



BUILDING PRODUCTS OF CANADA CORP.



POTENTIAL CONTRIBUTION FOR LEED® CANADA FOR HOMES 2009 REQUIREMENTS

CREDITS

DURABLE STRATEGIES

POTENTIAL POINTS

CREDIT RELEVANCE

CONTRIBUTION AND COMPLIANCE* SOUNDSMART / ENERMAX PANELS

ID 3.1

Innovative or regional
design

1-4 points

Direct

COMMENTS

Requirements

Prepare a written Innovative Design Request, to be submitted by the *LEED Canada for Homes* Provider to the CaGBC, explaining the merits of the proposed measure. This point should not be counted until *LEED Canada for Homes* has ruled on the request.

This credit rewards innovative or regional measures that are not addressed elsewhere in the Rating System. A project can also receive **1 LEED point** for exceeding the **performance requirements** of existing credits.

Exemplary performance requirement MR 2.2: Recycled content

Innovation and exemplary performance if the project reaches **30%** or more of recycled content.

Exemplary performance requirement MR 2.2: Regional materials

Innovation and exemplary performance if the project reaches **40%** or more of regional material.

Exemplary performance requirement MR 2.2: FSC® Certified wood

Innovation and exemplary performance if **95%** or more of the project's total new wood is FSC® Certified Wood.

SOUNDSMART and **ENERMAX** panels from **BUILDING PRODUCTS OF CANADA CORP.** are leaders in their category, **SOUNDSMART** and **ENERMAX** combine sound attenuation and thermal insulating properties. The reflective aluminum side dramatically improves the soundproofing efficiency of any wall or floor/ceiling assembly. It also increases a building's energy efficiency. It is the perfect wall solution for a healthier, more comfortable and more peaceful indoor environment.

SOUNDSMART and **ENERMAX** panels dramatically improves the soundproofing efficiency, and can therefore, according to the project's team and priorities, contribute to the obtaining of the credit for Innovative design promoting a high soundproofing efficiency.

Moreover, **SOUNDSMART** and **ENERMAX** panels contains a high pre-consumer and post-consumer recycled content as well as regional materials.

These characteristics may help achieve exemplary performances for the following credits:

MR 2.2: Recycled content

MR 2.2: Regional materials

EA 1

Optimize Energy
Performance

Up to 28 - 34 points
Or up to 5 points
Based on the selected options

Direct

COMMENTS

Requirements

Improve the overall energy performance of a home by meeting or exceeding the performance of **ERS (EnerGuide) 76** or **HERS 80**.

Prerequisites

1.1 Meet performance of ERS 76 or HERS 80 (0 points, required).

Credits

1.2 Exceptional Energy Performance in ERS (EnerGuide) (maximum 28 points). Exceed the performance of **ERS 76**. Use table 151 below relating the EnerGuide Rating System (ERS) index to the appropriate number of LEED points. This path can also pursue **EA 8** and **EA 9** and must meet the prerequisites and satisfy the conditions and must comply with the Credit **EA 8.1 Lighting** requirements.

OR

1.2 Exceptional Energy Performance in HERS (maximum 34 points). Exceed the performance of **HERS 80**. Use the table 15b below relating the **Home Energy Standards (HERS) Index** to the appropriate number of LEED points.

There are two possible conformity paths in the Energy and Atmosphere category. If a project is allocated points for Credit **EA 1.2 (SCE)**, Credits **EA 2 to 6, 7.3** and **10** must be skipped. If a project is allocated points for Credit **EA 1.2 (HERS)**, Credits **EA 2 to 6, 7.3** and **8 to 10** must be skipped.

SOUNDSMART and **ENERMAX** panels contribute to Prerequisite and Credit **EA 1**. They are fabricated by laminating an aluminum membrane to a high-strength natural panel, which significantly improves the energy performance of walls.

SOUNDSMART and **ENERMAX** panels improves the energy efficiency of a building by adding a thermal resistance up to **R-4.3** for **ENERMAX** and up to **4.7** for **SOUNDSMART** (including the reflective coefficient) on the inner side of the building exterior wall and in conjunction with a 3/4 inch layer of air (reference: CCMC insulation 13494-R).

BUILDING PRODUCTS OF CANADA CORP. has all required documents regarding LEED® and can rapidly provide information for a specific project.

INNOVATION AND DESIGN
PROCESS (ID)

ENERGY AND ATMOSPHERE (EA)

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CREDITS DURABLE STRATEGIES POTENTIAL POINTS CREDIT RELEVANCE CONTRIBUTION AND COMPLIANCE*
SOUNDSMART / ENERMAX PANELS

EA 2

Insulation

2 points

Direct

COMMENTS

Requirements

Design and install insulation to minimize heat transfer and thermal bridging.

Prerequisites

2.1 Basic Insulation (0 points, required)

- Install insulation that meets or exceeds the **R-value** requirements listed in Chapter 6 of the **2004 International Energy Conservation Code** (Table 602.1) or the **local building codes**, whichever is the more stringent. Alternative wall and insulation systems, such as structural insulated panels (SIPs) and insulated concrete forms (ICFs), must demonstrate a comparable **R-value**, but thermal mass or infiltration effect cannot be included in the **R-value** calculation.
- Install insulation to meet the provincial or local standards. Installation must be verified by a **Green Rater** conducting a pre-drywall thermal bypass inspection.

2.2 Enhanced Insulation (2 points)

- Install insulation that exceeds the **R-value** requirements listed in Chapter 6 of the **2004 International Energy Conservation Code** (Table 602.1) or the **local building codes**, whichever is the more stringent by at least **20%**. Alternative wall and insulation systems, such as structural insulated panels (SIPs) and insulated concrete forms (ICFs), must demonstrate a comparable **R-value**, but thermal mass or infiltration effect cannot be included in the **R-value** calculation.
- Install insulation to meet grade 1 standards. Installation must be verified by a **Green Rater** conducting a pre-drywall thermal bypass inspection.

SOUNDSMART and **ENERMAX** panels contribute to Prerequisite and Credit **EA 2**. They are fabricated by laminating an aluminum membrane to a high-strength natural panel, which significantly improves the energy performance of walls.

SOUNDSMART and **ENERMAX** panels improve the energy efficiency of a building by adding a thermal resistance up to **R-4.3** for **ENERMAX** and up to **4.7** for **SOUNDSMART** (including the reflective coefficient) on the inner side of the building exterior wall and in conjunction with a 3/4 inch layer of air (reference: CCMC insulation 13494-R).

EA 3

Air Filtration

3 points

Direct

COMMENTS

Requirements

Minimize energy consumption caused by uncontrolled air leakage into and out of conditioned spaces.

Prerequisites

3.1 Reduce Envelope Leakage: Meet the air leakage requirements shown in table 17. The air leakage rate must be tested and verified by a **Green Rater**.

Credits

3.2 Greatly Reduced Envelope Leakage (2 points). Meet the air leakage requirements shown in table 17. The air leakage rate must be tested and verified by a **Green Rater**.

OR

3.3 Minimal Envelope Leakage (3 points). Meet the air leakage requirements shown in table 17. The air leakage rate must be tested and verified by a **Green Rater**.

SOUNDSMART and **ENERMAX** panels contribute to Credit **EA 3** because it substantially increases the air tightness of the building envelope. The **ENERMAX** panel's fully supported aluminum membrane is a Type 1 vapour barrier which ensures an air permeability lower than **0.0002 L/s.m²**. This characteristic provides an increased performance to stop air and moisture migration in the wall cavity. **SOUNDSMART** and **ENERMAX** panels therefore decrease the air leakages and allows an increase in the energy efficiency of a building (CCMC air barrier 13356-R).

However, **BUILDING PRODUCTS OF CANADA CORP.** has no control over the on-site installation technique or on the products used to seal the openings.

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ENERGY AND ATMOSPHERE (EA)





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MR 2.1

Environmentally preferable products:
FSC®-Certified Tropical Wood

(0) Required

Direct

COMMENTS

Requirements

Prerequisites

2.1: FSC®-Certified Tropical Wood. Meet the following two requirements, as applicable:

A) Provide all wood-product suppliers with a notice (see figure 6, below) containing all the following elements:

- a statement that the builder's preference is to purchase products containing tropical wood only if it is FSC®-Certified;
- a request for the country of manufacture of each products supplied; **and**
- a request for a list of FSC®-Certified tropical wood products the vendor can supply.

B) If tropical wood is intentionally used (i.e., specified in purchasing documents), use only FSC®-Certified tropical wood products. Reused or reclaimed materials are exempt.

SOUNDSMART and ENERMAX panels from BUILDING PRODUCTS OF CANADA CORP. can contribute to this Prerequisite since it does not contain tropical wood components.

BUILDING PRODUCTS OF CANADA CORP. can provide a compliance letter for this prerequisite in a certified project.

MR 2.2

Environmentally preferable products:
FSC®-Certified wood

Does not contribute

Direct

COMMENTS

Requirements

Use building component materials that meet one or more of the criteria below:

Except as noted otherwise below, **90%** of the component, as defined in each category, must meet the specification shown.

Wood frame: 90% of wood used for the wall structure must be FSC® certified.

BUILDING PRODUCTS OF CANADA CORP. is FSC® Mix Credit certified. Certificate code RA-COC-006310, FSC®-C113184.

SOUNDSMART panel contains **95%** of wood fibers and ENERMAX panel **92.9%**. Nonetheless, to be compliant with Credit MR 2.2, calculations must exclude components with post-consumer recycled content. Considering the calculation requirements for this credit, SOUNDSMART contain 59% of wood fibers and ENERMAX 62.4%. All of BUILDING PRODUCTS OF CANADA CORP.'s products are made out of **100%** controlled wood.

FSC®-Certified SOUNDSMART and ENERMAX panels can be provided upon special request and availability. This product may thus have a **100% FSC®** certified wood content.

MR 2.2

Environmentally preferable products: Recycled content

0.5 point by component

Direct

COMMENTS

Requirements

Environmentally preferable products 0.5 point each, maximum 8 points).

Use building component materials that meet one or more of the criteria below. Except as noted in Table 24, a material must make up **90%** of the component, by weight or volume. A single component that meets each criterion (i.e., environmentally preferable, low emissions, and local sourcing) can earn points for each.

Roof, floor and walls—Insulation: must have **20%** or more recycled content (0.5 point by components).

The SOUNDSMART panel can contribute to this credit since it contains **50.3% pre-consumer** recycled content and **36.2% post-consumer** recycled content.

The ENERMAX panel can contribute to this credit since it contains **42.4% pre-consumer** recycled content and **30.5% post-consumer** recycled content.

Percentages of recycled content are calculated based on the total weight of the entire system and **exclude** the percentage of recycled content from internal waste of BUILDING PRODUCTS OF CANADA CORP. production as requested by LEED®.

BUILDING PRODUCTS OF CANADA CORP. has all required documents regarding LEED® and can rapidly provide information for a specific project.

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MR 2.2

Environmentally preferable products: Local production

0.5 point by component

Direct

COMMENTS

Requirements

Environmentally Preferable Products (0.5 point each, maximum of 8 points)

Use building materials that meet one or more of the criteria below. Except as noted in table 24, a material must make up **90%** of the component by weight or volume. A single component that meets each criterion (i.e., environmentally preferable, low emissions, and local sourcing) can earn points for each.

Local production

Use products that were extracted, processed, and manufactured within **800 km** (500 miles) of home if moved by truck or within **2,400 km** (1,500 miles) if moved by rail.

Except as noted otherwise below, **90%** of the component, as defined in each category, must meet the specification shown.

The **SOUNDSMART** panel can contribute to this Credit since **81.4%** of the components used in its manufacturing are extracted, collected, treated and recovered within **800 km** or **2,400 km** (depending on the transportation mean used) of the final production site.

The **ENERMAX** panel can contribute to this Credit since **68.6%** of the components used in its manufacturing are extracted, collected, treated and recovered within **800 km** or **2,400 km** (depending on the transportation mean used) of the final production site.

The percentage calculation was performed by considering the requirements of Credit **MR 2.2** and the maximum distance radius (which depends on the means of transportation used).

The **ENERMAX** panel is made in **Pont-Rouge, QC, CAN** (G3H 1S2).

The origin of the main components and the mean of transportation used must be validated for every project.

MR 2.2

Environmentally preferable products: Low emissions

0.5 point by component

Direct

COMMENTS

Requirements

Environmentally Preferable Products (0.5 point each, maximum of 8 points)

Use building materials that meet one or more of the criteria below. Except as noted in Table 24, a material must make up **90%** of the component by weight or volume. A single component that meets each criterion (i.e., environmentally preferable, low emissions, and local sourcing) can earn points for each.

Low emissions : Comply with California «Practice for Testing of VOCs from Building Materials Using Small Chambers» (www.dhs.ca.gov/ehlb/IAQ/VOCs/Practice.htm).

The **SOUNDSMART** and **ENERMAX** panels can contribute to this Credit since the components used in its manufacturing by **BUILDING PRODUCTS OF CANADA CORP.** comply with the low emissions requirements.

The **ENERMAX** panel contains no volatile organic compound (**VOC**) and no added urea formaldehyde.

BUILDING PRODUCTS OF CANADA CORP. has all required documents regarding **LEED®** and can rapidly provide information for a specific project.



POINTS

TOTAL

UP TO 15.5 POINTS &
UP TO 44.5 POINTS (BASED ON
THE SELECTED OPTIONS)

The **SOUNDSMART** and **ENERMAX** panels can contribute up to a total of 15.5 points (prescriptive path) & 44.5 points (non-prescriptive path) for a **LEED® Canada for Homes Project**

* It is important to consider that the total amount of possible points reflects the number of achievable points in each credit categories. The product by itself cannot achieve this score, as defined above, but is considered as a beneficial element in order to achieve **LEED®** credits.

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