed content that represents the correct thickness and color of the inboard and outboard lites. By leveraging visibility settings, users can control the level of detail depending on the desired scale of the view. The content is created for Revit 2013 to take advantage of Revit's material analytics for energy simulations. In addition to specific customized makeups, standard makeups will be available for download on www.SunGuardGlass.com, [Autodesk Seek](#) and [SmartBIM](#).

www.sunguardglass.com

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BE THE FIRST TO COMMENT

ON "ONLINE TOOL POPULATES GLASS MANUFACTURER DATA IN BIM FORMAT"

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the economy that is forcing our nation and others to navigate away from consumption and toward savings. The design and construction industries have experienced huge losses in revenue, opportunities and employees. However, the...

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Robert Nieminen
published 31 articles



KJ Fields
published 20 articles



Nathan M. Gillette
published 18 articles

EXHIBIT F



● The 2013 Architectural Products
● Product Innovation Awards

THE FOURTH ANNUAL ARCHITECTURAL PRODUCTS MAGAZINE
PRODUCT INNOVATION AWARDS PROGRAM

ABOUT THE AWARDS: The Architectural Products Magazine Product Innovation Awards (PIA) honor products, materials, systems and product applications innovation across the non-residential design sector.

THE ENTRANTS: PIA entries were made open and available to any and all manufacturers of products and materials who deem innovation to be a distinguishing characteristic of their offering.

THE 2013 AP PIA WINNERS

Company	Product
Accoya Wood	Accoya Wood
Acme Brick Company	Acme Brick Vision
Acuity Brands	Phuzion LED High Bay from Holophane
American Specialties, Inc.	TRI-Umph Automatic High Speed Hand Dryer
Amerlux	FINO
Arborite	Arborite INK
Armstrong World Industries	Create! custom ceiling panels
ASSA ABLOY / McKinney	Square Barrel Hinge
Banker Wire	Circle Mesh
Bendheim	Houdini Glass
Big Ass Fans	Haiku Ceiling Fan
BLANCO America	BLANCO MODEX
Bradley Corporation	Verge L-Series Lavatory System
CertainTeed Corp.	LightFrame Translucent Ceiling and Wall System
CertainTeed Corp.	MemBrain - Smart Vapor Retarder & Air Barrier Film
Construction Specialties	C/S Perform Louvers
ConXtech	ConXtech
Cooledge Lighting	Cooledge light sheet
Cooper Lighting	iLumin Remote
Cosella Dorken	DELTA-FASSADE S
Cosella Dorken	DELTA-FASSADE S / application award
Crestron Electronics	CP3N 3-Series Control System
d'ac Lighting	Cielo pendant
DAP Products Inc.	DAP SMARTBOND Construction Adhesives
Dri-Design	Tapered Series Wall Panel System
Focal Point LLC	THEORY
Fortifiber Building Sys Group	WeatherSmart Commercial
GE Albeo	ABHX-Series LED High Bay Lighting
Georgia-Pacific Gypsum	DensDeck Prime Roof Boards
GKD Metal Fabrics	Omega 1510
Graff Design	Ametis Shower System
Guardian Industries	Chihuly Glasshouse
Guardian Industries	Guardian Glass Analytics
Guardian Industries	Guardian Reveal
Gyproc, Saint-Gobain Co.	Gyptone BIG Large Format Perforated Acoustic Panels
Hansgrohe	Axor Starck Organic Collection
Hubbell / AAL	MicroCore LED Technology
Hubbell / KIM Lighting	LightVault 8
Hubbell / Prescolite	Prescolite MegaLum

Company	Product
Hunter Douglas Contract	Echelon Frame and Panel System
Hunter Douglas Contract	RB 500 Roller Shade Operating System
InPro Corporation	Contego(TM) Modular Sign System
Johns Manville	Invinsa FR
Johns Manville	JM E3co ENRGY Curb PV-Mounting Solution
Juno Lighting Group	Indy LED ChromaControl Architectural Downlights
Juno Lighting Group	Indy Performance Series LED Hyperbolic Arch Downlights
Juno Lighting Group	Trac-Master T271L Arc LED series
Klip Biotechnologies	EcoClad XP
KOHLER	Moxie showerhead
Kohler Co.	Digital Wood finishes
KONE	TransitMaster 120 Escalator
Kurt Versen / Hubbell	The Revolutionary Sustainable Platform - MultiSource
KWC Faucets	KWC ZOE
LAUFEN	Living Square SaphirKeramik
Leucos	AKI
Litecontrol	Aerial
Lumos Solar	Lumos LSX Module System
Lunera Lighting	The Helen Lamp
Lythic Solutions	DAY1 Troweling Aid & Curing Agent
Maadi Group	Make-A-Bridge
Manning Lighting	Planar series
MAPEI Corporation	Ultraflex LFT Rapid
MaxLite	Micro-T(TM) LED Lay-In Panel
MechoSystems	MagnaShade(R)
Mitsubishi Electric	CITY MULTI S-Series VRF Zoning Sys
Moen	MDura H-D manual flush valve w/AccuSet Piston Tech
Moser Contract	Thomas Moser Element Collection
NanaWall Systems Inc.	HSW60 w/Incorporated Swing Door Slide Away
NanaWall Systems Inc.	SL82 Structurally Glazed Folding System
Nathan Allan Glass Studios Inc.	Veer
Nemetschek Vectorworks, Inc.	Nemetschek Vectorworks
Nora Systems, Inc.	noraplan sentica
Overhead Door Corporation	Stormtite(TM) AP Model 627 - Advanced Insulated Rolling Service Doors
Philips Lighting	Philips Antumbra
Philips Lighting	Philips Hue
Philips Lighting	Philips Ledalite BoldPlay
Philips Lumileds	LUXEON Z
Pulp Studio	Chromavision
PureEdge Lighting	TruLine 1.6
Pureti	PURETi
RAB Lighting, Inc.	GLED LED Garage Light
Rocky Mountain Hardware	Metro Privacy Set - 3 1/2" x 13"
Rocky Mountain Hardware	Mod Sconce
Ruskin	XP500
Saint-Gobain Weber GmbH	weber.therm style Glas
Sargent / ASSA ABLOY	IN120 WiFi Access Control Lock
Sargent Manufacturing	BHW Trim
Selux Corporation	M125 LED
Sensuede	Sensuede
Sento Faucet	Sento Single Hole Faucet
Sherwin Williams	Dry Erase Coating
Sherwin Williams	Harmony Interior Acrylic Latex Paint
Simpson Strong-Tie	Strong Frame Special Moment Frame

Company	Product
Smith System	Flavors Noodle Chair
Solatube	SkyVault M74 DS
SORAA	SORAA SNAP SYSTEM
Steelcase	Gesture
Steelcase	media:scape team studio
Steelcase	V.I.A.
Tarkett	Johnsonite Finishing Borders Collection
THG Paris	Collection O
TOSHIBA- LED Lighting	TLS-RTL Roadway Luminaire
TOSHIBA- LED Lighting	TLS-DCA6 and TLS-DCA8 LED Downlights
Traxon Technologies	IMAGIC WEAVE HO / HE
Trim-Tex	Wall Mounted Deflection Bead
Trove	Heze
Unicel Architectural	Daylighting Design at Woolwich Central School
Unicel Architectural	Unicel Architectural
USAI Lighting	BeveLED 2.0 Pendant
USAI Lighting	NanoLED NXT Pendant
Vetrotech Saint-Gobain	Contraflam Structure 60 Fire-Rated Glass
VMZINC	PIGMENTO by VMZINC
Wausau Window & Wall	INvent(TM) Series Simulated Double-Hung Windows
Wilsonart	Wilsonart
Xero Flor America (XFA)	Xero Flor Green Roof System
YKK America	YES SSG TU Vent
Zola Windows	PanoramicView Series Lift-Slide Door

EXHIBIT G

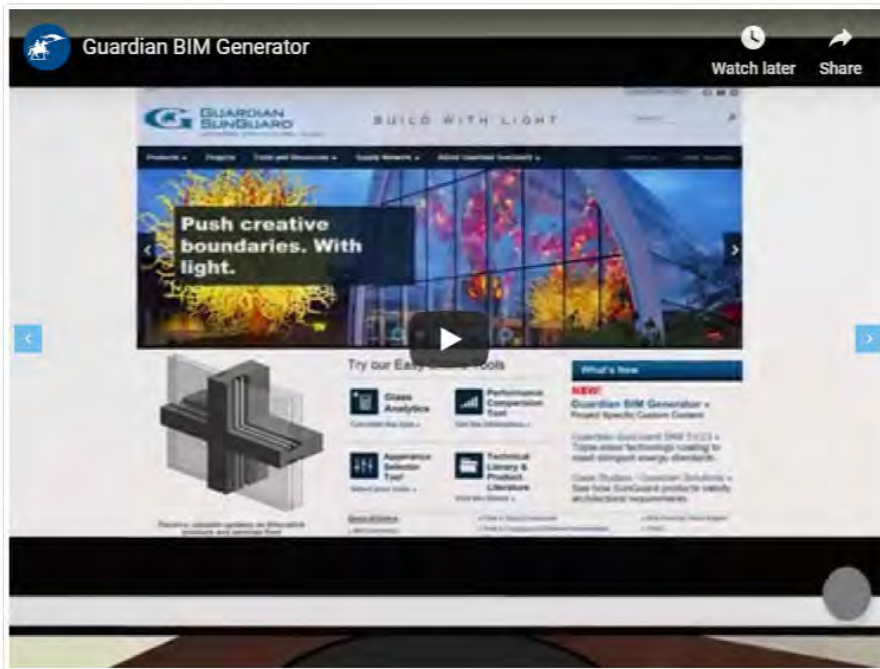


REVIEWS

The New Guardian BIM Generator for Commercial Glass Projects

TBH Editor

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April 08, 2015

The BIM Generator works with the Guardian Performance Calculator as part of a suite of online Glass Analytic tools. These tools are a comprehensive suite of engineering and analytical tools that demonstrate the advantages of high performance glass in building facades.

The Performance Calculator provides modeling of the thermal and optical properties for glass make-ups ranging from monolithic uncoated glass to highly complex combinations of substrates, coatings and interlayers. These project specific make-ups can then be integrated into the Guardian Building Energy Calculator to compare energy cost and consumption information based on hourly simulations of user specified glass make-ups, building parameters and geography. Once a selection has been made from the comparative tools, users have the ability to request project specific custom BIM content from the Guardian Performance Calculator.

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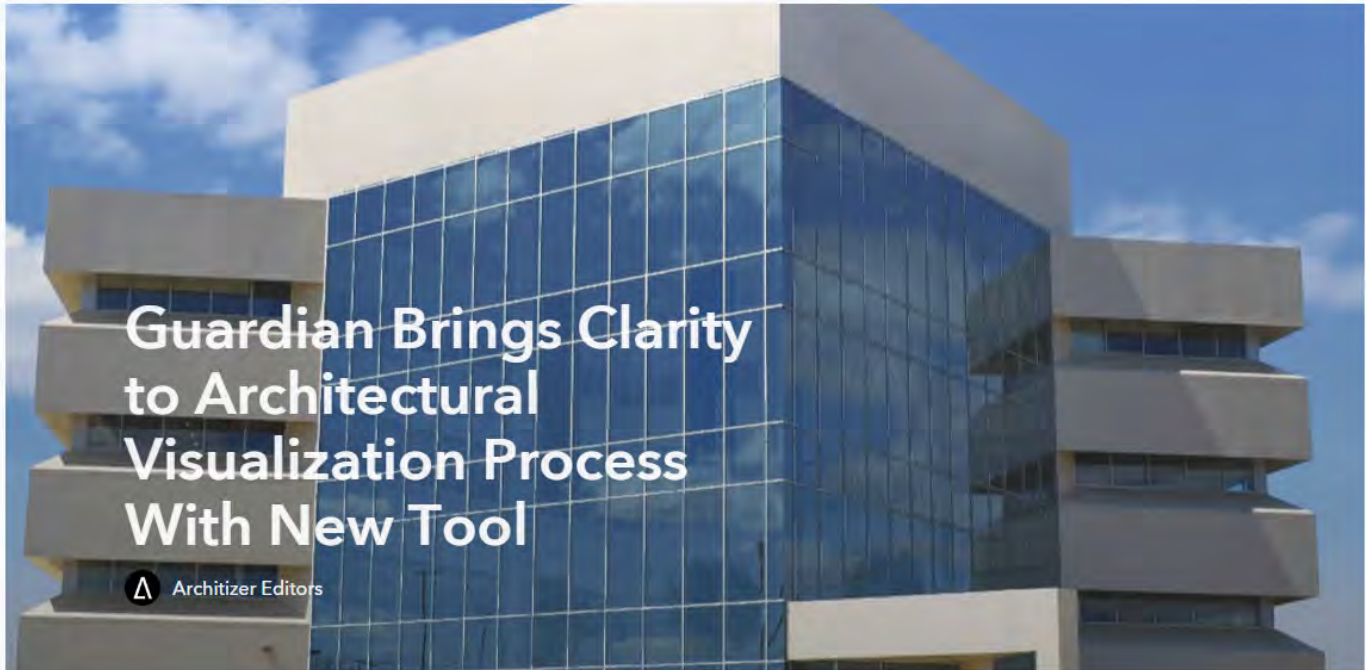


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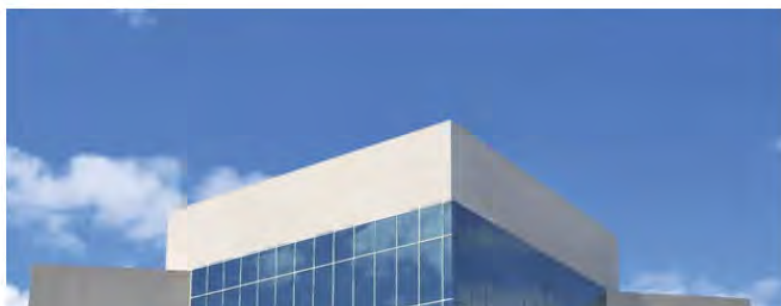


MATERIALS
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Guardian Industries Corp. will be bringing its newest digital tool to the AIA National Conference in Atlanta this month, showing how the glass manufacturer has made the glass selection easier and more efficient than ever. Founded in 1932, the Auburn Hills, Mich.-based manufacturer produces float and fabricated glass products including SunGuard® Advanced Architectural Glass, which comes in a comprehensive range of coatings that achieve varying aesthetic and performance requirements. The new Guardian Glass Visualizer uses powerful analytics to depict glass appearance as lighting and sky conditions change, assisting the architect in evaluating the aesthetic properties of virtually any glass makeup.

Guardian builds its SunGuard Advanced Architectural Glass with sputter coating, a treatment that saves a typical commercial building thousands of dollars in energy costs – not to mention earning LEED points for the reduction – and provides increased storm and security protection when combined with laminated glass. The innovative process also creates a multitude of options that give architects precise control over color and coating combinations but can be difficult to navigate and imagine in a real-world setting. To make it easier, Guardian offers a suite of online services, Glass Analytics.



.....



Guardian Glass Analytics launched with a Performance Calculator, a Building Energy Calculator, and a BIM Generator. The latest addition, the [Glass Visualizer](#), will help architects to see their designs in a different light – literally. Building upon the existing options for solar performance and energy efficiency, architects will now be able to visualize photorealistic renderings of custom glass makeups on different buildings, at different times of day, and with various sky conditions.

“Software tools for glass performance and building energy analysis have existed for years, but samples laid out on a conference room table continues to be the most common method to evaluate glass appearance,” says Collin Blackford, Guardian Regional Technical Advisor. Bringing his architectural background to the project, Blackford guided enhancements to ensure that the visualizer was built to address architects needs while staying in line with Guardian’s objectives.

“A single site visit will only help you to understand how the glass looks on the reference building under the conditions that exist on the day of the visit,” Blackford says. Surroundings, shade, size, occupancy, and interior lighting are just some of the variables that can make for a drastically different visual experience on a day-to-day and hour-to-hour basis.



Tim Singel, responsible for conceptual design and global deployment of all Glass Analytics, including the new visualizer, says, “It was Guardian’s belief that technological advancements in computing and imaging should enable the development of visualization software that would allow the user to control the conditions that affect glass appearance.” So Singel and Blackford started working together to create a program giving multiple visuals and efficiency information in one place.

They faced the challenge of figuring out how to quantify a question about their glass that can be subjective: What does it look like? The visualizer needed to do more than just generate images; it needed to provide dynamic and accurate views of buildings affected by both different options and constantly changing conditions. “From the earliest design concept of the Glass Visualizer, we were committed to delivering photorealistic rendered images,” says Singel. In order to make that a reality, the building options presented in the Glass Visualizer were created with actual photographs taken under different weather conditions.

Choose a Sky Condition

Sky conditions can dramatically affect the visual appearance of the glass.



Full Daylight



Cloudy Day



Clear Sunrise



Cloudy Sunset



Clear Night

Choose a View



The visualizer tool offers five natural lighting options: full daylight, cloudy, clear-day sunrise, cloudy-day sunset, and night. Working in line with the other advanced analytics tools, especially the Performance Calculator, design professionals can compare different custom glass. As Blackford notes, “The end result is that the Glass Visualizer allows the user to see what it looks like, whether the makeup is monolithic, clear glass, or a complex multilayer combination of substrates, coatings, interlayers, and frits.”



Comparing the different views on the glass visualizer gives the user a greater sense of how the slightest changes to the glass can radically affect a room or an exterior design. At its booth for the AIA convention, Guardian will be giving demos to show that its new technology will help designers take control

giving demos to show that its new technology will help designers take control of these variations like never before. “With this tool,” Singel says, “there is a new way for the design professional to understand how lighting will affect the appearance of glass.”

For more information on the Guardian Glass Visualizer, visit Guardian at Booth 2545 at AIA or visit guardian.com/commercial.

Related Content

EXHIBIT I



Ask the Experts: How to Bring Glass Design Concepts to Reality

Architizer Editors

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From networking to sightseeing, there were almost as many reasons to go to the AIA Conference on Architecture as there were attendees. Yet there is one goal that every participant of the American Institute of Architects’ annual convention has in common: firsthand exposure to the latest building products and design technologies at the expo portion.

This year’s convention took place in Orlando, Florida from April 27 to 29, and nearly 800 manufacturers and vendors converged on Central Florida to provide the hands-on learning that convention-goers crave.

Guardian Glass responded to architects’ desire to find new ways to build with glass with its Guardian Glass Solutions Hub.



Guardian UltraClear™, courtesy Guardian Glass

“We’ve listened to our customers and created focused topics to help our booth visitors See What’s Possible™,” says Brian Schulz, Guardian Glass North America’s products manager. The manufacturer’s booth provided on-the-spot consultations and lively five-minute talks by Guardian glass experts on areas of interest to help create better buildings.

The Guardian Glass Solutions Hub was a highlight of the exhibit hall — which sprawled over 170,000 square feet — as Guardian offered diverse glass resources to new customers and longtime clients. A rotating series of topics helped AIA attendees understand these choices and how to combine aesthetics with performance features such as light transmission, U-factor and solar heat gain to solve their design and performance challenges and inspire ideas about how to Build With Light®.



T-Mobile Arena; photo by Abstract Photography, Inc.

Bringing Design Vision to Life

Guardian Glass experts showed how the right glass and coating bring to life your design vision: A great example is the T-Mobile Arena in Las Vegas, designed by Populous Architects. This Guardian Glass project illustrates how high performance, low-E glass can work with dramatic design — in this case, bent glass. Triple silver Guardian SunGuard® SNX 51/23 glass ensures the arena’s curved façade enjoys the highest light-to-solar heat gain ratio in the industry.





University of Alaska Fairbanks Wood Center; photo © Kevin G. Smith Photography

Performance = Energy Savings and Sustainability Credits

Guardian's team also spoke about how glass can impact occupant comfort, energy savings and sustainability program qualifications. In the example of Perkins+Will's University of Alaska Fairbanks Wood Center, natural light pours into a campus destination that offers comfortable space with beautiful views year-round. The innovative curtain wall design, which includes SunGuard® SuperNeutral® 68; laminated, colored glass; a vacuum insulated panel and innovative thermal spacer, exceeded the 2030 Challenge by reducing the modeled energy use 66 percent below a typical dining hall.



University of Alaska Fairbanks Wood Center; photo © Kevin G. Smith Photography

Solutions for a Subtropical Climate

In a nod to the Orlando location, the Glass Solutions Hub was a fount of information on glass solutions for a subtropical climate. The region demands a glass that controls the sun's glare and blocks its heat, in particular: For the University of North Florida Osprey Dining Hall, Jacksonville-based DP / Smith-McCrary Architects specified triple silver Guardian SunGuard® SNX 62/27, another high performance low-E glass solution. The Guardian Glass team also reviewed use of laminated glass, often necessary in this region where hurricanes and high winds are possible.





Osprey Hall by Architect DP / Smith-McCrary Architects Inc., Jacksonville FL

Good Looks and a Work Ethic: Today's Interior Glass

It didn't stop with the façade — Guardian demonstrated how interior glass can support well-being and productivity while offering visual or acoustical privacy. Walls, partitions, tables, stairs and more allow architects and designers to pull light through interiors with exceptional clarity in the example of low-iron Guardian UltraClear™ glass, which offers very high light transmission and appears color-neutral clear to the edge, reducing the green tint.



These Guardian Glass products, additional SunGuard glass and Guardian InGlass® interior glass products, along with a comprehensive portfolio of digital services, Guardian Glass Analytics™, provided visual aids to the conversations and one-on-one interactions.

Guardian showed off the newest tool in the Glass Analytics toolbox at AIA: The Guardian Sustainability Calculator. The Sustainability Calculator gives users the power to select, evaluate and document environmental performance for Guardian SunGuard or InGlass architectural glass products.

The company also recently announced plans to construct a jumbo coater so that it can supply bigger sheets of coated glass for fabrication into glass

façades and windows. How this new investment allows the high-performing SunGuard portfolio to support more expansive views and higher daylight penetration in buildings were surely another topic of discussion.

The Guardian Glass Solutions Hub continued a long tradition of helping design professionals become fluent in the language of glass.

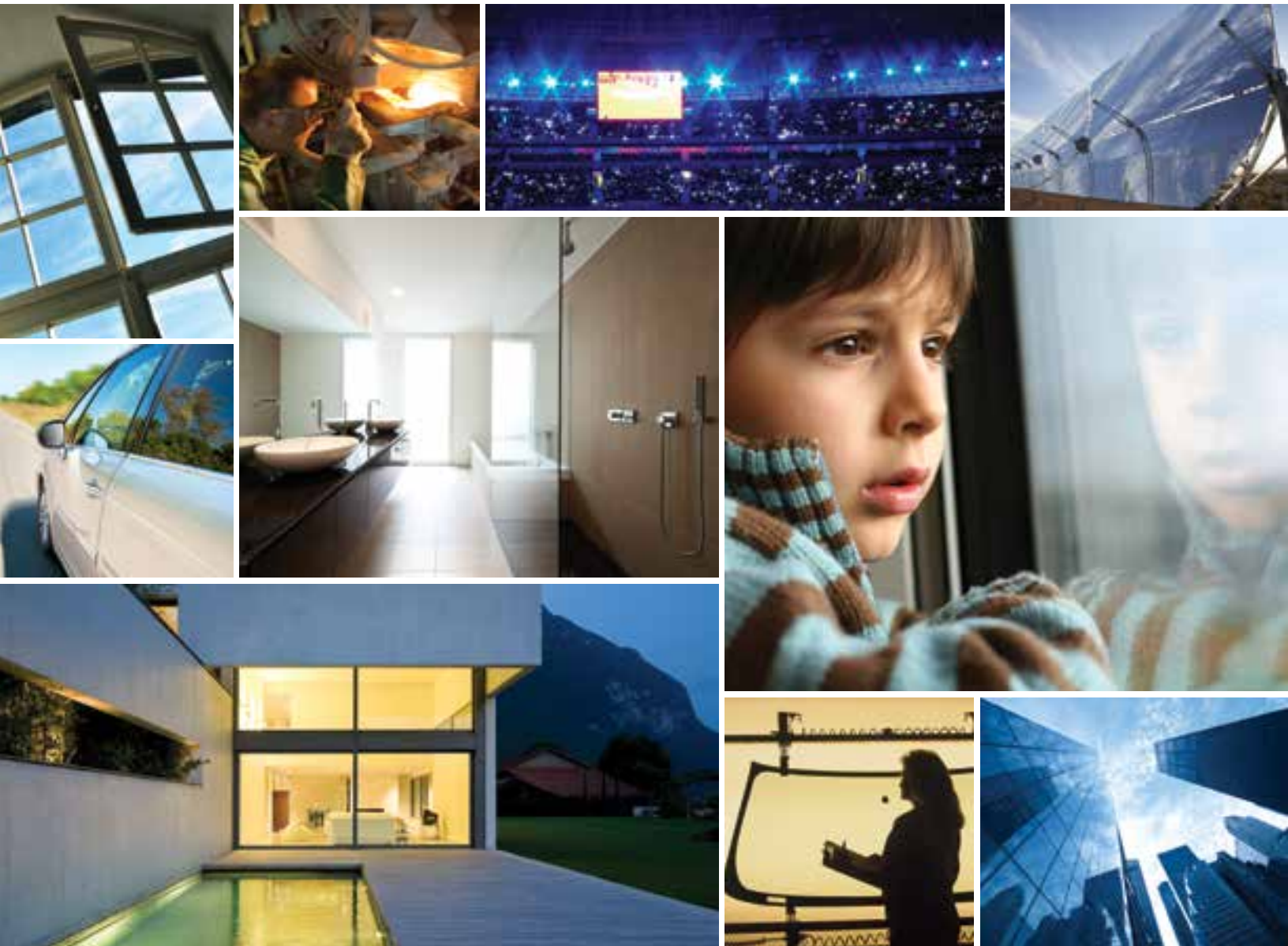
The SunGuard glass product line from Guardian Glass offers excellent solar control and a wide variety of colors and performance levels. SunGuard glass products provide innovative, leading solutions for appearance, economics and energy efficiency, and are available through an international network of independent Guardian Select® fabricators. If you missed AIA, you can still find information about SunGuard, InGlass interior products, Guardian services and the Glass Solutions Hub, by visiting guardianglass.com.

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EXHIBIT J



GUARDIAN GLASS *for* NORTH AMERICA



See what's possible™



Great glass design begins with quality float glass—a Guardian specialty

Start with quality float glass

Our float glass is available in a range of thicknesses and colors, including clear, green and other tints. We also offer specialty tints that customers can choose to control the appearance and performance of glass.

Precision glass is available in thicknesses as low as 1 mm for sophisticated technology applications including electronics, display cover glass and biomedical/life sciences.

Clear glass of the highest quality is available for a wide range of applications.

UltraClear™ low-iron is exceptionally clear, sparkling glass that welcomes abundant light.

Green glass in various shades is available for commercial, automotive and other applications.

TwilightGreen® provides excellent solar control and energy savings with a rich green color.

Gray glass is industry-standard tinted float glass to help control solar heat gain and provide aesthetic options.

CrystalGray® is light gray in color and transmits visible light well while reducing solar heat gain.

CrystalBlue™ is a beautiful, soft blue color with outstanding light transmission and energy performance.

MidnightGray™ offers excellent solar control, energy savings and privacy with a dark gray color.

Add exceptional value

As part of our manufacturing process, we can infuse glass with special properties, helping our customers achieve impressive performance and dramatic visual effects. We can improve safety, increase comfort, lower cost, preserve a like-new look, include color and graphics, add privacy and more.

Heat-treated glass, including heat-strengthened and tempered glass, resists breakage and, if broken, fractures in a way that reduces the likelihood of serious injury.

Laminated glass delivers strength, beauty and sound control with abundant color options by bonding a plastic interlayer between two or more panes of glass under heat and pressure.

Coated glass can heighten performance in a number of ways, including increasing energy efficiency, reducing solar heat gain, virtually eliminating reflection, resisting scratches and corrosion under harsh conditions, and more.

Mirror glass is beautifully reflective, durable, easy to clean and long-lasting.

Textured and etched glass, including our exclusive Berman Glass editions designer textures, add depth, drama and degrees of privacy to a range of applications.

Collaboration

We collaborate with our clients to solve their glass needs. And we support them every step of the way with extensive technical resources and powerful online tools.

In the pages that follow, we describe a selection of our products for commercial, residential, interior, security and automotive applications. Ask us to learn more—or to collaborate on something altogether new.



SunGuard SuperNeutral 68, SuperNeutral 54 and AG 50 helped create the impressive Swedish Hospital, Issaquah, Washington.

Expert customer care

Guardian offers unique capabilities and quality craftsmanship from production to installation via our independent Guardian Select® Fabricator Network and Glazier Connection partners. Professionals in these exclusive groups have completed a rigorous training and certification process administered by Guardian. This network also enables glass to be fabricated closer to the project location, shortening delivery times, which may help the project earn LEED credit.

SunGuard's online home at SunGuardGlass.com provides a wide array of product information, as well as intuitive tools and resources to help architects specify SunGuard products. Our new Glass Analytics online suite of engineering and analytic tools for glass demonstrate the advantages of high performance glass in building facades and include the Performance Calculator, Building Energy Calculator, BIM Generator and Glass Visualizer. Other resources found online are a searchable project database, a performance comparison tool and our Guardian Select Fabricator and Glazier Connection locators.

Knowledge sharing

Guardian participates in the American Institute of Architects Continuing Education System (AIA/CES) by providing seminar presentations that architects can attend to build their glass knowledge and, in most cases, earn Health, Safety and Welfare credits. Online education is also available at continuingeducation.construction.com, in cooperation with BNP Media.

Call 866.482.7374, email SunGuardGlass@Guardian.com or visit SunGuardGlass.com to learn more.

GREEN BUILDING ADVANTAGE

SunGuard products offer tremendous energy savings and more. They can contribute to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program for commercial projects in five categories: Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, Innovation in Design and Regional Priority.

ShowerGuard® is the first bath and shower glass that provides permanent protection against corrosion and discoloration. Manufactured and sealed with Guardian's patented ion-beam process, ShowerGuard shower enclosures, glass doors and washroom surfaces maintain a like-new appearance for years to come.

SatinDeco® acid-etched glass is smooth to the touch and easy on the eyes. The satin-smooth, translucent finish of SatinDeco obscures the view through the glass while maintaining a high level of light transmittance. Add interest and a touch of privacy with SatinDeco windows, dividers, tabletops and more.

UltraMirror® corrosion-resistant mirror is beautifully reflective and stays that way, resisting moisture, chemicals and abrasions. In hospitality restrooms and other high-traffic settings, UltraMirror can heighten beauty and reduce the cost of cleaning and replacement.



UltraClear™ low-iron float glass delivers maximum clarity and color neutrality—clear to the edge. Without the green tint of standard float glass, it elevates light transmission and presents views that are true to life.

Berman Glass editions is a series of signature glass textures hand-designed by pioneering glass artist Joel Berman. Each is pressure-formed in volume to fit your budget and timeframe. Exclusively manufactured and distributed by Guardian, this series invites architects and designers to transform almost any setting with the look of custom glass.

Standard textures lend privacy and dimension with a wide range of options at an exceptional value.

Laminated glass delivers advanced safety and sound control by bonding two panes of glass with a variety of interlayers – available in a rainbow of colors.

DiamondGuard® scratch-resistant glass is infused with carbon strength, resists scratching and looks like new longer than ordinary glass. Consider it for everything from tabletops to windows and walls. This product's endurance in the real world redefines the possibilities for glass.

Reveal™ switchable glass transitions from clear to opaque with the flip of a switch, for ultimate privacy control in conference rooms, consultation spaces, enclaves and more. Create dynamic spaces that shift with user needs and introduce it everywhere privacy and light matter.

Call 855.58.GLASS (855.584.5277), email Info@GuardianInGlass.com or visit GuardianInGlass.com to learn more.

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Geneva, NY	50 Forge Avenue, Geneva, NY 14456	315.787.7000
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We're here to help

There's a lot to know about glass—and Guardian. But above all, you should know that we're here to help.

We'd love to learn about your project and collaborate on a solution. Our engineers, suppliers, sample systems and online tools stand ready to support you from concept to completion.

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Headquartered in Auburn Hills, Michigan, Guardian Glass is a leading international manufacturer of float, value-added coated, and fabricated glass products and solutions for architectural, residential, interior, transportation and technical glass applications. To learn more, visit Guardian.com.

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EXHIBIT K

Home » Tools and Resources » Evaluation Tools » Glass Analytics

Glass Analytics

Online Suite of Engineering and Analytic Tools for Glass

Guardian Industries has developed easy-to-use, advanced software for glass and glazing system analysis. These online tools offer a comprehensive suite of engineering and analytical reports that demonstrate the advantages of high performance glass in building facades. Read more about the tools below, or [register and start using Glass Analytics now!](#)



NEW: Evaluate with the Sustainability Calculator

Architects and designers can now efficiently evaluate environmental performance attributes of Guardian glass products with the new Guardian Sustainability Calculator. This easy-to-use digital program helps users see how Guardian glazing make-ups can help a project earn certification from green building rating systems such as LEED®, the Living Building Challenge and the WELL Building Standard.

[» Use the Sustainability Calculator](#)



Customize with Performance Calculator

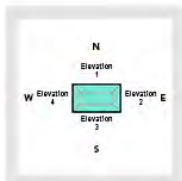
SunGuard's Performance Calculator simplifies creation of glass make-ups through a simple point-and-click, web-based interface. You can use the calculator to model the thermal and optical properties for a glass make-up ranging from monolithic uncoated glass to highly complex combinations of float glass substrates, coatings and interlayers. Easily create client-ready reports comparing glass options.



Visualize with Guardian's Glass Visualizer

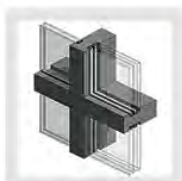
The Guardian Glass Visualizer dynamically generates photo-realistic images of both exterior and interior glazing views. It allows the user to evaluate the aesthetic properties of virtually any glass make-up. Just choose the glass you want to visualize, select the building and perspective that suites you, and watch how various sky conditions affect the appearance of the glass.

[» Try the Glass Visualizer \(Standard Products\)](#)



Analyze using the Building Energy Calculator

The Building Energy Calculator uses the make-ups created in the Performance Calculator to compare energy cost, consumption and financial payback information based on hourly simulations of glazing options, building parameters and project location. The Building Energy Calculator can be used as a schematic design tool to compare annual energy costs for a variety of exterior envelope scenarios.



Design using Guardian's BIM Generator

The Guardian BIM Generator provides thermal and optical performances of the project specific custom IG makeups. It is highly detailed content with visibility settings to control the level of detailing depending on the scale of the view.

The content is created for Revit 2013 to take advantage of the material analytics within Revit for energy simulations.

Parameters give the ability to control the dimensions of the spacer systems as well as control the glass bite of the unit. Any fabrication needs for heat treatment or lamination can be specified which allows for a much more detailed glazing schedule and material

Glass Visualizer (Standard Products)

Glass Analytics

Performance Comparison Tool

Sustainability Calculator

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takeoffs. [» Learn more about Guardian's BIM Generator.](#)

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EXHIBIT L

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Integrated pyrometer designed for the glass industry

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Glass Visualization Tool from Guardian Industries

COMMERCIAL, RETAIL, FABRICATION



Architects and designers can now see an accurate visual impression of Guardian SunGuard exterior coated glass products under varying lighting conditions with the new Guardian Glass Visualizer, according to officials from Guardian Industries.

An online tool available in North America at sunguardglass.com, the Glass Visualizer is the newest edition to the suite of Glass Analytic services from Guardian that includes the Performance Calculator, Building Energy Calculator and BIM Generator. With the Glass Visualizer,

architects can visualize standard SunGuard glass make-ups, or custom glass make-ups generated using Guardian's Performance Calculator. Users can choose the glass they want to see, select the building type option, and see what the glass will look like under varying sky conditions.

The Visualizer has five outdoor settings: full daylight, cloudy, clear day sunrise, cloudy day sunset and night, and four views. There are two different exterior views to see what the glass looks like from outside looking in; and also two interior views looking out. Realistic photo images help create an accurate color impression, including reflected outside color which is what you would typically see from outside a building, and transmitted color, which is the color looking through the glass.

See the Glass Visualizer at GlassBuild America Sept. 9-11 in Las Vegas. Visit Guardian at booth 1515, or access the Visualizer from Guardian's Glass Analytics page at SunGuardGlass.com.

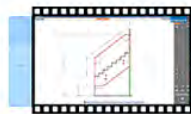
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EXHIBIT M



Home > NEWS > Guardian sustainability calculator wins multiple awards

NEWS Other news

Guardian sustainability calculator wins multiple awards

10 January 2018

6



Guardian’s digital tool evaluates the company’s glazing product performance in green rating systems.

The Guardian Sustainability Calculator’s launch has garnered Guardian Glass an unprecedented three awards from the architectural and glass trade media.

A digital program, the Sustainability Calculator helps architects and designers review how glazing make-ups from Guardian Glass can help a project earn certification from green building rating systems such as LEED®, the Living Building Challenge and the WELL Building Standard.

This tool clearly resonated with the judges and readers for these award programs:

- * Architectural Record Products – The Sustainability Calculator was a winner in the Facades category.
- * Glass Magazine Award – The Sustainability Calculator won in the category of Most Innovative Web Tool, App or Software Product.
- * USGlass Magazine Readers Choice Award – Readers named the Sustainability Calculator Most Significant Website/Resource.

“The Guardian Sustainability Calculator gives you the power to select Guardian exterior or interior coated glass products, evaluate them and document their contribution potential,” explains Brian Schulz, product manager, Guardian Glass North America. “We’re honored that the judges for Architectural Record and Glass Magazine, and the readers of USGlass Magazine, recognize how the Sustainability Calculator helps architects and designers see what’s possible™ and aids in the specification process.”

As the newest component of Guardian Glass Analytics™ for North America, the Sustainability Calculator joins the Performance Calculator, Building Energy Calculator, BIM Generator and the Glass Visualizer. Together, these industry-leading tools provide comprehensive engineering and analytical modelling and custom glass content that create value for users by demonstrating the advantages of high performance glass in building façades.

Guardian Glass, a major business unit of Guardian Industries, is one of the world’s largest manufacturers of float, coated and fabricated glass products. At its 25 float plants around the globe, Guardian Glass produces high performance glass for use in exterior (both commercial and residential) and interior architectural applications, as well as transportation and technical products. The Guardian Glass Science & Technology Center continuously works to create new glass products and solutions using the most advanced technology to help customers see what’s possible™.

TAGS architectural and glass building fa coated custom glass content exterior or interior coated glass products fabricated glass products float glazing makeups green building rating systems high performance glass industryleading tools

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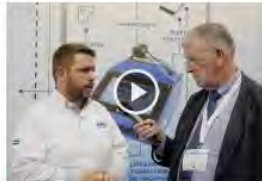
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Guardian Sustainability Calculator Wins Multiple Awards

Posted by PRISM | Jan 18, 2018 | 0 ● | ★★★★★



The award-winning Guardian Sustainability Calculator helps architects and designers review how glazing make-ups from Guardian Glass appear and how they can help a future project earn certification from green building rating systems such as LEED®, the Living Building Challenge and the WELL Building Standard.

Digital Tool Evaluates Guardian Glazing Product Performance In Green Rating Systems

Auburn Hills, Mich. – December 14, 2017 – The [Guardian Sustainability Calculator](#)'s launch has garnered Guardian Glass an unprecedented three awards from the architectural and glass trade media.

A digital program, the Sustainability Calculator helps architects and designers review how glazing make-ups from Guardian Glass can help a project earn certification from green building rating systems such as LEED®, the Living Building Challenge and the WELL Building Standard.

Product Analysis



SNR 43 on Clear

Transmission	Heat Gain	Transmitted Color
Visible Light %: 43	Relative: 56	<input type="color"/>
UV %: 17	Shading Coefficient: 0.26	Reflected Color
Solar Energy %: 18.9	Solar Coefficient: 0.228	<input type="color"/>
Reflectivity	Light-to-Solar: 1.89	
Visible Light Out %: 27.6	U-Value	
Visible Light In %: 14	Winter Nighttime Air: 0.268	
Solar Energy %: 43.1	Summer Daytime Air: 0.268	

Health Product Declaration	Link
Simple Dax Energy Modeling	Link
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Manufacturing Location: Hickory, SC, Geneva, NY
 Fabrication Location: BVGlazing Systems LTD., Residential Division, Concord, ON

SNR 43 on Clear Credit Contribution Summary

LEED® V4 BDC New Construction

IPc1: Integrative Process
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SSc5: Heat Island Reduction
 SunGuard Advanced Architectural Glass products can be used to reflect solar energy and reduce the heat island effect. Contributes

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This tool clearly resonated with the judges and readers for these award programs:

Architectural Record Record Products – The Sustainability Calculator was a winner in the Facades category.

Glass Magazine Award – The Sustainability Calculator won in the category of Most Innovative Web Tool, App or Software Product.

USGlass Magazine Readers Choice Award – Readers named the Sustainability Calculator Most Significant Website/Resource.

“The Guardian Sustainability Calculator gives you the power to select Guardian exterior or interior coated glass products, evaluate them and document their contribution potential,” explains Brian Schulz, product manager, Guardian Glass North America. “We’re honored that the judges for *Architectural Record* and *Glass Magazine*, and the readers of *USGlass Magazine*, recognize how the Sustainability Calculator helps architects and designers see what’s possible™ and aids in the specification process.”

As the newest component of [Guardian Glass Analytics™](#) for North America, the Sustainability Calculator joins the Performance Calculator, Building Energy Calculator, BIM Generator and the Glass Visualizer. Together, these industry-leading tools provide comprehensive engineering and analytical modeling and custom glass content that create value for users by demonstrating the advantages of high performance glass in building facades. For more information, visit guardianglass.com.

Guardian Glass

Guardian Glass, a major business unit of Guardian Industries, is one of the world’s largest manufacturers of float, coated and fabricated glass products. At its 25 float plants around the globe, Guardian Glass produces high performance glass for use in exterior (both commercial and residential) and interior architectural applications, as well as transportation and technical products. You’ll find Guardian glass in homes, offices, cars and some of the world’s most iconic architectural landmarks. The Guardian Glass Science & Technology Center continuously works to create new glass products and solutions using the most advanced technology to help customers see *what’s possible™*. Visit guardianglass.com.

Guardian Industries

Guardian Industries, a global company headquartered in Auburn Hills, Michigan, employs around 17,000 people and operates facilities throughout North America, Europe, South America, Africa, the Middle East and Asia. Guardian’s diverse group of companies are involved in the manufacture of high-performance float, coated and fabricated glass products; the manufacture of high-quality chrome-plated and painted plastic components for the automotive and commercial truck industries; and the distribution of specialty building products. Guardian’s vision is to create value for customers and society through constant innovation using fewer resources. Guardian is a wholly owned subsidiary of Koch Industries, Inc. Visit guardian.com.

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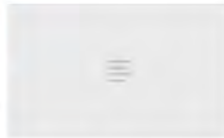
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Guardian Sustainability Calculator Wins Multiple Awards



The *Guardian Sustainability Calculator's* launch has garnered Guardian Glass an unprecedented three awards from the architectural and glass trade media.

A digital program, the Sustainability Calculator helps architects and designers review how glazing make-ups from Guardian Glass can help a project earn certification from green building rating systems such as LEED, the Living Building Challenge and the WELL Building Standard.

This tool clearly resonated with the judges and readers for these award programs:

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- *Glass Magazine* Award – The Sustainability Calculator won in the category of Most Innovative Web Tool, App or Software Product.
- *USGlass Magazine* Readers Choice Award – Readers named the Sustainability Calculator Most Significant Website/Resource.

The Guardian Sustainability Calculator gives you the power to select Guardian exterior or interior coated glass products, evaluate them and document their contribution potential. We're honored that the judges for Architectural Record and Glass Magazine, and the readers of USGlass Magazine, recognize how the Sustainability Calculator helps architects and designers see what's possible™ and aids in the specification process.

— BRIAN SCHULZ, PRODUCT MANAGER, GUARDIAN GLASS NORTH AMERICA

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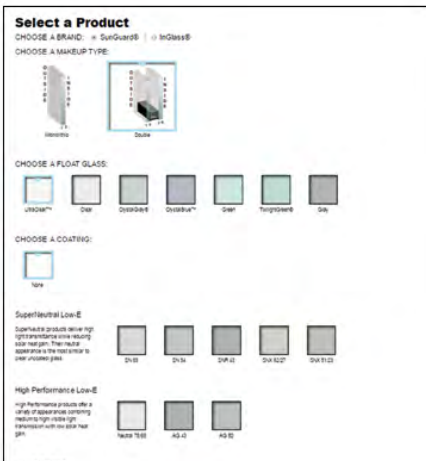
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Most Innovative Web Tool, App or Software Product Guardian Sustainability Calculator Guardian Glass

An easy-to-use, new digital tool, the Guardian Sustainability Calculator from Guardian Glass helps architects and designers determine how Guardian glass make-ups can help a project earn certification from green building rating systems such as LEED, the Living Building Challenge and the Well Building Standard, according to company officials. Users can select, evaluate and document environmental performance of Guardian SunGuard and Guardian InGlass products.

"Today's architects and designers are committed to creating sustainable buildings, both new construction and retrofits. The process is already a complicated endeavor [and] adding an additional layer of navigating green building rating systems is daunting," says Tim Singel, director, technical advisory systems, Guardian Glass. The calculator "was developed ... as a way for users to easily evaluate Guardian SunGuard and InGlass products, reducing the intimidating green rating system to quick data entry that generates a report that's easy to process."



Select a Product

CHOOSE A BRAND: SunGuard InGlass

CHOOSE A MAKEUP TYPE:

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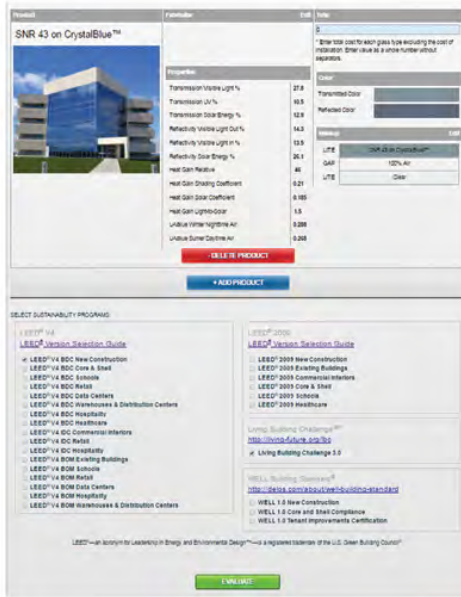
SuperNeutral Low-E
SuperNeutral products allow high light transmittance while reducing solar radiation. They have superior solar control to other window films.

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The tool asks users to complete two simple steps to determine how standard make-ups of SunGuard and InGlass products can help a project achieve credit certification, according to officials. Users begin by entering a few basic project details and selecting one or more products. Users then identify the sustainability program or programs of interest and click the "Evaluate" button. Results are viewable on the screen and as an output report.

The Sustainability Calculator, which Singel says is the first of its kind in the glass manufacturing industry, expands Guardian's digital toolbox. Via Guardian Glass Analytics, architects and designers can use the Sustainability Calculator with the Performance Calculator, Building Energy Calculator, BIM Generator and the Glass Visualizer to provide comprehensive engineering and analytical modeling and custom glass content that demonstrate the advantages of high performance glass in building façades.



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Guardian Glass Launches New Sustainability Calculator

Posted July 05, 2017

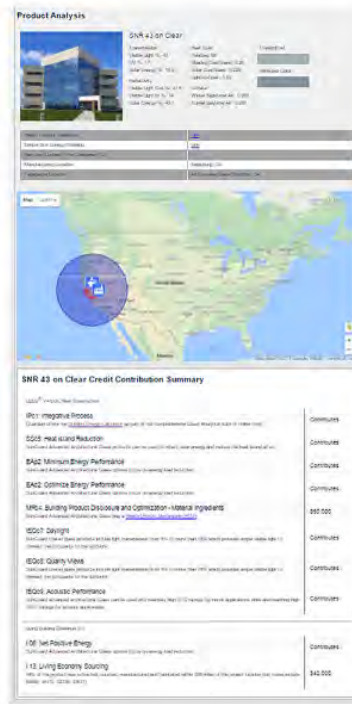


Architects and designers can now efficiently evaluate environmental performance attributes of Guardian glass products with the new Guardian Sustainability Calculator. This easy-to-use digital program helps users see how Guardian glazing make-ups can help a project earn certification from green building rating systems such as LEED, the Living Building Challenge and the WELL Building Standard.

"The Guardian Sustainability Calculator gives you the power to select Guardian SunGuard or InGlass architectural glass products, evaluate them and document their contribution potential," explains Brian Schulz, product manager, Guardian Glass North America. "The program generates a comprehensive report on a range of rating systems, helps architects and designers see what's possible™ and aids in the specification process."

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Guardian Glass is a major business unit of Guardian Industries Corp. For more, visit guardianglass.com.



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Company Overview of Guardian Industries Corp.

Snapshot People

Company Overview

Guardian Industries Corp. manufactures float glass and fabricated glass products for commercial, residential, and transportation applications. It offers glass for architectural, residential, interior, transportation, and technical glass applications; glass for homes, offices, and cars; glass for other projects; low-E-coated glass for architectural and aesthetic applications; coatings on plastic for the automotive, commercial truck, and consumer goods industries; and automotive trims. The company also distributes specialty building products, such as roofing products and accessories, insulation products, gypsum products, siding products, decking products, millwork products, and more. It offers...

Detailed Description

2300 Harmon Road
Auburn Hills, MI 48326-1714
United States

Phone: 248-340-1800
Fax: 248-340-9988
www.guardian.com

Founded in 1932

Key Executives For Guardian Industries Corp.

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President and Chief Executive Officer
- Mr. Jeffery A. Knight**
Chief Financial Officer
- Mr. Scott Viggo Thomsen**
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Guardian Industries Corp. Launches New Sustainability Calculator

Jul 6 17

Guardian Industries Corp. launched new Guardian Sustainability Calculator. Architects and designers can now efficiently evaluate environmental performance attributes of Guardian glass products with the new Guardian Sustainability Calculator. This easy-to-use digital program helps users see how Guardian glazing make-ups can help a project earn certification from green building rating systems such as LEED (R), the Living Building Challenge and the WELL Building Standard. The new component of Guardian Glass Analytics for North America, the Sustainability Calculator joins the Performance Calculator, Building Energy Calculator, BIM Generator and the Glass Visualizer.

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Guardian Glass New Sustainability Calculator

Posted on July 7, 2017 by [davidc@ccr-mag.com](#)

Architects and designers can now efficiently evaluate environmental performance attributes of Guardian glass products with the new Guardian Sustainability Calculator. This easy-to-use digital program helps users see how Guardian glazing make-ups can help a project earn certification from green building rating systems such as LEED®, the Living Building Challenge and the WELL Building Standard.

"The Guardian Sustainability Calculator gives you the power to select Guardian SunGuard® or InGlass® architectural glass products, evaluate them and document their contribution potential," explains Brian Schulz, product manager, Guardian Glass North America. "The program generates a comprehensive report on a range of rating systems, helps architects and designers see what's possible™ and aids in the specification process."

The newest component of Guardian Glass Analytics™ for North America, the Sustainability Calculator joins the Performance Calculator, Building Energy Calculator, BIM Generator and the Glass Visualizer. Together, these industry-leading tools provide comprehensive engineering and analytical modeling and custom glass content that demonstrate the advantages of high performance glass in building facades.

Guardian Glass is a major business unit of Guardian Industries Corp. For more, visit www.guardianglass.com.

About Guardian Industries Corp.

Based in Auburn Hills, Michigan, Guardian Industries is a diversified, global company with a vision to create value for customers and society through constant innovation using fewer resources. Guardian, its subsidiaries and affiliates employ 17,000 people and operate facilities throughout North America, Europe, South America, Africa, the Middle East and Asia. Guardian Glass is a leading international manufacturer of float, value-added coated, and fabricated glass products and solutions for architectural, residential, interior, transportation and technical glass applications. SRG Global is one of the world's largest manufacturers of advanced, high value coatings on plastics for the automotive and commercial truck industries, providing solutions for greater surface durability, structural integrity, functionality, vehicle efficiency and design flexibility. Guardian Building Products is a leading U.S. based distributor of specialty building products.

For more information, visit www.guardian.com.

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2019

2018 Women's Retreat HiLites & 2019 Location

WR 2019 will be held early August 2019.

Jan 15th
2019

2019 Commercial Construction & Renovation Summit

CCRS 2019 Update & 2018 HiLites

The 2019 Summit will be held January 15th-17th at The Golden Nugget Hotel & Casino in Biloxi, MS.

Sept 27th
2018

2018 COMMERCIAL CONSTRUCTION & RENOVATION RETREAT

2017 Commercial Retreat HiLites & 2018 Location

CR 2018 will be held September 27th-30th, 2018, in Lexington, KY at The 21C Museum Hotel.



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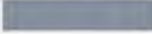
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Breaking News

Guardian Glass Launches New Sustainability Calculator

Product Analysis

SNR 43 on Clear

Transmission	Heat Gain	Essential
Visible Light %: 43	Relative: 35	
Uv %: 17	Shading Coefficient: 0.28	Reflected Color
Solar Energy %: 18.9	Solar Coefficient: 0.225	
Reflectivity	Light-to-Solar: 1.85	
Visible Light Out %: 27.8	U-Value	
Visible Light In %: 54	Winter Nighttime Air: 0.285	
Solar Energy %: 43.1	Summer Daytime Air: 0.285	

Health Product Declaration	Link
Simple Glaz. Energy Modeling	Link
Recycled Content - Pre Consumer (%)	0
Manufacturing Location	Kingburg, CA
Fabrication Location	All Creative Glass Studios, CA

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Project Profile: Spangler Candy

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July 20, 2017

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