

LEED® synthesis sheet

Acoustical membranes from Lead series

Acousti-Tech™ Lead 6, Acousti-Tech™ Lead 4.5 and Acousti-Tech™ Lead 3.3 membranes: Product contribution to LEED® Canada-NC 2009

LEED® Canada-NC 2009

Contribution

Energy and Atmosphere (EA)

EAp2 – Minimum energy performance

0 point (required)

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.

EA credit 1- Optimize energy performance

1 to 19 points (NC)

3 to 21 points (NE)

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 points (3)** LEED® CS for an expected cost reduction of **25%** (new buildings) or **21%** (existing buildings renovations).

Comments

AcoustiTECH™ Lead 6, AcoustiTECH™ Lead 4.5 and AcoustiTECH™ Lead 3.3 are acoustical and vapour barrier membranes which are ideal for construction and renovation of condominiums, apartment buildings and basements.

The **AcoustiTECH™ Lead 6, AcoustiTECH™ Lead 4.5 and AcoustiTECH™ Lead 3.3** membranes contribute to Prerequisite **EAp2** because they have a thermal resistance of respectively **R-0.693, R-0.512 and R-0.439**.

The **AcoustiTECH™ Lead 6, AcoustiTECH™ Lead 4.5 and AcoustiTECH™ Lead 3.3** membranes reduce 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™ Lead 6, AcoustiTECH™ Lead 4.5 and AcoustiTECH™ Lead 3.3** membranes can therefore help maintain a stable and uniform indoor temperature and can raise the quality of life by increasing the level of comfort and energy efficiency throughout the year.

Comments

AcoustiTECH™ Lead 6, AcoustiTECH™ Lead 4.5 and AcoustiTECH™ Lead 3.3 are acoustical and vapour barrier membranes which are ideal for construction and renovation of condominiums, apartment buildings and basements.

The **AcoustiTECH™ Lead 6, AcoustiTECH™ Lead 4.5 and AcoustiTECH™ Lead 3.3** membranes contribute to Credit **EA 1** because they have a thermal resistance of respectively **R-0.693, R-0.512 and R-0.439**.

*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.

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).

The **AcoustiTECH™ Lead 6**, **AcoustiTECH™ Lead 4.5** and **AcoustiTECH™ Lead 3.3** membranes block the cold coming from the sub floor and increase the performance of radiant heat systems.

The **AcoustiTECH™ Lead 6**, **AcoustiTECH™ Lead 4.5** and **AcoustiTECH™ Lead 3.3** membranes can therefore help maintain a stable and uniform indoor temperature and can raise the quality of life by increasing the level of comfort and energy efficiency throughout the year.

1 to 2 points

Comments

The **AcoustiTECH™ Lead 6**, **AcoustiTECH™ Lead 4.5** and **AcoustiTECH™ Lead 3.3** membranes can contribute to this credit since they contain pre-consumer recycled content. However, they contain no post-consumer recycled content.

Percentages of pre-consumer recycled content are as followed:

AcoustiTECH™ LEAD 6: 41 %
AcoustiTECH™ LEAD 4.5: 40 %
AcoustiTECH™ LEAD 3.3: 38 %

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™ Lead 6**, **AcoustiTECH™ Lead 4.5** and **AcoustiTECH™ Lead 3.3** membranes can contribute to this credit since they contain materials that 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 percentages of materials with a local extraction site comprised in these membranes are as followed:

AcoustiTECH™ LEAD 6: 27 %
AcoustiTECH™ LEAD 4.5: 28 %
AcoustiTECH™ LEAD 3.3: 30 %

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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 product final place of manufacturing the **AcoustiTECH™ LEAD** membranes 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

1 point

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.

Comments

The **AcoustiTECH™ Lead 6, AcoustiTECH™ Lead 4.5 and AcoustiTECH™ Lead 3.3** 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™ Lead 6, AcoustiTECH™ Lead 4.5 and AcoustiTECH™ Lead 3.3** membranes are non toxic, odorless, rot resistant, non allergenic and antibacterial and may therefore contribute to the interior air quality improvement (**IAQ**).

Regional Priority (RP)

Credit RP 2 – Regional Priority

1 to 3 points

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

Please refer to the *Advantages and Aspects to Consider* section of the *Regional Priority* credit.

For a list of applicable credits, please refer to the CaGBC website **www.cagbc.org**, under the LEED® tools section for the LEED® NC 2009 and LEED® CS 2009 Rating Systems.

TOTAL

AcoustiTECH™ LEAD membranes can contribute up to a total of
Twenty-seven (27) points for LEED® Canada-NC 2009 &
Twenty-nine (29) 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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