

SageGlass®

# GSAS DESIGN & BUILD – COMMERCIAL | CORE + SHELL | EDUCATION | HOTELS WITH SAGEGLASS®



5 of the 8 categories of GSAS may be boosted by using Saint-Gobain's electrochromic glazing SageGlass in the building design. 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.



This brochure is based on the Global Sustainability Assessment System (GSAS) Technical Guide 2017.

  
SAINT-GOBAIN

# GSAS with SageGlass



## SITES

### Light Pollution

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



## ENERGY

### Energy Demand Performance, Energy Delivery Performance, Primary Energy Source, CO<sub>2</sub> Emissions and Offset

By adapting its properties to the external climatic conditions and occupant's needs, SageGlass minimizes energy demand and use, as well as CO<sub>2</sub> emissions by reducing heating loads in winter, cooling loads in summer and electrical lighting all year long.

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.



## MATERIALS

### Life Cycle Assessment

Sharing the ambitions of the Saint-Gobain Group regarding Environmental, Health & Safety topics, SageGlass has gone through a Life Cycle Assessment process, the results of which are available under an Environmental Product Declaration (EPD) compliant with international standards and verified by an independent third party. Besides, SageGlass is now certified under the Gulf Green Mark-Environmental Product Declaration (GGM-EPD), an initiative of the Gulf Organization for Research and Development (GORD) to promote construction industry products and materials that cause less stress on the environment.



## INDOOR ENVIRONMENT

### Thermal Comfort

Through its efficient insulation and dynamic solar control properties, SageGlass contributes to creating thermally comfortable environments both in winter and summer. SageGlass can particularly 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.

### Daylight

With SageGlass, more glass can be used without compromising occupant comfort and energy performance. This thus enables to optimize daylight provision in the space all year long and reduction in artificial lighting consumption.







## MANAGEMENT & OPERATIONS

### Glare Control *(N/A for Hotels)*

Thanks to its dynamic properties, SageGlass regulates the level of daylight entering the space in function of the external light conditions and occupant's needs. SageGlass can be clear when daylight is needed, or tinted in case of excessive light to protect from glare. Note that SageGlass can block up to 99% of the entering light to protect against extreme glare situations.

SageGlass in-pane zoning characteristics, which consists in tinting several zones within a glass pane to different transmission states, allows to further co-optimize daylight admission, glare control and energy efficiency.

### Views *(N/A for Core + Shell and Hotels)*

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. 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.

### Acoustic Quality

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 bring acoustic comfort by combining two panes of glass of different thickness, 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.

### Low-Emitting Materials

Glass is inherently a non-emitting source of Volatile Organic Compounds (VOCs). Note that any sealants used inside the weather barrier during installation must be accounted for in the Low-Emitting Materials credit.

### Automated Control System

The SageGlass system provides designers an advanced tool to simultaneously manage daylight, glare, thermal comfort and energy use. Control can be automated, with the option of manual override and, if desired, integrated into the building management system.

The SageGlass control system enables to follow continuously how the system operates (tint state of the glazings, voltage and currents etc.) and can thus support preventive maintenance.





## 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 30 national GBCs worldwide.



WORLD GREEN BUILDING COUNCIL



SageGlass was awarded the Quality Mark from GORD on January 2019.

### Disclaimer

This brochure only provides an indication on the possible categories which SageGlass could contribute to in relation to a GSAS rating system. It is intended as a guide in the choice of appropriate glazing in relation to the GSAS credit rating system and has no binding value. The GSAS 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 a GSAS assessment as per the GSAS methods and procedures available on their site. It is the user's responsibility to choose the appropriate building environmental assessments methods destined to ensure that the building meets regulatory requirements at national, local or regional level.



Hotel Warwick Geneva, Switzerland  
©Adrien Barakat



Mall of America, Bloomington, MN, USA

## 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 96 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

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