



POTENTIAL CONTRIBUTION FOR LEED® CANADA NC & CS 2009 REQUIREMENTS

**CONTRIBUTION AND COMPLIANCE*
ROOF INSULATORS:**

REGULAR COATED, ASPHALT IMPREGNATED, ASPHALT COATED AND ASPHALT COATED AND IMPREGNATED

CREDITS

DURABLE STRATEGIES

POTENTIAL POINTS

CREDIT RELE-

COMMENTS

EAp2

Minimum Energy Performance

0 (required)

Direct

Requirements

Select 1 of the 3 compliance path options described below.

Chosen option must also be used for EA Credit 1.

Option 1 – Whole building simulation:

Either Model National Energy Code For Buildings (MNECB) or ASHRAE 90.1-2007, Energy Standard for Buildings Except Low-Rise Residential Buildings.

In comparison with the reference building performance rating, demonstrate a 23% cost improvement in the proposed building performance rating for new buildings or a 19% cost improvement in the proposed building performance rating for major renovations to existing buildings, for the MNECB or 10% cost improvement for new buildings or 5% cost improvement for major renovations to existing buildings for ASHRAE 90.1-2007.

Option 2 – Comply with the prescriptive measures of the ASHRAE Advanced Energy Design Guide appropriate to the project scope, for one of the following path: for Small Office Buildings 2004 or for Small Retail Buildings 2006 or for Small Warehouses and Self-Storage Buildings 2008 or for K-12 School Buildings.

Option 3 – Comply with the prescriptive measures identified in the Advanced Buildings™ Core Performance Guide developed by the New Buildings Institute.

COMMENTS

The REGULAR COATED, ASPHALT IMPREGNATED, ASPHALT COATED and ASPHALT COATED AND IMPREGNATED roof insulators are ubiquitous all-purpose base for a wide range of flat roof residential, industrial, commercial and institutional building applications. REGULAR COATED, ASPHALT IMPREGNATED, ASPHALT COATED and ASPHALT COATED AND IMPREGNATED roof insulators have a very high compressive strength, which increases the rigidity and integrity of the roof system. It provides an excellent substrate for the roofing membrane and is an ideal surface for the application of hot asphalt.

The roof insulators contribute to Prerequisite EA 2 because they help increase the energy performance.

These insulators improve the energy efficiency of a building by adding a thermal resistance of R-3 / inch.

EA 1

Optimize Energy Performance

1 to 19 points (NC)
3 to 21 points (CS)

Direct

COMMENTS

Requirements

Select 1 of the 3 compliance path options described below.

Comply with EA Prerequisite 2 (Minimum Energy Performance).

Option 1 – Demonstrate a percentage cost improvement in the proposed building performance rating compared with reference building performance rating, according to the chosen path in EA Prerequisite 2. Up to 19 points (NC) or 21 points (CS).

MNECB

One point (1) LEED® NC and three (3) points LEED® CS for an expected cost reduction of 25% (new buildings) or 21% (existing buildings renovations).

ASHRAE 90.1-2007

One point (1) LEED® NC and three (3) points LEED® CS for an expected cost reduction of 12% (new buildings) or 8% (existing building renovations).

Option 2 – Comply with the prescriptive measures of the ASHRAE Advanced Energy Design Guide (1 point) appropriate to the project scope, for one of the following path: for Small Office Buildings 2004 or for Small Retail Buildings 2006 or for Small Warehouses and Self-Storage Buildings 2008 or for K-12 School Buildings.

Option 3 – Comply with the prescriptive measures identified in the Advanced Buildings™ Core Performance Guide developed by the New Buildings Institute. For this credit, additional points must be obtained with this option (3 points maximum).

COMMENTS

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The roof insulators contribute to Credit EA 1 because they help increase the energy performance.

These insulators improve the energy efficiency of a building by adding a thermal resistance of R-3 / inch.

ENERGY AND ATMOSPHERE (EA)

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





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CREDITS DURABLE STRATEGIES POTENTIAL POINTS CREDIT RELE-

MR 4	Recycled Content	1 - 2 points	Direct
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Requirements

Use materials with recycled content such that the sum of post-consumer recycled content plus 1/2 of the pre-consumer content constitutes at least 10% (1 point) or 20% (2 points), based on cost, of the total value of the materials in the project. The recycled content value of a material assembly is determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.

MR 5	Regional Material	1 - 2 points	Direct
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Requirements

Use building materials or products that have been extracted, harvested, recovered and processed within 800 km (500 miles) (2,400 km if shipped by rail or water) of the final manufacturing site.

Demonstrate that the final manufacturing site is within 800 km (500 miles) (2,400 km if shipped by rail or water) of the project site for these products.

If only a fraction of a product or material is extracted, harvested, recovered, processed and manufactured locally, then only that percentage (by weight) must contribute to the regional value. The minimum percentage of regional materials for each point threshold is 20% (1 point) or 30% (2 points).

COMMENTS

The REGULAR COATED, ASPHALT IMPREGNATED, ASPHALT COATED and ASPHALT COATED AND IMPREGNATED roof insulators can contribute to this Credit since they contain pre-consumer and post-consumer recycled content as shown in the table below:

Product	Pre-consumer*	Post-consumer*
Regular coated	48.2%	36.6%
Asphalt impregnated	48.2%	37.2%
Asphalt coated	47.7%	35.5%
Coated and impregnated	47.0%	39.7%

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®.

All data relating to components with recycled content were identified and validated by a third party - Vertima Inc.

* These values vary according to the insulator's thickness. The technical data shown in this table represent the minimum percentages.

COMMENTS

The REGULAR COATED, ASPHALT IMPREGNATED, ASPHALT COATED and ASPHALT COATED AND IMPREGNATED roof insulators can contribute to this Credit since some of the components used in their 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 percentages of regional materials are shown in the table below:

Product	Regional materials*
Regular coated	84.9%
Asphalt impregnated	85.4%
Asphalt coated	83.2%
Coated and impregnated	86.7%

The percentage calculation was performed by considering the requirements of Credit MR 5 and the maximum distance radius (which depends on the means of transportation used).

The roof insulators are 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.

All data relating to regional materials have been validated by a third party - Vertima Inc.

* These values vary according to the insulator's thickness. The technical data shown in this table represent the minimum percentages.

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MATERIALS AND RESOURCES (MR)





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MATERIALS AND RESOURCES (MR)	CREDITS	DURABLE STRATEGIES	POTENTIAL POINTS	CREDIT RELE-
	MR 7	Certified Wood	Does not contribute	Direct

Requirements

Use a minimum of 50% (based on cost) of wood-based materials and products that are certified in accordance with the Forest Stewardship Council's (FSC) Principles and Criteria, for wood building components. These components include at a minimum structural framing and general dimensional framing, flooring, sub-flooring, wood doors and finishes.

Include materials permanently installed in the project. Wood products purchased for temporary use in the project (e.g., formwork, bracing, scaffolding, sidewalk protection, and guard rails) may be included in the calculation at the project team's discretion.

Where applicable, all these materials must be included in the calculation. The furniture can also be included if it is included with uniformity in MR Credit 3, Materials Reuse, through MR Credit 7, Certified Wood.

COMMENTS
<p>BUILDING PRODUCTS OF CANADA CORP. is FSC Mix Credit certified. Certificate code RA-COC-006310, FSC-C113184. Therefore, all of the BUILDING PRODUCTS OF CANADA CORP.'s products are made out of 100% controlled wood.</p> <p>FSC certified roof insulators can be provided upon special request and availability. These products may thus contribute to this credit since they are made of 56.2% (regular coated), 53.7% (asphalt impregnated), 56.7% (asphalt coated) and 51.4% (asphalt coated and impregnated) wood components.</p> <p>The percentages are calculated according Credit MR 7 and exclude the post-consumer recycled content.</p> <p><i>All data relating to components with certified wood have been validated by a third party - Vertima inc.</i></p>

INNOVATION IN DESIGN (ID)	ID 1	Innovation in Design	1-3 points	Direct
	<p>Requirements</p> <p>Path 2: Exemplary Performance</p> <p>An exemplary performance point may be earned for achieving double the credit requirements and/or achieving the next incremental percentage threshold of an existing credit in LEED.</p> <p>Exemplary Performance MR 4: Recycled content</p> <p>Innovation and exemplary performance if the project reaches 30% or more of recycled content.</p> <p>Exemplary Performance MR 5: Regional Material</p> <p>Innovation and exemplary performance if the project reaches 40% or more of regional material.</p>			

COMMENTS
<p>The REGULAR COATED, ASPHALT IMPREGNATED, ASPHALT COATED and ASPHALT COATED AND IMPREGNATED roof insulators contain a high pre-consumer and post-consumer recycled content as well as a high regional material percentage.</p> <p>These characteristics may help achieve exemplary performances for the following credits:</p> <p>MR 4: Recycled content</p> <p>MR 5: Regional material</p>

REGIONAL PRIORITY (RP)	RP 2	Regional Priority	1-3 points	Direct/ Indirect
	<p>Requirements</p> <p>Up to 3 points for Regional Priority Credit 2 may be proposed for this credit that is intended to allow adding point emphasis to recognize one OR more issues that have additional regional environmental importance.</p> <p>To achieve a Regional Priority credit, the applicant must identify LEED® credits which have additional regional environmental importance. A project must achieve the base credit and then propose that credit as a Regional Priority credit.</p>			

COMMENTS
<p>Please refer to the Advantages and Aspects to Consider section of the Regional Priority credit.</p> <p>For a list of applicable credits, please refer to the CaGBC website www.cagbc.org, under the LEED® tools section for the LEED® Canada -NC 2009 & CS 2009 Rating Systems.</p>

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POINTS	TOTAL	UP TO 30 POSSIBLE POINTS (NC) & 32 POSSIBLE POINTS (NE)	The roof insulators can contribute up to a total of thirty (30) points for a LEED® Canada-NC 2009 project & thirty-two (32) points for a LEED® Canada-NE 2009 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.*

