

POTENTIAL CONTRIBUTION FOR LEED® CANADA FOR HOMES 2009 REQUIREMENTS

CREDITS	DURABLE STRATEGIES	POTENTIAL POINTS	CREDIT RELEVANCE
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CONTRIBUTION AND COMPLIANCE* R-4 PANEL

INNOVATION AND DESIGN PROCESS (ID)

ID 3.1	Innovative or regional design	1-4 points	Direct
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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.

The R-4 structural insulation panel from BUILDING PRODUCTS OF CANADA CORP. is an innovative solution to meeting and exceeding the ever-increasing building code standards for insulation. R-4 is a composite panel that combines the structural and insulating strengths of polystyrene and natural wood fibre.

The R-4 panel contains a high pre-consumer and post-consumer recycled content as well as a high regional material percentage.

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

MR 2.2: Recycled content

MR 2.2: Regional materials

ENERGY AND ATMOSPHERE (EA)

EA 1	Optimize Energy Performance	Up to 28 - 34 points Or up to 5 points Based on the selected options	Direct
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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.

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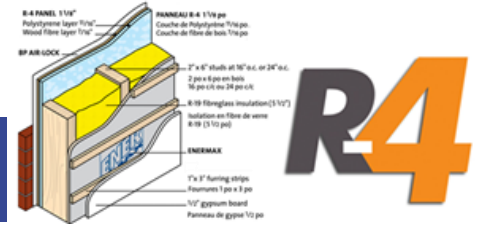
The R-4 panel improves the energy efficiency of a building by adding a thermal resistance of R 4 for a 1 1/8 inch thick panel.

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

Vertima's interpretation regarding potential contribution and compliance of the product and/or system to the LEED® credits are based on information given by the clients and their suppliers, who are responsible for its veracity and integrity. Vertima documents, analyses and validates the supporting documentation in compliance with the CAN/CSA ISO 14021 standard. Therefore, Vertima cannot be held responsible for false or misleading information. VERTIMA INC. ensures an annual review of the technical data enclosed in this document in collaboration with its clients in order to maintain a high quality standard.

Vertima record number: FVERT-13-1041-04
In effect since: April 2013
Valid until : December 2018
Technical Data documented and validated by:





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CREDITS	DURABLE STRATEGIES	POTENTIAL POINTS	CREDIT RELEVANCE
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CONTRIBUTION AND COMPLIANCE* R-4 PANEL

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)

- a. 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.
- b. 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)

- a. 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.
- b. Install insulation to meet grade 1 standards. Installation must be verified by a **Green Rater** conducting a pre-drywall thermal bypass inspection.

The **R-4** structural insulation panel from **BUILDING PRODUCTS OF CANADA CORP.** is an innovative solution to meeting and exceeding the ever-increasing building code standards for insulation. **R-4** is a composite panel that combines the structural and insulating strengths of polystyrene and natural wood fibre.

The **R-4** panel improves the energy efficiency of a building by adding a thermal resistance of **R-4** for a 1 1/8 inch thick panel.

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.

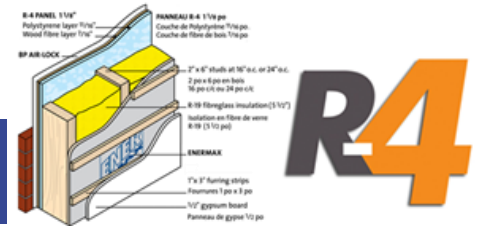
The **R-4** structural insulation panel from **BUILDING PRODUCTS OF CANADA CORP.** is an innovative solution to meeting and exceeding the ever-increasing building code standards for insulation. **R-4** is a composite panel that combines the structural and insulating strengths of polystyrene and natural wood fibre.

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

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

ENERGY AND ATMOSPHERE (EA)





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CREDITS DURABLE STRATEGIES POTENTIAL POINTS CREDIT RELEVANCE

CONTRIBUTION AND COMPLIANCE* R-4 PANEL

MR 2.1	Environmentally preferable products: FSC®-Certified Tropical Wood	(0) Required	Direct
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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.

COMMENTS

The R-4 panel 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
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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.

COMMENTS

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

The R-4 panel contains 78.4% wood components. All of BUILDING PRODUCTS OF CANADA CORP.'s products are made out of 100% controlled wood.

FSC® certified R-4 panel can be provided upon special request and availability. This product may thus have a 100% FSC® certified wood content.

The percentages are calculated according Credit MR 2.2 and exclude the post-consumer recycled content.

MR 2.2	Environmentally preferable products: Recycled content	0.5 point by component	Direct
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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).

COMMENTS

The R-4 panel can contribute to this Credit since it contains 33.4% pre-consumer recycled content and 27.1% post-consumer recycled content.

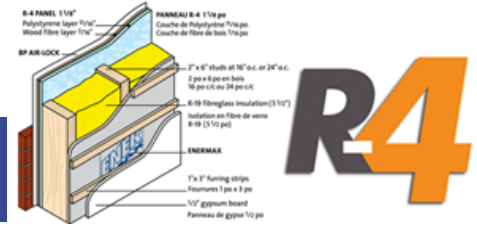
Percentages of recycled content are calculated based on the total weight of the entire system and **exclude** the percentage of recycled content from internal waste of BUILDING PRODUCTS OF CANADA CORP. production as requested by LEED®.

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

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MATERIALS AND RESOURCES (MR)

CREDITS	DURABLE STRATEGIES	POTENTIAL POINTS	CREDIT RELEVANCE	CONTRIBUTION AND COMPLIANCE* R-4 PANEL
MR 2.2	Environmentally preferable products: Local production	0.5 point by component	Direct	<p>COMMENTS</p> <p>The R-4 panel can contribute to this Credit since 57.2% 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.</p> <p>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).</p> <p>The R-4 panel is made in Pont-Rouge, QC, CAN (G3H 1S2).</p> <p>The origin of the main components and the mean of transportation used must be validated for every project.</p>
<p>Requirements</p> <p>Environmentally Preferable Products (0.5 point each, maximum of 8 points)</p> <p>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.</p> <p>Local production</p> <p>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.</p> <p>Except as noted otherwise below, 90% of the component, as defined in each category, must meet the specification shown.</p>				
MR 2.2	Environmentally preferable products: Low emissions	0.5 point by component	Direct	<p>COMMENTS</p> <p>The R-4 panel can contribute to this credit since the components used in its manufacturing by BUILDING PRODUCTS OF CANADA CORP. comply with the low emissions requirements.</p> <p>The R-4 panel contains no volatile organic compound (VOC) and no added urea formaldehyde.</p>
<p>Requirements</p> <p>Environmentally Preferable Products (0.5 point each, maximum of 8 points)</p> <p>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.</p> <p>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).</p>				

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POINTS	TOTAL	UP TO 15.5 POINTS & UP TO 44.5 POINTS (BASED ON THE SELECTED OPTIONS)	The R-4 panel 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
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* 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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