SageGlass®

ESTIDAMA WITH SAGEGLASS®:
FOR A SUSTAINABLE HABITAT

University of Miami's Frost School of Music, Miami, Florida, U.S.

Saint-Gobain's electrochromic glazing SageGlass® can provide a very useful tool for achieving ESTIDAMA certification as it can influence 5 of the 7 credit section categories. For some, the impact is quite obvious, but for others using SageGlass® may not necessarily come first to mind! Let's discover together just how great an asset our glazing can be for this certification.

SAINT-GOBAIN

ESTIDAMA with SageGlass®

INTEGRATED DEVELOPMENT PROCESS

Life cycle costing (IDP-1)

When considering the life cycle costs of the building, not only SageGlass® does impact the construction costs, but it also impacts the operating and maintenance costs. Indeed, SageGlass® contributes to manage daylight and heat, without the need for additional blinds. It allows savings on the building's energy needs, while no special cleaning and maintenance are needed. With SageGlass® daylight and views are continuously preserved, contributing to enhance people's well-being and performance. This can translate into amazing economic benefits during the operating phase of the building.

Maximum credit points: 4

LIVABLE BUILDINGS (LIVABLE OUTDOORS)

Light pollution reduction (LBo-10)

If SageGlass® is in its tinted states (≤ 6% light transmittance) at night, light pollution/trespass is dramatically reduced, preserving the sky and all nocturnal animals and plants.

Maximum credit points: 1

Thermal comfort & controls (LBi-5)

Thermal Zoning (LBi-5.1):
Users can easily control the level of tinting of entire sections of windows, not just specific windows, and even individual zones within a single pane of SageGlass®. This flexibility in the way to control SageGlass® is a key asset to support thermal zoning strategies within the building.

Occupant Control (LBi-5.2):
Since SageGlass® tinting can be controlled automatically or manually, people can control their thermal environment in a given space when and how they want.

Thermal Comfort modelling (LBi-5.3):
By embracing sunlight when it's cool outside and blocking it when it's hot, SageGlass® contributes to maintain a thermally comfortable indoor climate in summer. SageGlass® can help to reduce thermal discomfort due to direct sunlight exposure. Note that SageGlass® should be mounted in a high performance airtight framing system with good insulation properties.

Maximum credit points: 5

LIVABLE BUILDINGS (LIVABLE OUTDOORS)

Daylight and Glare (LBi-7)

Thanks to its dynamic properties, SageGlass® regulates the level of daylight entering the space in function of the external light conditions and of the occupant's needs. SageGlass® keeps sufficient daylight all year long, while ensuring protection against heat and glare. SageGlass® in-pane zoning characteristics, such as tinting several zones within a glass pane to different transmission states, allows to further co-optimize daylight admission, glare control and energy efficiency. SageGlass® controls can be automated, with the option of manual overrides or fully manual.

Maximum credit points: 2

Views (LBi-8)

SageGlass® enables the use of more glass to help achieve a direct line of sight to the outdoors for the occupied spaces, without compromising energy performance and comfort. Thanks to SageGlass®, the glass to wall ratio can be increased to almost 100% without compromising on the solar heat gain. In addition, SageGlass® is always transparent, even in its darkest state, so you can always enjoy the view through the glass and stay connected to the outside.

Maximum credit points: 1

Indoor Noise Pollution (LBi-9)

Traffic, work, loud music ... all these noises affect the daily quality of life, and even human health. SageGlass® can help reduce this exterior noise and increase acoustic comfort by combining two panes of glass of different thicknesses, or adding a special acoustic laminate specifically designed to enhance sound insulation. Note also that the glass should be mounted in a high performance airtight framing system with good acoustic properties.
Moreover, SageGlass® removes an additional source of noise and disturbance for the occupants, as it replaces blinds and mechanical shades which are usually noisy.

Maximum credit points: 1

This brochure is based on the "The Pearl Rating System for Estimada: Building Rating System, Design & Construction, Version 1.0" rating system.

RESOURCEFUL ENERGY

Minimum and Improved Energy Performance (RE-R1 & RE-1)

More than 30% of a building's energy goes out through the windows, literally. But not with SageGlass®. By adapting its properties to the external climatic conditions and the occupant's needs, SageGlass® helps minimizing energy use by reducing air conditioning needs and electrical lighting all year long.

Maximum credit points: 15

Cool Building Strategies (RE-2) and Peak Loads Reduction (RE-5)

SageGlass® can be tinted on demand to reduce the external heat gains, thus the cooling needs and HVAC loads at peak times. In particular, SageGlass® can block up to 95% of the solar heat gain.
A study by the independent engineering and sustainability consultancy firm Hilson Moran shows that SageGlass® reduces the cooling energy use by 22% in average and up to 49%, depending on the climate and reference façade system considered. Regarding peak loads, the same study showed an average reduction by 24%.

Maximum credit points: 10 (6+4)

STEWARDING MATERIALS

Non-polluting materials (SM-1)

Low toxicity material: SageGlass® is covered by a complete Health Product Declaration (HPD) which provides a transparency reporting of the material ingredients and potential health hazards contained. According to this HPD, SageGlass® does not contain any elements or compounds with over 1% of constituent materials with the designated R-phrases.
Besides, To follow the stringent environment engagement of its holding company Saint-Gobain, SageGlass® has gone through a Life Cycle Assessment process, which results are available under an Environmental Product Declaration (EPD) verified by an independent third party.

Maximum credit points: 1

INNOVATIVE PRACTICE (IP-2)

Maximum credit points: 2

SageGlass® is an innovative design solution with significant environmental, social and economic impacts, which cover three of the four pillars of Estidama (environmental, social, economic and cultural). Indeed, through its amazing properties, SageGlass® is a key asset to achieve exemplary level of performance in terms of:

- Reduced environmental footprint, thanks to reduced energy needs, smaller HVAC systems and lower equipment power usage.
- Improved well-being and comfort for the building's occupants, without energy penalty. SageGlass® system includes advanced tools to manage simultaneously daylight, glare, thermal comfort and energy use.
- Reduced damage to interior materials (carpets, wall coverings, valuable artwork etc.), due to the fact that SageGlass® blocks 98% of the solar radiation that causes fading.
- Reduced costs, thanks to:
  - Reduced building's energy bill (heating, cooling, lighting)
  - Reduced cleaning and maintenance, due to the absence of shading system and moving part in the SageGlass® system.
  - Increased occupant's productivity, due to enhanced indoor environment conditions
  - Lower interior materials replacement frequency

Pearl rating system for Estidama does not certify a specific product, but the building as a whole. The use of SageGlass® high performance glazing can **contribute to your future Pearl project on 5 criteria and be worth up to 42 credit points.**

IATA - Geneva airport, Switzerland, ©Adrien Barakat

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Saint-Gobain, a key partner for sustainable construction

For many years, Saint-Gobain has been involved in local efforts to promote sustainable buildings by joining Green Building Councils (GBCs). Today we are actively involved, both locally and globally:

- Member of the Corporate Advisory Board of the World GBC,
- Partner of the European Regional Network,
- Platinum member of the US GBC,
- Member of more than 35 national GBCs worldwide.

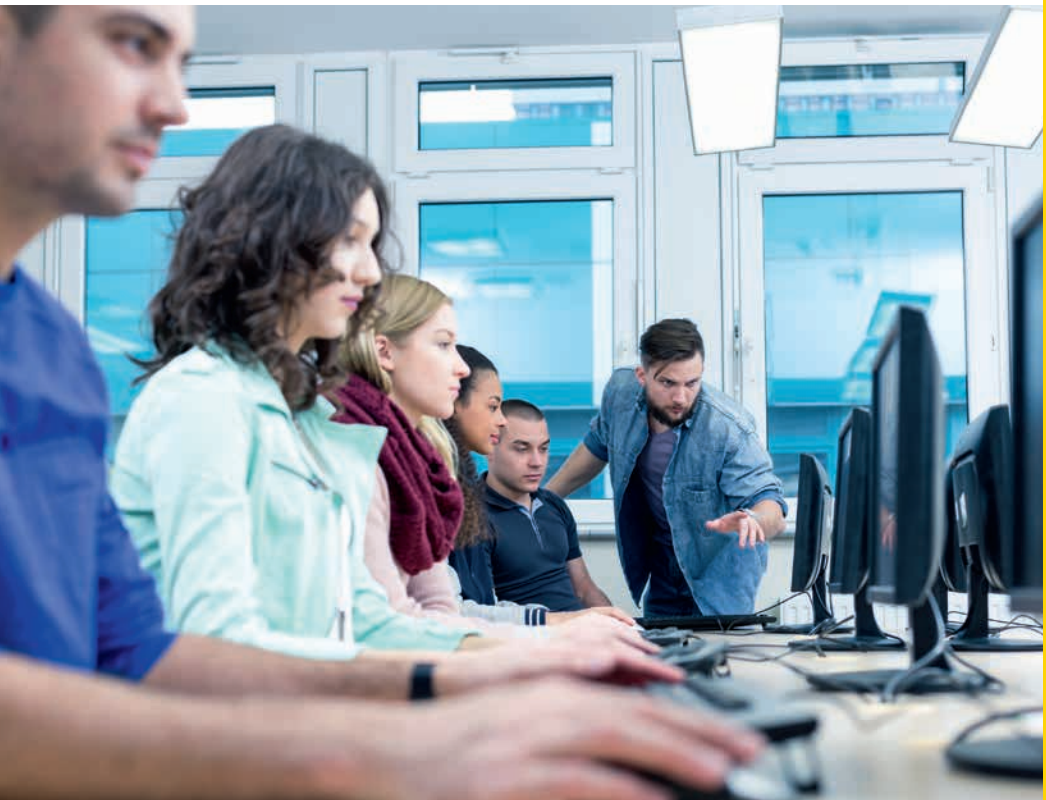
Discover how SageGlass® can be an asset for other green building certifications:

- LEED V4
- BREEAM

WORLD GREEN BUILDING COUNCIL

Disclaimer

This brochure only provides an indication on the possible credits which SageGlass® could yield in relation to an Estidama rating system. It is intended as a guide in the choice of appropriate glazing in relation to the Estidama credit rating system and has no binding value. The Estidama credit rating of a project is influenced by a variety of factors, such as the type of building, configuration of all the other elements of the building in addition to the glass, final configuration of the glazing itself, etc... The final rating is subject to the performance of an Estidama assessment as per the Estidama methods and procedures available on their site. It is the user's responsibility to choose the appropriate building environ-mental assessments methods destined to ensure that the building meets regulatory requirements at national, local or regional level.



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Look Again at SageGlass®

SageGlass® is the pioneer of the world's smartest dynamic glass and is transforming the indoor experience for people by connecting the built and natural environments. Electronically tintable SageGlass® tints or clears on demand to control sunlight and prevent heat and glare without the need for blinds or shades. SageGlass dramatically reduces energy demand and the need for HVAC by blocking up to 91 percent of solar heat. As part of Saint-Gobain, SageGlass® is backed by more than 350 years of building science expertise that only the world leader in sustainable environments can provide.

Get in Touch

Connect with us to learn more about the many ways you can receive more information.

SageGlass® Europe & Middle East
Vetrotech Saint-Gobain International AG
Switzerland
+41 (0)31 336 81 17
middleeast@sageglass.com
www.sageglass.com

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