The role of Vetrotech Saint-Gobain Fire-Rated Glass in achieving LEED® certification

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vetrotech
SAINT-GOBAIN

Not just safety … energy efficiency as well

Vetrotech fire-rated glass can help you achieve LEED certification.

Vetrotech Saint-Gobain is recognized as a worldwide leader in fire-rated glass products, offering the industry's broadest range of clear fire-rated glazing, fire-rated ceramic and heat-absorbing tempered laminates. These fire-rated glass products will not only make your building safer, but can also help make it brighter, more inviting, and more energy efficient.

Vetrotech fire-rated glass can reduce heating and cooling load.

When considering integrated whole-building design and efficiency, choosing the proper glass products is critical. The ideal glass product is one that permits the greatest amount of natural light to enter a building, while reducing or eliminating solar radiation and solar heat gain. This solar control can help maximize the performance of a building and allow warmth to enter a building during the winter, while also keeping the building cool in the summer months.

Vetrotech fire-rated KERALITE® and CONTRAFLAM® insulated glass unit (IGU) products have options for low-e coated glass and are insulated with a specialized gel that helps reflect the energy of the sun and insulate the interior of the building. Vetrotech IGU products can enable high-density areas to comply with strict fire codes while at the same time contributing to the energy efficiency of the building.

CONTRAFLAM STRUCTURE makes it possible to transform areas that rely on fluorescent lights for illumination (above) into bright and appealing spaces lit by natural light (left). CONTRAFLAM interior partition walls provide the same degree of fire protection to occupants as standard gypsum-and-frame fire-rated walls.

Vetrotech fire-rated glass enables daylighting without compromising occupant safety.

Whether you're designing or building commercial offices, a school, or a healthcare facility, it is proven that allowing abundant daylight into interior spaces and providing a visual connection to the outdoors increases productivity, promotes healing, and improves the overall mood of the occupants. Vetrotech fire-rated products provide up to 90% transmittance of visible light into a structure.

Vetrotech fire-rated glass is an excellent way to incorporate daylighting into a building's design – without compromising safety in the event of a fire. Although typical gypsum board and frame walls provide protection from fire, all Vetrotech fire-rated products provide that same protection while also delivering a maximum amount of visible light to interior spaces. Buildings with Vetrotech products can earn points in the "Daylight and Views" categories of the various LEED building design and construction standards.

Vetrotech fire-rated glass helps achieve credits for green building projects.

Vetrotech fire-rated glass products can contribute to achieving points as environmentally preferable products in LEED for New Construction (NC), LEED-Core and Shell (CS), LEED for Schools, LEED-Commercial Interiors (CI), and LEED for Healthcare. The following tables list how Vetrotech fire-rated glass can contribute to earning points in each of the applicable categories in the LEED v4 green building standards.

Vetrotech Product Contributions to LEED-Healthcare v2009 (v3) Credits

Credit	Credit Description	How Vetrotech Products Contribute	Products that Contribute	Possible Points Earned
Energy and Atmosphere				
EA p2- Minimum Energy Performance	To establish the minimum level of energy efficiency	The ideal glass is one that permits the greatest amount of natural light to enter a building while reducing the thermal effects of infrared energy and solar heat gain. When considering whole building energy performance, Vetrotech glass will aid in minimizing solar heat gain and reduce the load on your HVAC system.	PYROSWISS IGU KERALITE IGU CONTRAFLAM IGU	Required
EA c1.3- Optimize Energy Performance: HVAC	To achieve increasing levels of energy conservation	The ideal glass is one that permits the greatest amount of natural light to enter a building while reducing the thermal effects of infrared energy and solar heat gain. When considering whole building energy performance, Vetrotech glass will aid in minimizing solar heat gain and reduce the load on your HVAC system.	PYROSWISS IGU KERALITE IGU CONTRAFLAM IGU	1-24 pts
Materials and Resources				
MR c3- Sustainably Sourced Materials and Products	Use materials with one or more of the following attributes: contain recycled content; contain rapidly renewable materials, are FSC certified wood; are salvaged, refurbished or reused; are regionally sourced within 500 miles; and are low-emitting materials.	The glass in Vetrotech's products has no recycled content due to fire rating standards. The VDS steel framing systems incorporate 15% post-consumer recycled content. Using recycled steel conserves resources by reducing the use of virgin materials.	VDS Steel Framing Systems used with: – KERALITE – CONTRAFLAM	1-4 pts
MR pc52- Material Multi-Attribute Assessment	Use permanently installed products that have a critically reviewed LCA or EPD.	KERALITE and CONTRAFLAM product lines have EPDs which conform to ISO 14025 and EN15804 verified and published through the program operator, UL Environment.	KERALITE Laminated & Filmed KERALITE Select Laminated & Filmed CONTRAFLAM -45/60/90/120/180	1 pt
MR pc76- Material Ingredients and Reporting	Select products that demonstrate the chemical inventory to 1000 ppm through a manufacturer's inventory, HPD Cradle-to-Cradle certification.	Saint-Gobain is a member of the Manufacturer's Advisory Panel for the HPD Collaborative and will develop HPDs upon the release of HPD v2.0. Please contact Verotech for more information about HPDs.	KERALITE CONTRAFILM	1 pt
Indoor Environmental Quality				
IEQ 8.1 Daylight and Views- Daylight	Achieve daylighting in 75% of regularly occupied spaces or, for schools, achieve daylighting in 75% or 90% of classroom spaces.	Vetrotech fire-rated glass products allow admission of natural light into a space. Visible light transfer is a very important factor when developing designs for occupancy of buildings. Access to daylight increases occupants' productivity and reduces absenteeism and illness.	PYROSWISS KERALITE CONTRAFLAM	2 pts
IEQ 8.1 Daylight and Views- Views for Seated Spaces	Achieve a direct line of sight to the outdoor environment via vision glazing between 30 inches and 90 inches above the finish floor for building occupants in 90% of all regularly occupied areas.	Vetrotech fire-rated glass products provide the translucence of a clear glass window, but maintain the safety standards of fire-rated glass. Outside views provide similar occupant benefits as daylight.	PYROSWISS KERALITE CONTRAFLAM	1-3 pts

Vetrotech Product Contributions to LEED-CI v2009 (v3) Credits

Credit	Credit Description	How Vetrotech Products Contribute	Products that Contribute	Possible Points Earned
Energy and Atmosphere				
EA p2- Minimum Energy Performance	To establish the minimum level of energy efficiency	The ideal glass is one that permits the greatest amount of natural light to enter a building while reducing the thermal effects of infrared energy and solar heat gain. When considering whole building energy performance, Vetrotech glass will aid in minimizing solar heat gain and reduce the load on your HVAC system.	PYROSWISS IGU KERALITE IGU CONTRAFLAM IGU	Required
EA c1.3- Optimize Energy Performance: HVAC	To achieve increasing levels of energy conservation	The ideal glass is one that permits the greatest amount of natural light to enter a building while reducing the thermal effects of infrared energy and solar heat gain. When considering whole building energy performance, Vetrotech glass will aid in minimizing solar heat gain and reduce the load on your HVAC system.	PYROSWISS IGU KERALITE IGU CONTRAFLAM IGU	5-10 pts
Materials and Resources				
MR c4- Recycled Content	Use materials with recycled content For at least 10% or 20% (based on cost) of the total value of the materials in the project.	The glass in Vetrotech's products has no recycled content due to fire rating standards. The VDS steel framing systems incorporate 15% post-consumer recycled content. Using recycled steel conserves resources by reducing the use of virgin materials.	VDS Steel Framing Systems used with: – KERALITE – CONTRAFLAM	1 pt
MR c5- Regional Materials	Use a minimum of 20% materials and products manufactured regionally with a 500 mile radius.	Vetrotech fire-rated glass products are manufactured in Auburn, Washington. This credit has the potential to apply to project sites within 500 miles of this plant.	PYROSWISS KERALITE CONTRAFLAM	1-2 pts
MR pc52- Material Multi-Attribute Assessment	Use permanently installed products that have a critically reviewed LCA or EPD.	KERALITE and CONTRAFLAM product lines have EPDs which conform to ISO 14025 and EN15804 verified and published through the program operator, UL Environment.	KERALITE Laminated & Filmed KERALITE Select Laminated & Filmed CONTRAFLAM -45/60/90/120/180	1 pt
Indoor Environmental Quality				
IEQ 8.1 Daylight and Views- Daylight	Achieve daylighting in 75% of regularly occupied spaces or, for schools, achieve daylighting in 75% or 90% of classroom spaces.	Vetrotech fire-rated glass products allow admission of natural light into a space. Visible light transfer is a very important factor when developing designs for occupancy of buildings. Access to daylight increases occupants' productivity and reduces absenteeism and illness.	PYROSWISS KERALITE CONTRAFLAM	1 pt 1-2 pts for Schools
IEQ 8.1 Daylight and Views- Views for Seated Spaces	Achieve a direct line of sight to the outdoor environment via vision glazing between 30 inches and 90 inches above the finish floor for building occupants in 90% of all regularly occupied areas.	Vetrotech fire-rated glass products provide the translucence of a clear glass window, but maintain the safety standards of fire-rated glass. Outside views provide similar occupant benefits as daylight.	PYROSWISS KERALITE CONTRAFLAM	1 pt

Vetrotech Product Contributions to LEED-NC, LEED-CS, LEED-Schools, LEED-Retail Credits v2009 (v3)

Credit	Credit Description	How Vetrotech Products Contribute	Products that Contribute	Possible Points Earned
Energy and Atmosphere				
EA p2- Minimum Energy Performance	To establish the minimum level of energy efficiency	The ideal glass is one that permits the greatest amount of natural light to enter a building while reducing the thermal effects of infrared energy and solar heat gain. When considering whole building energy performance, Vetrotech glass will aid in minimizing solar heat gain and reduce the load on your HVAC system.	PYROSWISS IGU KERALITE IGU CONTRAFLAM IGU	Required
EA c1- Optimize Energy Performance	To achieve increasing levels of energy conservation	The ideal glass is one that permits the greatest amount of natural light to enter a building while reducing the thermal effects of infrared energy and solar heat gain. When considering whole building energy performance, Vetrotech glass will aid in minimizing solar heat gain and reduce the load on your HVAC system.	PYROSWISS IGU KERALITE IGU CONTRAFLAM IGU	1-19 pts except CS and Schools 3-21 pts for CS 1-16 pts for Schools
Materials and Resources				
MR c4- Recycled Content	Use materials with recycled content For at least 10% or 20% (based on cost) of the total value of the materials in the project.	The glass in Vetrotech's products has no recycled content due to fire rating standards. The VDS steel framing systems incorporate 15% post-consumer recycled content. Using recycled steel conserves resources by reducing the use of virgin materials.	VDS Steel Framing Systems used with: – KERALITE – CONTRAFLAM	1 pt
MR pc52- Material Multi-Attribute Assessment	Use permanently installed products that have a critically reviewed LCA or EPD.	KERALITE and CONTRAFLAM product lines have EPDs which conform to ISO 14025 and EN15804 verified and published through the program operator, UL Environment.	KERALITE Laminated & Filmed KERALITE Select Laminated & Filmed CONTRAFLAM -45/60/90/120/180	1 pt
MR pc 76- Material Ingredients and Reporting	Select products that demonstrate the chemical inventory to 1000 ppm through a manufacturer's inventory, HPD, Cradle-to-Cradle certification.	Saint-Gobain is a member of the Manufacturer's Advisor Panel for the HPD Collabortive and will develop HPDs upon the release of HPD v2.0. Please contact Verotech for more information about HPDs.	KERALITE CONTRAFLAM	1 pt
Indoor Environmental Quality				
IEQ 8.1 Daylight and Views- Daylight	Achieve daylighting in 75% of regularly occupied spaces or, for schools, achieve daylighting in 75% or 90% of classroom spaces.	Vetrotech fire-rated glass products allow admission of natural light into a space. Visible light transfer is a very important factor when developing designs for occupancy of buildings. Access to daylight increases occupants' productivity and reduces absenteeism and illness.	PYROSWISS KERALITE CONTRAFLAM	1 pt 1-2 pts for Schools
IEQ 8.1 Daylight and Views- Views	Achieve a direct line of sight to the outdoor environment via vision glazing between 30 inches and 90 inches above the finish floor for building occupants in 90% of all regularly occupied areas.	Vetrotech fire-rated glass products provide the translucence of a clear glass window, but maintain the safety standards of fire-rated glass. Outside views provide similar occupant benefits as daylight.	PYROSWISS KERALITE CONTRAFLAM	1 pt

Vetrotech Product Contributions to LEED BD+C v4 (NC, Schools, Retail, Healthcare), ID+C (CI), O+M: EB Credits

Credit	Credit Description	How Vetrotech Products Contribute	Products that Contribute	Possible Points Earned
Energy and Atmosphere				
Minimum Energy Performance	To establish the minimum level of energy efficiency	The ideal glass is one that permits the greatest amount of natural light to enter a building while reducing the thermal effects of infrared energy and solar heat gain. When considering whole building energy performance, Vetrotech glass will aid in minimizing solar heat gain and reduce the load on your HVAC system.	PYROSWISS IGU KERALITE IGU CONTRAFLAM IGU	Required
Optimize Energy Performance	To achieve increasing levels of energy conservation	The ideal glass is one that permits the greatest amount of natural light to enter a building while reducing the thermal effects of infrared energy and solar heat gain. When considering whole building energy performance, Vetrotech glass will aid in minimizing solar heat gain and reduce the load on your HVAC system.	PYROSWISS IGU KERALITE IGU CONTRAFLAM IGU	1-18 pts BD+C except Healthcare and Schools 1-20 pts for Healthcare 1-16 pts for Schools
Materials and Resources				
Building Product Disclosure and Optimization - Environmental Product Declarations* (Option 1)	Use permanently installed products that have a critically reviewed LCA or EPD.	KERALITE and CONTRAFLAM product lines have EPDs which conform to ISO 14025 and EN15804 verified and published through the program operator, UL Environment.	KERALITE Laminated & Filmed KERALITE Select Laminated & Filmed CONTRAFLAM -45/60/90/120/180	1 pt
Building Product Disclosure and Optimization - Sourcing of Raw Materials* (Option 2)	Use products that have extended product responsibility, contain bio-based materials, contain recycled content, are FSC certified, or are reused materials.	The glass in Vetrotech's products has no recycled content due to fire rating standards. The VDS steel framing systems incorporate 15% post-consumer recycled content, conserving resources by reducing the use of virgin materials.	VDS Steel Framing Systems used with: – KERALITE – CONTRAFLAM	1 pt
Construction and Demolition Waste Management*	Reduce construction and demolition waste disposed of in landfills and incineration facilities by recovering, reusing and recycling materials.	Vetrotech products are custom products, produced and manufactured to specific needs and sizes. No sizing or cutting is necessary on site, reducing the waste generation during the construction of the project.	PYROSWISS KERALITE CONTRAFLAM VDS Steel Framing Systems	1-2 pts
Indoor Environmental Quality				
Daylight	Provide glare-control devices for occupied spaces, demonstrate annual sunlight exposure of no more than 10% is achieved, demonstrate or achieve illuminance levels are between 300 lux and 3,000 lux.	Vetrotech fire-rated glass products allow admission of natural light into a space. Visible light transfer is a very important factor when developing designs for occupancy of buildings. Access to daylight increases occupants' productivity and reduces absenteeism and illness.	PYROSWISS KERALITE CONTRAFLAM	1 - 3 pts
Quality Views	Achieve a direct line of sight to the outdoors via glazing.	Vetrotech fire-rated glass products allow admission of natural light into a space. Visible light transfer is a very important factor when developing designs for occupancy of buildings. Access to daylight increases occupants' productivity and reduces absenteeism and illness.	PYROSWISS KERALITE CONTRAFLAM	1 pt BD+C except Healthcare 1-2 pts for Healthcare

*excluding O+M: Operations and Maintenance for Existing Buildings standards

About Vetrotech Saint-Gobain

For over 350 years, building industry professionals have trusted Saint-Gobain for high quality products. Saint-Gobain has developed corporate sustainability initiatives, with ambitious goals in the areas of environmental and social responsibility. Saint-Gobain was honored as an ENERGY STAR® Partner of the Year for the seventh consecutive year, and has received the ENERGY STAR Sustained Excellence Award for the fifth consecutive year. This award is in recognition of the company's long-term dedication to reducing environmental impacts.

Saint-Gobain is a member of the United States Green Building Council (USGBC), developer of the LEED green building rating systems. Saint-Gobain is also a member of the Manufacturer's Advisor Panel for the HPD Collaborative, working to develop Health Product Declarations and achieve greater transparency and safer products for customers.

The Vetrotech manufacturing facility in Auburn, Washington is strongly committed to sustainable manufacturing and operations. Vetrotech was the first US manufacturer to publish EPDs on fire-rated glazing; this document helps to identify and to understand the environmental impacts of Vetrotech products and demonstrates environmental leadership and transparency to the building market.

Vetrotech Saint-Gobain North America has adopted the 2030 Challenge, aiming to lower the product footprint of fire-rated glass by 50% by the year 2030. Vetrotech products are designed with sustainable buildings in mind and can contribute to earning points under LEED and other green building rating systems.

Vetrotech Saint-Gobain is a Registered Provider with The American Institute of Architects Continuing Education Systems and has developed a course regarding sustainability with fire-rated glazing entitled *Sustainable Solutions with Architectural Fire-Rated Glazing*. Please contact Vetrotech USA if you are interested in receiving this training.

ENERGY STAR AWARD 2015
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Sustained Excellence

U.S. GREEN BUILDING COUNCIL MEMBER

FSC Mixed Sources
Product group from well-managed forests, controlled sources and recycled wood or fiber
www.fsc.org Cert no. XXX-XXX-XXX
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