How Saand can help with LEED:

Saand's glass helps obtain Leed points in the following ways:

- Energy & Atmosphere
- Materials & Resources
- Indoor Environmental Quality

To get complete information about the LEED Canada-NC Green Building Rating System visit the website of the Canadian Green Building Council at: www.cabc.ca.

LEED CATEGORY: Energy & Atmosphere (1 to 17 points)

- **Prerequisite 2: Minimum Energy Performance**

Intent: Establish the minimum level of energy efficiency for the base building and systems.

- **Credit 1: Optimize Energy Performance**

Intent: Achieve increasing levels of energy performance above the prerequisite standard to reduce environmental impacts associated with excessive energy use.

Contribution of Saand:

The energy efficiency performances of glass vary according to the climatic zone it is installed in. Saand offers a wide range of glass suitable for the different climates found in North America.

Northern Zones (primarily heating):

The U value measures the capacity of glass to prevent heat loss. The

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U value of insulating glass is generally from 0.20 to 1.20. The lower the U value, the more the glass is effective against heat loss.

Glass types:

- U value <0.35*: Guardian Sun-Guard LE-40, LE-50, LE63, NP-61, Pilkington Energy Advantage and Eclipse Advantage, Comfort E2
- U value<0.30*: AFG Comfort Ti products, AG-43, PPG Solarban products.

*Sealed unit made up of a 6mm glass coating surface #2/12.7 mm air/6mm Clear

Southern Zones (primarily air conditioning):

The solar Heat Gain Coefficient (SHGC) measures the capacity of glass to block solar heat gain. The SHGC value is generally from 0 to 1. The lower the SHGC, the more effectively the glazing blocks heat gain.

Glass types:

- SHGC <0.30*: Pilkington Eclipse Advantage (Evergreen, Arctic Blue), AFG Yiac23, Guardian Sun-Guard AG43
- SHGC <0.40*: Pilkington Eclipse Advantage (Grey, Bronze, Blue-Green, AFG Tiac40,Tiac, Tir, Sun-Guard LE-40, LE-50, NP-61, SN-68, PPG Solarban products.

*Sealed unit made up of a 6 mm glass coating surface #2 / 12.7 mm air / 6 mm Clear.

LEED CATEGORY: Materials & Resources (1 to 14 points)

- **Credit 2.1: Construction Waste Management: Divert 50% From Landfill**
- **Credit 2.2: Construction Waste Management: Divert 75% From Landfill**

Intent: Divert construction, demolition and land clearing debris from landfill disposal. Redirect recyclable recovered resources back to the manufacturing process. Redirect reusable materials to appropriate sites.

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Contribution of Saand:

Saand uses wholly recyclable materials such as wood, cardboard and paper to package its glass. In addition, these materials contain no chemical coatings or bleaching agents. Saand also uses reusable metal supports when shipping glass.

- **Credit 4.1: Recycled Content: 7.5% (Post-Consumer + 1/2 Post-Industrial)**
- **Credit 4.2: Recycled Content: 15% (Post-Consumer + 1/2 Post-Industrial)**

Intent: Increase demand for building products that incorporate recycled content materials, therefore reducing impacts resulting from extraction and processing of new virgin materials and by-passing energy and green house gas-intensive industrial and manufacturing processes.

Contribution of Saand:

- Glass: The float glass used by Saand contain about 20% post-industrial recycled glass. Saand recycles about 90% of the clear glass waste produced during processing. This glass is returned to glass recyclers.
- Spacers: Saand recycles 90% of the clear aluminum waste produced during the assembly of sealed units.

- **Credit 5.1 Regional Materials: 10% Extracted and Manufactured Regionally**
- **Credit 5.2 Regional Materials: 20% Extracted and Manufactured Regionally**

Intent: 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.

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Saand operates 4 production plants in Ontario. The location of these plants minimized the shipping distance for finished products.

LEED CATEGORY: Indoor Environmental Quality (1 to 15 points)

- **Credit 4.1: Low-Emitting Materials: Adhesives & Sealants**

Intent: Reduce the quantity of indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and well-being of occupants.

Contribution of Saand:

The level of volatile organic compounds (VOC) of an adhesive or sealant is calculated in g/L. The lower the level, the less VOCs that could be emitted into the surrounding air the product contains. For example, regulation 1168, "*Adhesive and Sealant Applications"* of the *South Coast Air Quality Management District (*SCAQMD) calls for a VOC level in architectural sealants below 250 g/L.

Saand uses polysulphide or silicone as exterior sealants in its sealed units. The polysulphide and silicone used by Saand have a VOC level of 0 g/L and 27 g/L respectively. The polyisobutylene used as an interior sealant has a VOC level of 0 g/L.

- **Credit 7.1: Thermal Comfort: Compliance**

Intent: Provide a thermally comfortable environment that supports the productivity and wellbeing of building occupants.

Contribution of Saand:

Saand offers a wide range of glass that blocks solar heat gain and prevents heat loss to help maintain a comfortable temperature for building occupants. At the same time providing a connection between indoor and outdoor spaces by allowing daylight into and providing views from regularly occupied spaces. See the Energy & Atmosphere category for details.

- **Credit 8.1 Daylight and Views: Daylight 75% of Spaces**
- **Credit 8.2 Daylight and Views: Views for 90% of Space**

Intent: 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.

Contribution of Saand:

The capacity of glass to allow daylight to enter is express by the percentage of visible light transmission. This value is generally between 15 and 83%. The higher the percentage, the greater the light transmission.

Glass types:

- Visible light transmission <75%*. Pilkington Energy Advantage and Eclipse Advantage clear, AFG Comfort products, Solarban 60, Guardian Sun-Guard LE-63, NP-61 and SN-68.

*Sealed unit made up of a 6 mm glass coating surface #2 / 12.7 mm air / 6mm clear.

Translucent glass can also bring natural light into buildings. These kinds of glass give soft, glare-free light. Use of this glass, for example Acid etched glass, cuts the need for artificial light sources.
Please contact Saand for specific applications, specifications and samples.

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