

WELL v2.1

Green building standards

WELL has become the leading global rating system for buildings seeking to enhance human health and wellness. Designers and specifiers are looking for building products which contribute to their WELL project goals while delivering optimal performance.

The pioneer of the world's smartest electrochromic glass, SageGlass® is the ultimate connector between the built and natural environments. SageGlass offers benefits such as the ability to optimize daylight, reduce glare and manage heat – all while maintaining unobstructed views of the outdoors, hence contributing to many of the health and well-being requirements.



SageGlass can contribute to the following WELL Concepts:

Air

AO1 – Fundamental Air Quality (V1 Air Quality Standards)

Glass is inherently a non-emitting source of Volatile Organic Compounds (VOCs). However, SageGlass has performed VOC testing to confirm the low-emitting nature of our product. Please inquire for further details.

Note: Any sealants used inside the weather barrier during installation must be accounted for.

A07 – Operable Windows (V1 Operable Windows)

SageGlass can be installed in operable windows to provide fresh air while managing transmitted solar heat and light simultaneously. SageGlass' ability to modulate the visible light and solar heat may allow for greater design flexibility and increased window-to-wall ratio.

Light

L01 – Light Exposure and Education (P)

SageGlass offers daylighting while providing variable tint to maximize comfort and efficiency. By utilizing zoning and the ability to independently control each zone, SageGlass regulates the level of light entering spaces as a function of the external conditions and occupants' needs. SageGlass thus offers the possibility of designing with more glass to bring daylight and a permanent external view to more occupants in the building, as it always remains transparent.

L03 – Circadian Lighting Design (V1 Circadian Lighting Design (P))

Daylight is the most efficient light source to activate the non-visual functions of our body and regulate our circadian rhythms. With the ability to control via zones and provide variable tint, SageGlass can protect from glare by tinting only when needed, while maximizing the amount of daylight and melanopic lux present in the space. In particular, SageGlass in-pane zoning (differential tinting within a single glass pane to different transmission states) allows further optimization and balancing of daylight admission and glare control, enhancing the exposure to the non-visual light necessary for circadian synchronization*.

* BASED ON INTERNAL MODELLING STUDIES. MORE INFORMATION IS AVAILABLE BY REQUEST

Light

L04 – Glare Control (V1 Solar Glare Control (P), Daylight Modeling)

SageGlass is an electrochromic glass that enables maximum daylight exposure under any weather condition while controlling glare, thus ensuring visual comfort. Note: SageGlass can reduce visible light transmissivity by 99%. Moreover, entire sections of SageGlass windows, only specific windows, or individual zones within a single pane of SageGlass can be tinted according to occupants' and spaces' requirements, through automated or occupant control, to optimize the solar glare control and maximize the building occupants' comfort and well-being.

L05 – Enhanced Daylight Access (V1 Right to Light, Daylight Modeling)

Thanks to its variable tint and independent zone control, SageGlass contributes to balancing daylight levels under any weather condition while controlling glare, thus ensuring visual comfort without compromising energy performance. For instance, studies* by the independent engineering and sustainability consultancy firms Hilson Moran and Estia show that SageGlass is able to provide similar daylight autonomy levels as optimally controlled automated blinds systems, and considerably better performance than manually operated blinds.

* AVAILABLE ON REQUEST

L06 – Visual Balance

SageGlass can tint automatically or manually to meet a building's needs. SageGlass can protect rooms from extreme changes in lighting and provide a more comfortable space for occupants.

L08 – Occupant Control of Lighting Environments (V1 Automated Shading and Dimming Controls)

SageGlass can be tinted according to occupants' and spaces' requirements, through automated (as required by WELL) or manual control. In the automated mode, the tint is controlled by exterior sunlight sensors, which detect whether there are glare conditions or cloud cover. The automated mode can also take into consideration occupancy and seasons for improved energy savings*.

* MORE INFORMATION ON SAGEGLASS CONTROL STRATEGIES IS AVAILABLE BY REQUEST

Fitness

V03 – Movement and Network Circulation (V1 Interior Fitness Circulation (P))

Installing SageGlass within stairs and high circulation areas creates aesthetic appeal and connection of the indoors with the outdoor spaces, while still controlling glare that, if left unmanaged, could be uncomfortable or unsafe.

Did You Know?

Daylight and views are **essential** to our well-being, development and health. Research studies have suggested a 18% increase in productivity, and a 10% to 25% improvement in cognitive performances in offices with **more natural light and views** to the outdoors.

SOURCE: World Green Building Council: Health, Wellbeing & Productivity in Offices, The next chapter for green building



Comfort

S02 – Maximum Noise Levels (V1 Exterior Noise Intrusion)

Traffic, construction work, and other loud and persistent noises affect daily quality of life and human health. To help reduce exterior noise, SageGlass is produced with one laminate layer and is available as double or triple glazing, with additional sound dampening acoustic layers, which enhances sound insulation properties. A high-quality airtight frame should be used for optimum performance.

T01 – Thermal Performance (P) (V1 Thermal Comfort)

T02 – Enhanced Thermal Performance (V1 Thermal Comfort)

Through its efficient insulating and dynamic solar control properties, SageGlass contributes to creating thermally comfortable environments both in winter and summer. SageGlass can particularly help to regulate the radiant heat in the space. Note that SageGlass should be mounted in a high-performance framing system. Triple pane configuration options are also available for increased thermal performance.

T03 – Thermal Zoning (V1 Individual Thermal Control)

SageGlass has independent zone controls to maximize thermal comfort by area. In particular, SageGlass in-pane zoning allows for differential tinting within a single glass pane to different transmission states.

T04 – Individual Thermal Control (V1 Individual Thermal Control)

SageGlass dynamic glazing can be controlled manually, allowing occupants to control their thermal environment when and how they want

Community

C02 – Integrative Design (P) (V1 Integrative Design (P))

The SageGlass team engages with all stakeholders from the earliest possible stages of project design, promoting wellness and focusing on the needs of the occupants. SageGlass also has BIM objects to help streamline this integrative design process.

C03 – Occupant Survey (P) (V1 Post Occupancy Survey)

In accordance with its vision to improve the occupant's comfort in buildings, SageGlass has partnered with the Center for the Built Environment (CBE) at UC Berkeley to develop a specific module that can be used with the CBE core survey on projects with dynamic glazing. This module can serve to measure the effective impact of the dynamic glazing on thermal comfort and lighting, in addition to other factors, and provide feedback for further post-occupancy commissioning.

Mind

M03 – Access to Nature (P) (V1 Biophilia I – Qualitative)

SageGlass incorporates independent zoning and tinting controls to provide occupants with a view to the exterior while maintaining comfort. This enables the incorporation of nature inside the building and connection with nature outside the building.



Materials

X08 – Hazardous Material Reduction (V1 Fundamental Material Safety, Toxic Material Reduction)

SageGlass does not contain asbestos, lead, cadmium, or antimony at levels more than 100 ppm by weight. SageGlass does not contain mercury or hexavalent chromium. For further material information, please see our Health Product Declaration or our Declare label.

X10 – Volatile Compound Reduction (V1 Toxic Material Reduction, VOC Reduction)

SageGlass does not contain perfluorinated compound, halogenated flame retardant, phthalates or urea formaldehyde at levels equal or greater than 100 ppm. SageGlass does not contain isocyanate-based polyurethane at all. SageGlass is an inherently non-emitting material; for more information regarding VOC testing please see our attestation by Eurofins Product Testing A/S for emissions compliance to regulations in Germany, France, and Belgium, as well as CDPH CA01350.

X13 – Enhanced Material Precaution (P) (V1 Enhanced Material Safety)

SageGlass is participating in the Declare program with a Declare label that provides transparent reporting of the material ingredients and potential health hazards. SageGlass is 'Living Building Challenge Declared,' with exceptions for proprietary ingredients and small electrical components. All proprietary ingredients in SageGlass represent less than 0.1% of the product by weight.

X14 – Material Transparency (V1 Material Transparency)

SageGlass has completed both a Health Product Declaration and a Declare® label. These documents provide a transparency reporting of the material ingredients and potential health hazards contained. SageGlass' Declare label is 'Living Building Challenge Declared,' with exceptions for proprietary ingredients and small electrical components. All proprietary ingredients in SageGlass represent less than 0.1% of the product by weight.

Every year, Saint-Gobain publishes its annual report, including sustainability reporting information on SageGlass, which is based on the GRI V4 (Global Reporting Initiative) framework. The report is publicly available on the Saint-Gobain website.

**Not all
smart glass
is created equal**

1,300+
Installations

1,300+ **27+**
Patents Countries

30+
Years

SageGlass® is the world leader in smart glass. Our electrochromic glass tints and clears automatically to offer all the benefits of glass without the downsides of blinds and shades. Design gorgeous views that optimize daylight and comfort without excessive heat or glare. SageGlass solutions also improve building performance and reduce energy use. As a Saint-Gobain company, SageGlass is part of a group that spans 70 countries and 350 years of building science expertise.

To learn more about our product portfolio visit: sageglass.com/products

Contact your local representative at: sageglass.com/contact

     sageglass.com

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