



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

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 energy 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 building energy performance, allowing warmth to enter during the winter, while also keeping the building cool in the summer months – reducing the energy load on your HVAC equipment.

Vetrotech fire-rated SWISSFLAM®, KERALITE®, and CONTRAFLAM® insulated glass unit (IGU) products are manufactured with low-e coated glass and insulated with a specialized gel product 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 products can contribute to achieving points as environmentally preferable products in LEED-New Construction (NC), LEED-Core & Shell (CS), LEED-Schools, LEED-Retail, LEED-Commercial Interiors (CI), and LEED-Healthcare. The following tables list how Vetrotech fire-rated glass can contribute to earning points in each of the applicable LEED categories.



Top: Interior partition walls featuring CONTRAFLAM STRUCTURE at Rush University Medical Center, Chicago.

Left and above: LITEFLAM glass floor adds a unique accent to an outdoor plaza at New York University in Manhattan. LITEFLAM conveys daylight to underground corridors, while its hard-wearing, slip-resistant coating is pedestrian-friendly.

Saint-Gobain Vetrotech Product Contributions to LEED-NC, LEED-CS, LEED-Schools, LEED-Retail Credits

Credit	Credit Description	How Vetrotech Products Contribute	Products that Contribute	Possible Points Earned
Energy and Atmosphere				
EA Prerequisite 2 Minimum Energy Performance	To establish the minimum level of energy efficiency for the tenant space systems to reduce environmental and economic impacts associated with excessive energy use.	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.	PYROSSWISS IGU KERALITE – FR-F IGU – FR-R IGU SWISSFLAM IGU CONTRAFLAM IGU	Required
EA 1 Optimize Energy Performance	Achieve increasing levels of building energy performance above required minimum performance standards.	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 loss throughout the building.	PYROSSWISS IGU KERALITE – FR-F IGU – FR-R IGU SWISSFLAM IGU CONTRAFLAM IGU	3-21 (CS only) Points
Materials and Resources				
MR 4 Recycled Content	Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes 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 frame 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: SWISSFLAM 45 KERALITE – FR-F 20-180 – FR-L 20-180 – FR-ULTRA 20-90 CONTRAFLAM 60/120/180	1-2 Points with the availability of a third point for exemplary performance
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.	PYROSSWISS KERALITE – FR-R 20-90, FR-R IGU – FR-F 20-180, FR-F IGU – FR-L 20-180 – FR-ULTRA 20-90 SWISSFLAM 45, IGU CONTRAFLAM – 60/90/120/180 – IGU – STRUCTURE 60/120	NC, CS, Retail: 1 Point Schools: 1-2 Points
IEQ 8.2 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. The line of sight may be drawn through interior glazing. For private offices, the entire square footage of the office may be counted if 75% or more of the area has a direct line of sight to perimeter vision glazing.	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.	PYROSSWISS KERALITE – FR-R 20-90, FR-R IGU – FR-F 20-180, FR-F IGU – FR-L 20-180 – FR-ULTRA 20-90 SWISSFLAM 45, IGU CONTRAFLAM – 60/90/120/180 – IGU – STRUCTURE 60/120	1 Point plus another point available for exemplary performance

Saint-Gobain Vetrotech Product Contributions to LEED-CI Credits

Credit	Credit Description	How Vetrotech Products Contribute	Products that Contribute	Possible Points Earned
Energy and Atmosphere				
EA Prerequisite 2 Minimum Energy Performance	To establish the minimum level of energy efficiency for the tenant space systems to reduce environmental and economic impacts associated with excessive energy use.	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.	PYROSSWISS IGU KERALITE – FR-F IGU – FR-R IGU SWISSFLAM IGU CONTRAFLAM IGU	Required
EA 1.3 Optimize Energy Performance-HVAC	To achieve increasing levels of energy conservation beyond the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use.	When considering whole building energy performance, Vetrotech glass will aid in minimizing solar heat gain and loss throughout the building.	PYROSSWISS IGU KERALITE – FR-F IGU – FR-R IGU SWISSFLAM IGU CONTRAFLAM IGU	5-10 Points
Materials and Resources				
MR 4 Recycled Content	Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes 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 frame 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: SWISSFLAM 45 KERALITE – FR-F 20-180 – FR-L 20-180 – FR-ULTRA 20-90 CONTRAFLAM 60/120/180	1-2 Points with the availability of a third point for exemplary performance
MR 5 Regional Materials	Use a minimum of 20% materials and products manufactured regionally within a radius of 500 miles based on the combined value of all construction and Division 12 materials and products.	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.	PYROSSWISS KERALITE – FR-R 20-90, FR-R IGU – FR-F 20-180, FR-F IGU – FR-L 20-180 – FR-ULTRA 20-90 SWISSFLAM 45 SWISSFLAM IGU CONTRAFLAM – 60/90/120/180 – IGU – STRUCTURE 60/120 VDS Framing Systems	1-2 Points with the availability of a third point for exemplary performance
Indoor Environmental Quality				
IEQ 8.1 Daylight and Views-Daylight	Achieve daylighting in 75% or 90% of regularly occupied 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.	PYROSSWISS KERALITE – FR-R 20-90, FR-R IGU – FR-F 20-180, FR-F IGU – FR-L 20-180 – FR-ULTRA 20-90 SWISSFLAM 45, IGU CONTRAFLAM – 60/90/120/180 – IGU – STRUCTURE 60/120	1-2 Points
IEQ 8.2 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. For private offices, the entire square footage of the office may be counted if 75% or more of the area has a direct line of sight to perimeter vision glazing.	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.	PYROSSWISS KERALITE – FR-R 20-90, FR-R IGU – FR-F 20-180, FR-F IGU – FR-L 20-180 – FR-ULTRA 20-90 SWISSFLAM 45, IGU CONTRAFLAM – 60/90/120/180 – IGU – STRUCTURE 60/120	1 Point plus another point available for exemplary performance

Saint-Gobain Vetrotech Product Contributions to LEED-Healthcare Credits

Credit	Credit Description	How Vetrotech Products Contribute	Products that Contribute	Possible Points Earned
Energy and Atmosphere				
EA Prerequisite 2 Minimum Energy Performance	Establish the minimum level of energy efficiency for the proposed building and systems to reduce environmental and economic impacts associated with excessive energy use.	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 – FR-F IGU – FR-R IGU SWISSFLAM IGU CONTRAFLAM IGU	Required
EA 1 Optimize Energy Performance	Achieve increasing levels of building energy performance above required minimum performance standards.	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 loss throughout the building.	PYROSWISS IGU KERALITE – FR-F IGU – FR-R IGU SWISSFLAM IGU CONTRAFLAM IGU	1-24 Points
Materials and Resources				
MR 3 Sustainably Sourced Materials and Products	One point and up to a maximum of four will be awarded for each 10% of the total value of all building materials and products used in the project (based on cost) that can be defined as or contain any of the following: <ol style="list-style-type: none"> Salvaged, refurbished or reused materials Recycled content – can be determined by multiplying the recycled content fraction of the assembly (based on weight) by the cost of the assembly Regionally sourced/manufactured materials – extracted, harvested or recovered, and manufactured within 500 miles of project site Rapidly renewable materials Wood certified in accordance with the Forest Stewardship Council's Principles and Criteria 	The glass in Vetrotech's products has no recycled content due to fire rating standards. The VDS steel frame 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: SWISSFLAM-45 KERALITE – FR-F 20-180 – FR-L 20-180 – FR-ULTRA 20-90 CONTRAFLAM 60 /120	1-4 Points
Indoor Environmental Quality				
IEQ 8.1 Daylight and Views- Daylight	Achieve a minimum of two points under IEQ Credit 8.2 Daylight and Views-Views. AND: Achieve daylighting in 75% or more of the perimeter area used to qualify under IEQ Credit 8.2.	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 has been shown to have a positive effect on patient outcomes, and can also improve morale and reduce absenteeism among employees.	PYROSWISS KERALITE – FR-R 20-90, FR-R IGU – FR-F 20-180, FR-F IGU – FR-L 20-180 – FR-ULTRA 20-90 SWISSFLAM 45, IGU CONTRAFLAM – 60/90/120 – IGU – STRUCTURE 60	2 Points
IEQ 8.2 Daylight and Views- Views	Provide access to views that meet the following criteria: Inpatient units: A minimum of 90% of the inpatient staff and public areas shall be within 20 feet – or twice the window head height, whichever is smaller – of the perimeter. All such perimeter areas must have windows that provide at least an 11-degree angle of unobstructed view in the vertical and horizontal direction. Non-inpatient areas: Same as above except all windows must be within 15 feet of the perimeter.	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, and can help patients recover quicker from their illnesses.	PYROSWISS KERALITE – FR-R 20-90, FR-R IGU – FR-F 20-180, FR-F IGU – FR-L 20-180 – FR-ULTRA 20-90 SWISSFLAM 45, IGU CONTRAFLAM – 60/90/120 – IGU – STRUCTURE 60/120	1-3 Points



The stunning open-plan layout of Wieden + Kennedy's Amsterdam office was made possible by extensive use of Vetrotech Saint-Gobain glazing products.



For over 300 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 reports its greenhouse gas emissions to the Carbon Disclosure Project (CDP) and was ranked fourth in CDP's 2011 Global 500 annual report in the industrial sector.

Saint-Gobain was honored as an ENERGY STAR® Partner of the Year in 2009 and 2010, and received the ENERGY STAR Sustained Excellence Award in 2011 and 2012 in recognition of the company's long-term dedication to reducing environmental impacts. Saint-Gobain is also a member of the United States Green Building Council (USGBC), developer of the LEED green building rating systems.

The Vetrotech manufacturing facility in Auburn, Washington is strongly committed to sustainable manufacturing and operations. An example of this is recent upgrades that reduced annual electricity consumption for lighting by 44%. Vetrotech products are designed with sustainable buildings in mind and can contribute to earning points under LEED and other green building rating systems.

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