

FGD

Glass Solutions

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DECORLITE® LEED INFORMATION SHEET

The below document describes how FGD Glass Solutions Decorlite® Back-Painted glass supports methods frequently used to meet program requirements set forth in the U.S. Green Building Council Leadership in Energy and Environmental Design Green Building Rating System™. The use of certain materials will not guarantee credits, as the materials themselves cannot be LEED certified; however, the strategies used in conjunction with specifying certain materials do assist when applying for LEED credits.

Applicable Standards

There are a variety of forms decorative glass products may take. To ensure proper spatial integrity, recognized standards must be adhered to. The standards listed below, although not an extensive list, have been deemed most applicable to the various silvered glass products contained in this document. For a complete directory of ASTM standards visit:www.astm.com

Flat glass products to comply with:

- ASTM C 1036 Standard Specification for Flat Glass

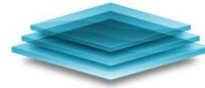
Glass coated with organic coatings to comply with:

- ASTM D 3359 Standard Test Methods for Measuring Adhesion by Tape Test

Laminated Glass Products to comply with:

- ASTM C 1172 Standard Specification for Laminated Architectural Flat Glass
- ANSI Z97.1-2004 American National Standards Institute (ANSI) American National Standard for Safety Glazing Materials used in Buildings –Safety Performance Specifications and Methods of Test
- CAN-CGSB -12.1-M90 Canadian General Standards board (CGSB) Tempered or Laminated Safety Glass
- 16CFR1201, Category II U.S. Government Code of Federal Regulations Part 1201 –Safety Standard for Architectural Glazing Materials

NOTE: This document is intended to provide general information only. FGD Glass Solutions does not make any warranty, either expressly or implied, as to the sustainability or completeness of the information herein. Decorlite® Back-Painted glass can be specified in multiple styles (etched, tempered, laminated) to suit a variety of architectural glass requirements.



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LEED® Category: Energy and Atmosphere

1. OPTIMIZE ENERGY PERFORMANCE (EA1)

INTENT

Achieve increasing levels of energy performance beyond the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use

REQUIREMENTS

Demonstrate a percentage improvement in the performance building performance rating compared with the baseline building performance rating

- **DECORLITE®**
Decorlite® acts as a natural amplifier for light and promotes energy harvesting to optimize site energy performance.
- When used in combination with design planning, the reflective and refractive properties of Decorlite® may contribute to a reduced need for electrical lighting.
- Applications where Decorlite® Back-Painted glass may enhance daylight penetration throughout the site include wall coverings, interior doors, shelving, and glass furniture components.

LEED® Category: Indoor Environmental Quality

2. LOW-EMITTING MATERIALS: SYSTEMS FURNITURE&SEATING/PAINTS&COATINGS (EQ4.5-4.2)

INTENT

Reduce the quality of indoor air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of installers and occupants

REQUIREMENTS

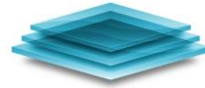
(1) All systems furniture and seating manufactured, or refurbished within 1 year prior to occupancy must not exceed LEED allowable limits for Volatile Organic Compounds (VOC) within the indoor air concentration.

(2) All Architectural Paints and coatings used on the interior of the building must not exceed LEED allowable Volatile Organic Compound (VOC) limits.

DECORLITE®

- To enhance the quality of air and well-being of the occupants on site Decorlite® is fabricated to be a low-emitting material.
- Systems such as partitions, desktops, and demountable walls can be specified using Decorlite® during construction to take advantage of its low-emitting properties.
- Exposure to Volatile Organic Compounds (VOC's) that may be present in paints can be eliminated by using Decorlite® as a wall covering instead.

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- All applications can be maintained with non-toxic chemicals. Stable and durable coatings are applied to last for decades, preventing frequent replacement.

LEED® Category: Indoor Environmental Quality

3. CONTROLLABILITY OF SYSTEMS/ LIGHTING (EQ6.1)

INTENT

Provide a high level of lighting system control by individual occupants or groups in multi-occupant spaces (i.e. classrooms or conference areas) and promote their productivity, comfort, and wellbeing.

REQUIREMENTS

Provide individual lighting controls for 90% (minimum) of the building occupants to enable adjustments to suit individual task needs and preferences.

Provide lighting system controls for all shared multi-occupant spaces to enable adjustments that meet group needs and preferences

DECORLITE®

- Reduce the amount of installed electric lighting by coordinating design with select surface materials, such as the high reflective surface of Decorlite®.
- When Decorlite® is used for daylighting, to increase the quality of light, Etched and Cast Carved varieties are available to sustain glare control requirements.
- Furniture components and interior doors may be enhanced with Decorlite® to further the penetration of natural light into the space (instances may include partitions and glass wall cladding).

LEED® Category: Indoor Environmental Quality4.

4. DAYLIGHT & VIEWS (EQ 8.1 & 8.2)

INTENT

To provide for the building occupants a connection between indoor spaces and the outdoors through the introduction of daylight and views into the regularly occupied areas of the building.

REQUIREMENTS

- Achieve a minimum Daylight Factor of 2% for at least 75% of all regularly occupied areas
- Maintain direct line of sight to the outdoor environment via vision glazing for building occupants in 90% of regularly occupied areas.
- Provide daylight redirection and/or glare reduction devices



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- Decorlite® can provide a connection between indoor occupants and the outdoors while accommodating for factors such as heat gain and loss, glare control, visual quality, and variations in daylight availability.
- Manipulate the appearance to bring the effects of nature indoors to increase satisfaction with the work environment-productivity, comfort, and well-being.
- The reflective surface of Decorlite® can be used to enhance daylighting and is available in etched styles qualifying as a glare reduction surface

LEED® Category: Indoor Environmental Quality

5. ENHANCED ACOUSTICAL PERFORMANCE/FOR SCHOOLS ONLY (EQ9)

INTENT

To provide class rooms that better facilitate teacher-to-student and student-to-student communications through effective acoustical design.

REQUIREMENTS

- Designing learning spaces to meet Acoustical Performance Criteria (per ANSI)
- Reduce background noise from heating and ventilation systems in classrooms and other core learning spaces.

DECORLITE®

- When laminated, Decorlite® can contribute in reducing acoustic levels.
- Laminated glass offers increased reduction of noise over non-laminated products.
- As a laminated material, Decorlite® maintains its qualities to harvest daylight

LEED® Category: Materials & Resources

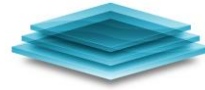
6. REGIONAL MATERIAL (MR5)

INTENT

To increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources, and reducing the environmental impacts resulting from transportation.

REQUIREMENTS

A minimum of 10% or 20% of construction material costs must be manufactured within 500 miles of the project site.



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DECORLITE®

- Fabrication of Decorlite® takes place in our Suwanee, Georgia, facility
- All materials used in fabrication are sourced regionally
- Depending on the location of your project, Decorlite® may help you attain this credit

LEED® Category: Indoor Environmental Quality

7. INNOVATION IN DESIGN (ID1)

INTENT

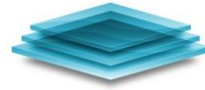
- Reduce the quantity of indoor air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of installers and occupants.
- To build a comprehensive, interactive educational program within the LEED® certified building to demonstrate and promote the use of sustainable building features and practices.

REQUIREMENTS

Achieve significant, measurable environmental performance using a strategy not addressed in the LEED 2009 for New Construction and Major Renovations, LEED 2009 for Core and Shell Development, or LEED 2009 for Schools Rating Systems.

DECORLITE®

- The use of glass as an alternative offers protection from Volatile Organic Compounds (VOC's) as well as extensive opportunities for design innovation.
- Decorlite® is a low-emitting, highly durable material. It resists fade from exposure to UV light, moisture, and humidity.
- Care is taken on multiple levels to remove VOC's from both materials used for fabrication and site of use including installation, and maintenance.
- Applications for use include furniture, glass signage, partitions, doors, and walls.
- In the instance of signage, digital imaging can be used in combination to create durable displays-resistant to permanent degradation from paints, permanent markers, or graffiti.
- This bacteria-resistant hygienic surface is easily cleaned with non-toxic chemicals eliminating subjection to potentially hazardous fumes for periodic maintenance.
- There is no need to repaint or refinish installed elements unlike drywall or millwork, minimizing exposure to VOC's or other hazardous elements present in traditional building materials.



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MORE INFORMATION

We appreciate your interest in how Decorlite® can contribute to your goal of achieving an efficient project and hope this information helps you when applying for LEED credits. Should you need further information concerning specific materials fabricated by FGD Glass Solutions, call us at 770-614-4121 or visit our website www.fgdglass.com.com. In-depth credit information, including detailed requirements and allowable points, is provided by the U.S. Green Building Council online at www.usgbc.org/leed.

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