

**LEED Product Review**  
**SofTile AP (Plus and Premium)**  
**SofSurfaces, Petrolia ON**





SoftTILE AP (Plus and Premium)

55 Ormskirk Avenue, Suite 100

Toronto, ON M6S 4V6

Tel: 416.350.2002

Fax: 416.766.5021

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September 30, 2011

Mr. Jeromy Morningstar  
SofSurface  
4393 Discovery Line  
P.O. Box 239  
Petrolia, Ontario N0N 1R0

**Re: LEED Product Review – SoftTILE AP (Plus and Premium)**

Dear Mr. Morningstar,

We are pleased to provide you with our LEED Product Review for Sofsurface. We hope the findings and solutions presented in this report will empower you to market a product that not only has lower ecological impacts and manufacture costs, but also is primed to be integrated into the LEED building certification process.

Our analysis indicates that the SoftTILE AP has many excellent features and manufacturing processes that will position it well for the LEED certification system. The rating system strives to balance environmental responsibility, resource efficiency, user comfort and well-being, and the economics of building. It includes all stakeholders in an integrated development process. This process results in a high-quality product that maximizes the owner's return on investment.

Identifying LEED-friendly product features, presented in more detail below, translates to increased product marketability, positioning the product for use in LEED buildings and other forward-thinking environmentally conscious projects.

Ecovert would like to thank Sofsurface for the opportunity to further develop our professional relationship and assist you in identifying the strategies and solutions required to advance Sofsurface in the green marketplace.

Best Regards,

A handwritten signature in black ink, appearing to read "Jim Lord", is written over a light blue horizontal line.

Jim Lord BBA, FCIP, LEED AP, SMaRT AP  
Principal



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## 1.0 Executive Summary

Ecovert was retained by Sofsurface to conduct a LEED Product Review for SoftTILE AP (Plus and Premium). The objective of the LEED Product Review is to determine the product's applicability to the LEED Rating System, and to put forth potential strategies for increased product applicability in green infrastructure projects.

The LEED Product Review of SoftTILE AP (Plus and Premium) provides an in-depth analysis of findings from the product appraisal, and documentation provided by Sofsurface. In our report we have outlined the available LEED Rating Systems, and the credits within these systems which pertain to building products. Our findings are intended to assist Sofsurface in aligning its products with opportunities to gain points in a LEED system.

The LEED Rating Systems are rigorous standards that enable buildings to stand out through demonstrating their environmental excellence. The recommendations provided below identify opportunities for SoftTILE AP (Plus and Premium) to contribute to LEED certification in building projects, but are not a guarantee; to achieve these benefits, product teams must work with the project's integrated design team to ensure LEED credit requirements are met.

## 2.0 LEED and Building Products

### 2.0 LEED Overview

Since the Canada Green Building Council's (CaGBC) inception in 2002, the LEED (Leadership in Energy and Environmental Design) rating system has become the industry standard for environmental building design. The LEED Rating System is a comprehensive, voluntary design and assessment tool which helps architecture, engineering, and construction professionals improve building efficiency and measure the sustainability of their projects.

LEED certification showcases environmental commitment and provides the necessary tools for an immediate, measurable impact on building performance. LEED promotes a whole-building approach to sustainability by recognizing performance in six key areas of human and environmental health: sustainable site development, water savings, energy efficiency, conservation of materials and resources, indoor environmental quality, and innovation in design.

LEED projects are unique as they incorporate economic, environmental and social goals into the building design, construction and operation. This approach can achieve a positive impact on triple bottom line – economic, environmental and social – asset performance.

Each program shares a common set of sustainable criteria for demonstrating excellence in sustainable buildings and is tailored to meet the needs of landlords and tenants. The following is a review of each program and an assessment of how these rating systems incorporate sustainable products.

### 2.1 Product Recognition in LEED

The LEED System recognizes that for a building to be truly sustainable, the products used within the building must also be environmentally and socially responsible. While there are a multitude of different products used in building construction and operations, the LEED system has identified key product attributes that contribute to a healthy and sustainable building. Products that excel in these attributes help buildings receive additional points toward a LEED rating. Each rating system – whether for new buildings, existing buildings, homes, etc – recognizes different product attributes. Some common sustainable product attributes recognized by LEED are:



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- Low-emitting materials (low in VOCs, formaldehyde, particulates)
- Recycled content
- Greenguard-certified furniture
- Carpet and Rug Institute – Green Label Program
- Low-flow water fixtures

The following section describes each rating system in more detail, and outlines the rating system's requirements for sustainable products and the credits products may affect.

## 2.2 CaGBC LEED Rating Systems

### 2.2.1 LEED Canada for Green Building Design and Construction 2009

The CaGBC LEED NC 2009 rating system is designed to distinguish high-performance, environmentally efficient new construction or significantly renovated commercial and residential building developments.

LEED NC 2009 Highlights for Products:

- Rewards buildings for including products with high recycled content, regional content, rapidly renewable material content, and certified wood content.
- Buildings receive credit for low-emitting products including paints, coatings, carpet, adhesives, sealants, and wood and laminate products.
- Technologies that reduce stormwater run-off, light pollution, water use, heat island effect, and erosion recognized.

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### 2.2.2 LEED Canada for Existing Buildings: Operation and Maintenance 2009

The CaGBC LEED EBOM 2009 rating system is designed to give owners of existing buildings an opportunity to validate excellence in best sustainable practices to compete with newer LEED NC buildings.

LEED EBOM 2009 Highlights for Products:

- Similarly to LEED NC 2009 above, products reducing water use, heat island effect, stormwater run-off, and light pollution are recognized.
- Green Cleaning products emphasized.
- Continuous purchasing of sustainable products is encouraged.
- Credit for low-mercury lamps.

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### 2.2.3 LEED Canada for Commercial Interiors 2009

The CaGBC LEED CI rating system is designed for tenants who do not have the ability to make alterations to base building systems and wish to pursue LEED certification.

LEED CI Highlights for Products:

- Similarly to LEED NC 2009 above, products reducing water use, heat island effect, stormwater run-off, and light pollution are recognized.
- Sustainable furniture receives credit.
- Like LEED NC 2009, LEED CI rewards buildings for choosing products with high recycled content, regional content, rapidly renewable material content, and certified wood content.

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- Buildings receive credit for low-emitting products, including paints, coatings, carpet, adhesives, sealants, and wood and laminate products.

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#### **2.2.4 LEED ND 2009: Neighbourhood Development**

The CaGBC LEED ND 2009 rating system is based on principles of smart growth, New Urbanism, and green infrastructure and building, and targets neighbourhoods with many buildings rather than single plots.

LEED ND 2009 Highlights for Products:

- Points give credit for whole site initiatives (stormwater, heat island, light pollution).
- Recognizes recycled content in infrastructure.
- Combines infrastructure and green buildings – larger scale, greater opportunities for products.

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#### **2.2.5 LEED Homes**

The CaGBC LEED Homes rating system allows homeowners to demonstrate their personal commitment to green building,

LEED Homes Highlights for Products:

- Several points available for environmentally preferable products.
- Credit for surface water control, nontoxic pest control, reducing heat island effect, and reducing water use.
- Increased opportunity for energy-saving products:
  - Windows
  - Appliances
  - Lighting
  - Insulation
  - Space heating equipment

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### **2.3 USGBC LEED Rating Systems**

#### **2.3.1 LEED 2009 for Schools**

The USGBC LEED 2009 for Schools rating system is designed with special consideration to the needs of all types of learning communities.

LEED for Schools Highlights for Products:



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- Similarly to LEED NC 2009 above, products reducing water use, heat island effect, stormwater run-off, and light pollution are recognized.
  - Increased consideration to products with exemplary indoor environmental quality attributes.
  - Recognition of product acoustic features.
  - Attention given to mould prevention in building products.

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### **2.3.2 LEED 2009 for Retail: New Construction**

The USGBC LEED 2009 for Retail rating system is designed for any retail building, including restaurants, apparel, grocery, banks, etc. Consideration is given to the unique space types, hours of operation, transportations concerns, and energy and water consumption patterns of retail operations.

LEED Retail Highlights for Products:

- Similarly to LEED NC 2009 above, products reducing water use, heat island effect, stormwater run-off, and light pollution are recognized.
- Rewards buildings for including products with high recycled content, regional content, rapidly renewable material content, and certified wood content.
- Buildings receive credit for low-emitting products, including paints, coatings, carpet, adhesives, sealants, wood and laminate products, and ceiling/wall materials.

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### **2.3.3 LEED 2009 for Retail: Commercial Interiors**

The USGBC LEED 2009 for Retail rating system is targeted for tenant spaces in any retail building, including restaurants, apparel, grocery, banks, etc.

LEED Retail Highlights for Products:

- Similarly to LEED NC 2009 above, products reducing water use, heat island effect, stormwater run-off, and light pollution are recognized.
- Credit for use of Energy Star appliances and efficient lighting.
- Rewards buildings for including products with high recycled content, regional content, rapidly renewable material content, and certified wood content.
- Buildings receive credit for low-emitting products, including paints, coatings, carpet, adhesives, sealants, wood and laminate products, and ceiling/wall materials.

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### **2.3.4 LEED 2009 for Healthcare: New Construction and Major Renovations**

The USGBC LEED 2009 for Healthcare rating system targets new construction of healthcare facilities, specifically formulated to consider the health and well-being of healthcare patients and workers.



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LEED 2009 for Healthcare Highlights for Products:

- Similarly to LEED NC 2009 above, products reducing water use, heat island effect, stormwater run-off, and light pollution are recognized.
  - Water use reductions in building equipment and food production recognized.
  - Materials without lead, cadmium, and copper – and lamps without mercury – are rewarded.
  - Use of low-emitting materials gains points.
  - Acoustic design and product features are recognized.
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## 3.0 Product Profile

### 3.1 Project Summary & Scope

Sofsurface produces SofTILE AP (Plus and Premium) architectural paver product from recycled tires. The product is manufactured in their facility based in Petrolia, Ontario.

### 3.2 Product & Company

The product is manufactured at 4393 discovery Lane in Petrolia, ON, Canada. The SofTile AP series consists of 94% recycled rubber and the SofTile AP Premium Series consists of 82% recycled rubber. SofTile AP is an architectural paver and is intended for outdoor use.

The product's primary LEED-recognized attributes are its incorporation of recycled tire crumb and its regionally-located manufacturing facility. Sofsurface's products contain a very high recycled content which is made up of recycled Ontario rubber tires. It may potentially contribute to regional content as well, depending on the location of the LEED project site and its proximity to the manufacturing facility. The product is also available in a number of colours with various solar reflective index values. Depending on the colour chosen and the roof design SofTile AP may contribute to the urban heat island effect credits. The manufacturer has an end of life product take back program, further demonstrating their commitment to minimizing their environmental impact. These qualities allow the product to not only contribute to decreasing the impact of the building's environmental footprint, but to also improve building occupant and environmental health.

### 3.3 Product Usage

SofTile AP is an architectural paver and is intended for outdoor use

## 4.0 LEED Synergies for Sofsurface

Our analysis of SofTile AP Recycled Tire Products suggests that the product features are compatible with a variety of LEED requirements and can contribute to multiple LEED credits over various rating systems. There are many opportunities to integrate the product with the LEED certification program, specifically with: LEED for New Construction, LEED for Commercial Interiors, LEED for Healthcare, LEED for Schools, and LEED for Retail, both NC and CI. The following credits apply specifically to the product:

Credit	Pts	Credit Name	Rating System	Relevance to Product
<b>LEED Canada for Green Building Design and Construction 2009</b>				
SSc7.1	1	Heat Island Effect: Non Roof	LEED NC 2009	SRI Value
SSc7.2	1	Heat Island Effect: Roof	LEED NC 2009	SRI Value
MRc4.1, 4.2	2	Recycled Content, 10-20%	LEED NC 2009	Recycled content
MRc5.1, 5.2	2	Regional Content, 20-30%	LEED NC 2009	Regional-sourced content
<b>LEED Canada for Commercial Interiors 2009</b>				
SSc1.d	1	Heat Island Effect: Non Roof	LEED CI 2009	SRI Value
SSc1.e	1	Heat Island Effect: Roof	LEED CI 2009	SRI Value
MRc4.1, 4.2	2	Recycled Content, 10-20%	LEED CI 2009	Recycled content
MRc5.1, 5.2	2	Regional Materials, 20-30%	LEED CI 2009	Regional-sourced content
<b>LEED 2009 for Healthcare: New Construction and Major Renovations [USGBC]</b>				
SSc7.1	1	Heat Island Effect: Non Roof	LEED 2009 for Healthcare	SRI Value
SSc7.2	1	Heat Island Effect: Roof	LEED 2009 for Healthcare	SRI Value
MRc3	4	Sustainably Sourced Materials and Products	LEED 2009 for Healthcare	Recycled, reused, or rapidly renewable content



Credit	Pts	Credit Name	Rating System	Relevance to Product
<b>LEED for Schools 2009 [USGBC]</b>				
<b>SSc7.1</b>	1	Heat Island Effect: Non Roof	LEED 2009 for Schools	SRI Value
<b>SSc7.2</b>	1	Heat Island Effect: Roof	LEED 2009 for Schools	SRI Value
<b>MRc4</b>	2	Recycled Content, 10-20%	LEED 2009 for Schools	Recycled content
<b>MRc5</b>	2	Regional Materials, 20-30%	LEED 2009 for Schools	Regional-sourced content

For recycled content credits:

- The sum of post-consumer recycled content plus 1/2 of the pre-consumer content constitutes at least 10% or 20%, based on cost, of the total value of the materials that make up Divisions 2-10 of the project. Include only materials permanently installed 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.

For regional materials credits, 20% or 30% of the total cost of the materials from Divisions 2-10 in the project must be:

- Building materials or products that have been extracted, harvested, recovered, and processed within 800km (by truck) or 2400km (by rail or sea) of the final manufacturing site. Demonstrate that the final manufacturing site is within the applicable boundaries of the project site for these products.
- If only a fraction of the product/material is extracted, harvested, recovered, processed, and manufactured locally, then only that percentage (by weight) must contribute to the regional value. Should 80% of the product be extracted and manufactured within the applicable boundaries, then the entire product may be used in the calculations for regional materials.

For head island effect credits:

- This credit is intended to minimise the buildings impact on human and wildlife habitats by providing shading, and light coloured surfaces.
- The architect or LEED consultant will calculate this credit by looking at all of the surfaces on the site or roof area and slop.
- The most important information that a supplier can provide for this credit is the SRI (Solar Reflective Index) of your product. We have included this information in the attached sample LEED letter.



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## 5.0 Recommendations Synergies for Sofsurface

In order to improve the LEED paperwork for your product we recommend that you include the percentage of recycled content, manufacturing location and SRI values in your product literature as well as indicate your manufacturing address.



## 6.0 Sample LEED Credit Support Documentation Letter

Company Letterhead & Logo

Date

To Whom It May Concern,

Re: SofTile AP Plus Series

SofSurfaces produces environmentally friendly architectural pavers for use on roofs and at grade.

We use only the highest quality materials to ensure a superior product. Our SofTile AP Plus Series pavers composed of 76% of post-consumer recycled content materials.

Our manufacturing facility is located in Petrolia, Ontario at 4393 Discovery Lane and is transported by truck to the project site. More than 94% of the assembled product consists of recycled crumb rubber which is produced at:

% of Product From Following Location	Point of Extraction	Distance Between Extraction and Manufacture Locations	Method of Transport
94%	650 Riverview Drive Chatham, Ontario	67 km	Truck

The SofTile Plus TC, 101 has an Solar Reflectance Index (SRI) of 1.

Please feel free to contact me at phone number if you have any questions regarding this product and its recycled or regional content.

Sincerely,

SIGNATURE

Jeromy Morningstar, Managing Director, SofSurfaces



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55 Ormskirk Avenue, Suite 100

Toronto, ON M6S 4V6

Tel: 416.350.2002

Fax: 416.766.5021

Company Letterhead & Logo

Date

To Whom It May Concern,

Re: SofTile AP Premium

SofSurfaces produces environmentally friendly architectural pavers for use on roofs and at grade.

We use only the highest quality materials to ensure a superior product. Our SofTile AP Premium pavers composed of 68% of post-consumer recycled content materials.

Our manufacturing facility is located in Petrolia, Ontario at 4393 Discovery Lane and is transported by truck to the project site. More than 82% of the assembled product consists of recycled crumb rubber which is produced at:

% of Product From Following Location	Point of Extraction	Distance Between Extraction and Manufacture Locations	Method of Transport
82%	650 Riverview Drive Chatham, Ontario	67 km	Truck

The SofTile Premium Tiles product has the following Solar Reflectance Index (SRI) values: Brown has an SRI of 14, Grey has an SRI of 23, Beige has an SRI of 44 and Pearl has an SRI of 56.

Please feel free to contact me at phone number if you have any questions regarding this product and its recycled or regional content.

Sincerely,

SIGNATURE

Jeromy Morningstar, Managing Director, SofSurfaces