## LEED® synthesis sheet
### AcoustiTECH™ Ceramic membrane:
#### Product contribution to LEED® Canada-NC 2009

### LEED® Canada-NC 2009

#### Energy and Atmosphere (EA)

<table>
<thead>
<tr>
<th>EAp2 – Minimum energy performance</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Requirements</strong></td>
<td>0 point (required)</td>
</tr>
<tr>
<td>Select 1 of the 3 compliance path options described below.</td>
<td></td>
</tr>
<tr>
<td><strong>Chosen option must also be used for EA Credit 1</strong></td>
<td></td>
</tr>
<tr>
<td>In comparison with the reference building performance rating, demonstrate a <strong>23%</strong> cost improvement in the proposed building performance rating for new buildings or a <strong>19%</strong> 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.</td>
<td></td>
</tr>
<tr>
<td><strong>Option 2</strong> 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.</td>
<td></td>
</tr>
<tr>
<td><strong>Option 3</strong> Comply with the prescriptive measures identified in the Advanced Buildings™ Core Performance Guide developed by the New Buildings Institute.</td>
<td></td>
</tr>
<tr>
<td><strong>EA credit 1 - Optimize energy performance</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Requirements</strong></td>
<td>1 to 19 points (NC) 3 to 21 points (NE)</td>
</tr>
<tr>
<td>Select 1 of the 3 compliance path options described below.</td>
<td></td>
</tr>
<tr>
<td><strong>Comply with EA Prerequisite 2 (Minimum Energy Performance).</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Option 1</strong> 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).</td>
<td></td>
</tr>
<tr>
<td><strong>MNECB</strong> One point (1) LEED® NC and three points (3) LEED® CS for an expected cost reduction of 25% (new buildings) or 21% (existing buildings renovations).</td>
<td></td>
</tr>
</tbody>
</table>

*Vertima’s interpretation regarding potential contribution and compliance of the product and/or system for the LEED® credits are based on information given by the clients who are responsible for its veracity and integrity. Vertima is validating given proof and vouchers with manufacturers and their suppliers. Therefore, Vertima cannot be held responsible for false information or misinterpretation.

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Comments

**AcoustiTECH™ Ceramic** is an acoustical and vapour barrier membrane which is ideal for construction and renovation of condominiums, apartment buildings and basements.

The **AcoustiTECH™ Ceramic** membrane contributes to Prerequisite EAp2 because it has a thermal resistance of R-0.44.

The **AcoustiTECH™ Ceramic** membrane provides an increased thermal comfort on ceramic tiles, marble and stone and reduces the cold coming from the subfloor by creating a thermal break and optimize the efficiency of electrical floor heating systems and are compatibles with hydronic floor heating systems.

The **AcoustiTECH™ Ceramic** membrane reflects warmth of the room to ceramic in order to keep the floor warmer and more comfortable.

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Comments

**AcoustiTECH™ Ceramic** is an acoustical and vapour barrier membrane which is ideal for construction and renovation of condominiums, apartment buildings and basements.

The **AcoustiTECH™ Ceramic** membrane contributes to Credit EA 1 because it has a thermal resistance of R-0.44.

The **AcoustiTECH™ Ceramic** membrane provides an increased thermal comfort on ceramic tiles, marble and stone.
ASHRAE 90.1-2007

One point (1) LEED® NC and three points (3) 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).

Materials & Resources (MR)

**MR credit 4 – Recycled Content**

Requirements

Use materials with recycled content such that the sum of post-consumer recycled content plus half 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.

**Credit MR 5 – Regional Materials**

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).

**Non-compliant**

Comments

The AcoustiTECH™ Ceramic membranes cannot contribute to this credit since they contain no pre-consumer and 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 Finitec Canada’s production as requested by LEED®.

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

**1 to 2 points**

Comments

The AcoustiTECH™ Ceramic membrane can contribute to this credit since 9% of the components used in its composition are extracted, collected, treated and recovered within 800 km by truck or 2,400 km by train or by boat of the final production site.

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 AcoustiTECH™ Ceramic membrane’s final place of manufacturing is located in Laval, Quebec (H7L 3Z1).

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

All data on regional materials components were identified and validated by a third party – Vertima Inc.
Indoor Environmental Quality (IEQ)

Credit IEQ 3.2 – Management plan: before occupancy

Requirements

Develop an IAQ management plan and implement it after all finishes have been installed and the building has been completely cleaned before occupancy.

Option 2 - Air Testing

Conduct baseline IAQ testing, after construction ends and prior to occupancy, using testing protocols consistent with the United States Environmental Protection Agency Compendium of Methods for the Determination of Air Pollutants in Indoor Air and as additionally detailed in the LEED® Canada Reference Guide for Green Building Design and Construction. Demonstrate that the contaminant maximum concentrations listed are not exceeded.

Regional Priority (RP)

Credit RP 2 – Regional Priority

Requirements

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.

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.

Comments

The AcoustiTECH™ Ceramic membranes can indirectly contribute to this credit and can be beneficial to projects selecting the option 2 in Credit IEQ 3.2: Air testing prior to occupancy.

Finitec Canada has shown a marked interest in developing and selecting products that have less adverse effects on the environment.

The AcoustiTECH™ Ceramic membrane is non toxic, odorless, rot resistant, non allergenic and antibacterial and may therefore contribute to the interior air quality improvement (IAQ).

TOTAL

AcoustiTECH™ CERAMIC membrane can contribute up to a total of Twenty-five (25) points for LEED® Canada-NC 2009 & Twenty-seven (27) points for LEED® Canada-CS 2009

* 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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*Made in collaboration with Vertima® May 2012

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