

LEED Materials Guide



Requirements for Material Resource EPD, SRM and MIR Credits and IEQ Low Emitting Materials



Leveling the playing field
for Green Building





LEED Material Guide

This guide is designed to complement your use of Green Canary and offer a comprehensive overview of v4.1 Material Resource EPD, SRM, and MIR Credits, as well as IEQ Low Emitting Materials.

By the end of this guide, you will have a solid understanding of:

- **LEED Credit Requirements:** Understand the specific requirements for Material Resource and IEQ credits.
- **Certification Basics:** Familiarize yourself with the types of certifications available and their significance.
- **Key Certification Features:** Learn what to look for in certifications to ensure they meet LEED requirements.



How to use this guide

The LEED Reference Manual has hundreds of pages explaining the Material Resource EPD, SRM, and MIR Credits, and IEQ Low Emitting Materials, not to mention the website, the forum and the interpretations. Then there is v4 and v4.1. In that time, they have changed the criteria, the name and removed the numbers as if they were trying to make it more difficult.

We utilize v4.1 because it the least stringent and simplest to use. We have condensed all this information into these slides. Between this guide our database of Certifications you have all that you need to get these credits without being an expert.

LEED Credits Overview

Material and Resource (MR)

Environmental Product Declaration (EPD) Is a Life Cycle Assessment that provides a product's environmental impacts throughout its entire lifecycle. The key indicators typically included in EPDs, Global Warming Potential, Acidification Potential, Eutrophication Potential, Ozone Depletion Potential.

Sourcing of Raw Material (SRM): focuses on the sourcing of materials from either recycled content, end of life, Certified wood, Salvaged material or bio-based content.

Materials Ingredient (MI): Looks at certifications that disclose chemical ingredients or products that reduce harmful substances. MIR encourages manufacturers to be more transparent and reduce the use of harmful substances.

Indoor Environmental Quality (IEQ)

Low-Emitting Materials: This credit requires the use of low-emitting materials that contribute to improved indoor air quality. It focuses on materials such as paints and coatings adhesives and sealants, insulation, walls, composite wood and flooring.

SMDS Sheets

These are the most important part of Green Canary. They have every option for the LEED Material Resource (MR) and Indoor Environmental Quality (IEQ) Low Emitting credit.

Once filled out by the Sub-Contactor they automatically upload and populate the Green Canary Database.

Once all entries have been entered, with a push of a button you are ready to submit for your LEED Credits.



Job Name:

Submittal #

Product Name:

Page #

CSI Division

Select One - CSI Division

00 00 00

Sub-contractor D/M/W/ESB

Y/N

Sub-contractor:

Sub Phone:

email:

Manufacturer:

Mfg. Phone:

email:

Description:

*Directions: sub/vendor fill in all applicable boxes and attach manufacturer letter.
*Provide one SMDS form per product. Items in gray are optional (customize options), red highlights important info.

Contact:

Company:

Contact:

Email:

Technical support: contact@greencanarysoftware.com

Instructions:

Only answer applicable Credits. Choose the Credit and use the yellow drop-downs to find your evaluation. For MR Credit 3, enter Cost to contribute. Add zip codes to Regional Material where noted.

Search products and get manufacturer data: <https://bettermaterials.gbci.org/>

Material and Resource (Select Only Applicable Cells)

MR Credit 2: Option 1 - EPD (Environmental Product Declaration)

EPD Program Operator:

MR Credit 2: Option 2 - Embodied Carbon/LCA Optimization*

MR Credit 4: Option 1 - Material Ingredients (HPD, Declare, Cradle to Cradle...)

Does the report have third-party verification of the content inventory

MR Credit 4: Option 2 - Material Ingredient Optimization

GBCI "Docverification" ID (if available)

General Note:

Supporting Documentation:

Did you provide the Supporting Documentation?

Name of Document

Page #

See LEEDv4.1 credit requirement tabs for explanations of each credit option.

MR Credit 3: Responsible Sourcing of Raw Materials*

> Cost of Material (Cost is required for this credit)

> Regional Material (200% of cost contributes for local criteria)

Manufacturing Location:

Extraction Location:

Percentage both sourced within 100 mi/160.9km

Material Reuse

Reused/salvaged material

Recycled Content

Post-consumer Recycled Cont. (consumer waste; end-of-life of product)

Pre-consumer Recycled Cont. (Diverted from manufacturing process)

Biobased Material

Testing & Sustainable Agriculture Network's Compliant or Meets San's Basic Criteria (Testing Only)

FSC Certified Wood

Forest Stewardship Council Certified Wood OR meets the alternative compliance path (see MRc3 tab)

Extended Producer Responsibility

Meets Extended Manufacturer Responsibility criteria

Closed Loop or Take Back Program Name

DO NOT PDF
save as .xlsx

Low Emitting Materials (Choose one from each section)

1.) Is the product "Interior" of the Weatherproofing
If no, no further information needed, the Submittal is N/A

2.) Provide cost of Material or Surface Area

Adhesives & Sealant, Paints & Coatings must enter a surface area

COST

0

Volume (not a preferred metric)

0

SURFACE AREA

0

3.) (EQ) Product Categories (Pick One)

ADHESIVES & SEALANT (Only interior products applied on-site)

Product actual VOC Rating (must not exceed VOC limit below)

g/L

Pick both pull-downs

Adhesives, Sealants VOC Limit

g/L

Does it meet

Adhesives and Sealant Evaluations

PAINTS & COATINGS (Only interior products applied on-site)

Product actual VOC Rating (must not exceed VOC limit below)

g/L

Pick both pull-downs

Paints, Coatings VOC Limit

g/L

Does it meet

Paints and Coatings Evaluations

4.) Supporting Documentation

Did you provide the Supporting Documentation?

Y/N

Name of Document

Page #

DO NOT PDF
save as .xlsx

3.) (EQ) Product Categories (Continued, Pick One)

COMPOSITE WOOD (Excludes flooring, ceiling, wall panels, or furniture)

Does it Meet (Pull-down list)

Composite Wood Emission Evaluation

FURNITURE (Exclude office accessories from the credit)

Does it Meet (Pull-down list)

Furniture Emission Evaluation

FLOORING (Excludes subflooring and wet-applied products)

Does it Meet (Pull-down list)

Flooring Emission Evaluation

WALL PANELS (Exclude removable panels, cabinetry & structure)

Does it Meet (Pull-down list)

Wall Panel Emission Evaluation

CEILING (Exclude overhead structural elements)

Does it Meet (Pull-down list)

Ceiling Emission Evaluation

INSULATION (Exclude HVAC and plumbing insulation)

Does it Meet (Pull-down list)

Insulation Emission Evaluation

GREEN CANARY

ecoREAL 2009, WBE/DBE ©

Email

Email

SMDS Sheets – Quick notes

SMDS sheet guides the Sub-Contractor through the process.

Building number - One per building

Material and Resource "MR" SMDS: Sustainable Material Data Sheet			
Job Name:			
Submittal #		Page #	
Product Name:			
CSI Division	Select One - CSI Division	00 00 00	
Sub-contractor D/M/W/ESB	Y/N		
Sub-contractor:		Sub Phone:	email:
Manufacturer:		Mfg. Phone:	email:
Description:			
*Directions: sub/vendor fill in all applicable boxes and attach manufacturer letter. *Provide one SMDS form per product. Items in gray are optional (customize options), red highlights important info.			
Contact:			Instructions:
Company:			Only answer applicable Credits. Choose the Credit and use the yellow drop-downs to find your evaluation. For MR Credit 3, enter Cost to contribute..
Contact:			Add zip codes to Regional Material where noted.
Email:			Search products and get manufacturer data: https://bettermaterials.gbci.org/
Technical support: contact@greencanarysoftware.com			
Material and Resource (Select Only Applicable Cells)		MR Credit 3: Responsible Sourcing of Raw Materials*	
MR Credit 2: Option 1 - EPD (Environmental Product Declaration)	-> Cost of Material (Cost is required for this credit)		
Specific Type III (ISO 14044) - External Review (1.5			
EPD Program Operator:			
MR Credit 2: Option 2 - Embodied Carbon/LCA Optimization*	-> Regional Material (200% of cost contributes for local criteria)		
Select One-Embodied Carbon/LCA Optimization			
Manufacturing Location:	zip/postal code		
Extraction Location:	zip/postal code		
Percentage both sourced within 100 mi/160.9km			
MR Credit 4: Option 1 - Material Ingredients (HPD, Declare, Cradle to Cradle...)	Material Reuse		
Select One - Material Ingredient	Reused/salvaged material		
Does the report have third-party verification of the content inventory	Y/N		
MR Credit 4: Option 2 - Material Ingredient Optimization	Recycled Content		
Select One - Material Ingredient Optimization	Post-consumer Recycled Cont.		
	(consumer waste; end-of-life of product)		
	Pre-consumer Recycled Cont.		
	(Diverted from manufacturing process)		
GBCI "Docverification" ID (if available)			
General Note:	Biobased Material		
*For MR Credit 2: Option 2 and MR Credit 3 - Add zip code to Regional Material if products are sourced (extracted, manufactured, and purchased) within 100 miles or 160.9km of the project site, they are valued at twice their value.	Testing & Sustainable Agriculture Network's Compliant		
Supporting Documentation:	or Meets San's Basic Criteria (Testing Only)		
Did you provide the Supporting Documentation?	Y/N		
Name of Document		FSC Certified Wood	
Page #		Forest Stewardship Council Certified Wood OR	
		meets the alternative compliance path (see MRc3 tab)	
See LEEDv4.1 credit requirement tabs for explanations of each credit option.	Extended Producer Responsibility		
	Meets Extended Manufacturer Responsibility criteria		
	Closed Loop or Take Back Program Name		
DO NOT PDF save as .xlsx			
SMDS Form	MRc2 -option 1	MRc2- Option 2	MRc3
	MRc4 - Option 1	MRc4 - Option 2	

Do Not PDF, and do not modify cell A88.The sheets are designed for automation.

IEQ Low Emitting Material "SMDS" (Sustainable Material Data Sheet)			
Job:			
Submittal #		Page #	
Product Name:			
CSI Division	Select One - CSI Division	00 00 00	
Sub-contractor D/M/W/ESB	Y/N		
Sub-contractor:		Sub Phone:	Email:
Manufacturer:		Mfg. Phone:	Email:
Description:			
*Directions: sub/vendor fill in all applicable boxes and attach manufacturer letter. *Provide one SMDS form per product. Items in gray are optional (customize options).			
Contact:			Instructions:
Company:			For Adhesives & Sealants, Paints & Coatings select the VOC Limit and the Evaluation.
Contact:			For the given category, either pick an evaluation or select none.
Email:			See the LEED EQ Credit 2 and USGBC Equivalent tabs for further explanation.
Technical support: contact@greencanarysoftware.com	Search products and get manufacturer data: https://bettermaterials.gbci.org/		
Low Emitting Materials (Choose one from each section)			
1.) Is the product "Interior" of the Weatherproofing			
If no, no further information needed, the Submittal is N/A			
3.) (EQ) Product Categories (Continued, Pick One)			
COMPOSITE WOOD (Excludes flooring, ceiling, wall panels, or furniture)			
Does it Meet (Pull-down list)			
FURNITURE (Exclude office accessories from the credit)			
Does it Meet (Pull-down list)			
FLOORING (Excludes subflooring and wet-applied products)			
Does it Meet (Pull-down list)			
WALL PANELS (Exclude removable panels, cabinetry & structure)			
Does it Meet (Pull-down list)			
CEILING (Exclude overhead structural elements)			
Does it Meet (Pull-down list)			
ADHESIVES & SEALANT (Only interior products applied on-site)			
Product actual VOC Rating (must not exceed VOC limit below)			
Pick both pull-downs			
Does it meet			
PAINTS & COATINGS (Only interior products applied on-site)			
Product actual VOC Rating (must not exceed VOC limit below)			
Pick both pull-downs			
Does it meet			
4.) Supporting Documentation			
Did you provide the Supporting Documentation?			
Name of Document			
Page #			
DO NOT PDF save as .xlsx			
SMDS Form	LEED EQ Credit 2 Info	USGBC Equivalents	

More info is on the tabs

MR SMDS Sheets

Div 3-10 sections 31.60.00 Foundations, 32.10.00 Paving, 32.30.00 Site Improvements, and 32.90.00 Planting.

Select the drop-down that correlates with the credit

MR Credit 2: Option 1 - EPD (Environmental Product Declaration)

EPD Program Operator:

Specific Type III (ISO 14044) - External Review (1.5)

MR Credit 2: Option 2 - Embodied Carbon/LCA Optimization*

Select One-Embodied Carbon/LCA Optimization

MR Credit 4: Option 1 - Material Ingredients (HPD, Declare, Cradle to Cradle...)

Does the report have third-party verification of the content inventory

Y/N

MR Credit 4: Option 2 - Material Ingredient Optimization

Select One - Material Ingredient Optimization

Instructions:
Only answer applicable drop-downs to find Add zip codes to R Search products at

MR Cr
-> Cost of Material (Cost is required
-> Regional Mater
Manufacturing Loc
Extraction Location
Percentage both
Material Reuse
Reused/salvaged r
Recycled Content
Post-consumer Re (consumer waste; e
Pre-consumer Rec (Diverted from manu
Biobased Material
Testing & Sustaina or Meets San's Ba
FSC Certified Wo
Forest Stewardship meets the alternati
Extended Produc
Meets Extended Manufacturer Responsibility criteria
Closed Loop or Take Back Program Name

products are sourced (extracted, manufactured, and purchased) within 100 miles or 160.9km of the project site, they are valued at twice their value.
Supporting Documentation:
Did you provide the Supporting Documentation?

Y/N

Name of Document

Page #

See LEEDv4.1 credit requirement tabs for explanations of each credit option.

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If it doesn't have a certification leave it blank

MR Credit 3: Responsible Sourcing of Raw Materials*

-> Cost of Material (Cost is required for this credit) \$

-> Regional Material (200% of cost contributes for local criteria)
Manufacturing Location: zip/postal code
Extraction Location: zip/postal code
Percentage both sourced within 100 mi/160.9km %

Material Reuse
Reused/salvaged material %

Recycled Content
Post-consumer Rec %
(consumer waste; e
Pre-consumer Rec %
(Diverted from manu

Biobased Material
Testing & Sustainable Agriculture Network's Compliant or Meets San's Basic Criteria (Testing Only) %

FSC Certified Wood
Forest Stewardship Council Certified Wood OR
meets the alternative compliance path (see MRc3 tab) %

Extended Producer Responsibility
Meets Extended Manufacturer Responsibility criteria
Closed Loop or Take Back Program Name

Cost is required for SRM entries

Enter the % of SRM if applicable

IEQ SMDS Sheets

Products inside the air envelope of the building

- Only the categories you intend to complete are required

In project settings select Cost/Surface Area or Volume. One is required per SMDS Sheet

One Product per SMDS sheet

IEQ Low Emitting Material "SMDS" (Sustainable Material Data Sheet)

Submit #

Product Name

Division

Sub-contractor D/M/W/ESB

Sub-contractor

Manufacturer

Description

Page #

00 00 00

Y/N

Sub Phone

Mfg. Phone

GREEN CANARY

www.greencanarysoftware.com

Contact

Company

Contact

Email

Technical support: contact@greencanarysoftware.com

Instructions

For Adhesives & Sealants, Paints & Coatings select the VOC Limit and the Evaluation. For the given category, either pick an evaluation or select none. See the LEED EQ Credit 2 and USGBC Equivalent tabs for further explanation. Search products and get manufacturer data: <https://bettermaterials.gbci.org/>

Directions: sub/vendor fill in all applicable boxes and attach manufacturer letter. Provide one SMDS form per product. Items in gray are optional (customize options).

Low Emitting Materials (Choose one from each section)

Is the product "Interior" of the Weatherproofing

Y/N

If no, no further information needed, the Submittal is N/A

2.) Provide cost of Material or Surface Area

Adhesives & Sealant, Paints & Coatings must enter a surface area

COST

0

*Volume (not a preferred metric)

0

SURFACE AREA

0

3.) (EQ) Product Categories (Pick One)

ADHESIVES & SEALANT (Only interior products applied on-site)

Product actual VOC Rating (must not exceed VOC limit below)

Pick both pull-downs

Does it meet

Adhesives, Sealants VOC Limit

g/L

Adhesives and Sealant Evaluations

PAINTS & COATINGS (Only interior products applied on-site)

Product actual VOC Rating (must not exceed VOC limit below)

Pick both pull-downs

Does it meet

Paints, Coatings VOC Limit

g/L

Paints and Coatings Evaluations

4.) Supporting Documentation

Did you provide the Supporting Documentation?

Name of Document

Page #

DO NOT PDF

save as .xlsx

Select the Certification or None

3.) (EQ) Product Categories (Pick One)

ADHESIVES & SEALANT (Only interior products applied on-site)

Product actual VOC Rating (must not exceed VOC limit below)

Pick both pull-downs

Does it meet

Adhesives, Sealants VOC Limit

g/L

Adhesives and Sealant Evaluations

PAINTS & COATINGS (Only interior products applied on-site)

Product actual VOC Rating (must not exceed VOC limit below)

Pick both pull-downs

Does it meet

Paints, Coatings VOC Limit

g/L

Paints and Coatings Evaluations

3.) (EQ) Product Categories (Continued, Pick One)

COMPOSITE WOOD (Excludes flooring, ceiling, wall panels, or furniture)

Does it Meet (Pull-down list)

Composite Wood Emission Evaluation

FURNITURE (Exclude office accessories from the credit)

Does it Meet (Pull-down list)

Furniture Emission Evaluation

FLOORING (Excludes subflooring and wet-applied products)

Does it Meet (Pull-down list)

Flooring Emission Evaluation

WALL PANELS (Exclude removable panels, cabinetry & structure)

Does it Meet (Pull-down list)

Wall Panel Emission Evaluation

CEILING (Exclude overhead structural elements)

Does it Meet (Pull-down list)

Ceiling Emission Evaluation

INSULATION (Exclude HVAC and plumbing insulation)

Does it Meet (Pull-down list)

Insulation Emission Evaluation

Products applied on site require VOC, VOC Limit and certification

Product Data Sheet

Bradford™
for smarter environments

FIBERTEX 450 ROCKWOOL

Introduction

Bradford Fibertex 450 is a general purpose industrial insulation for use on process equipment, vessels, tanks and reactors. It is a medium duty thermal and acoustic insulation suitable for continuous operation up to 450°C.

Product Description

Bradford Fibertex 450 Rockwool is a robust medium density insulation product. Fibertex 450 is manufactured from spinning a molten mixture of natural rock and recycled products into fine wool like fibres. The inorganic fibres are bonded together using a thermosetting resin to form the final product. The product can be identified by its dark green/brown appearance.

Applications

Fibertex 450 can be used in applications where operating temperatures do not exceed 450°C such as process temperature control, energy conservation, condensation prevention, acoustic absorption treatment and personnel protection from plant and equipment.

Typical applications include:

- large diameter piping
- autoclaves
- reactors
- ovens
- kilns
- boilers
- heat exchangers
- party walls

Bradford Fibertex 450 is easily installed by impaling the batts or blankets on weld pins and securing with speed clips. The un-faced surface of the Rockwool Batt or Blanket is to be applied to the hot surface to be

insulated. On small vessels the insulation may be simply retained by wire mesh or metal bands. For acoustic panel applications ensure cavity dimension is equal or less than product thickness.

Benefits

- Lightweight highly durable insulation product
- Fits shape of equipment to be insulated
- Excellent and cost effective thermal insulation
- Performance is not adversely effected from contact with water
- Non combustible
- Low chloride content resulting in less corrosion of insulated steel process equipment
- Biosoluble and safe to use product

Available Facings

Fibertex 450 is available as either un-faced Semi-rigid boards or Flex-Skin faced blankets. Flex Skin blankets incorporate a non woven fabric facing that enhances flexibility, handling and tensile strength. For mesh faced products please refer to Bradford Fibermesh range of products. Please note a range of facings for Fibertex 450 are available to meet your requirements - contact Bradford for more information

Health and Safety

This product is manufactured to the latest Fiber Bio-Soluble (FBS-1) Rockwool formulation and is not classified as hazardous according to the criteria of the ASCC (formerly NOHSC) guidelines. For further information refer MSDS sheet on Bradford website.



FIBERTEX 450 ROCKWOOL – DATA SHEET

CSR

SKU Table

	Thickness (mm)	Length (mm)	Width (mm)	Pieces per Pack	Nominal M3 per pack	Nominal Piece Weight (kg)	Nominal Weight/pack (kg)
Batt	25	1500	900	12	16.2	2.7	32.4
	25	1500	1200	6	18.8	3.6	21.6
	38	1500	900	8	18.8	4.1	32.8
	50	1500	900	6	18.1	5.4	32.4
	50	1500	1200	5	5.4	7.2	21.6
	65	1500	900	4	5.4	6.8	27.2
	75	1500	900	4	5.4	8.1	32.4
	75	1500	1200	2	8.6	10.8	21.6
Blanket	100	1500	900	3	4.1	10.8	32.4
	25	3600	750	2	5.4	5.4	10.8
	38	3600	750	1	2.7	8.2	8.2
	50	3600	750	1	2.7	10.8	10.8
	65	3600	750	1	2.7	13.6	13.6
	75	3600	750	1	2.7	16.2	16.2
	100	3600	750	1	2.7	21.6	21.6

Required

- Job Name – Building number
- Exact Product Name – not generic names “exterior shingles” or “Wood Doors”
- Manufacturer

Additional (helps categorize)

- Description of product
- CSI Division
- Sub-contractor who supplied the product
- Submittal Number – We need this to reference back to your documentation and original submittal in case

Material and Resource "MR" SMDS: Sustainable Material Data Sheet										
Job Name:										
Submittal #					Page #					
Product Name:										
CSI Division	Select One - CSI Division				00 00 00					
Sub-contractor D/M/W/ESB	Y/N									
Sub-contractor:					Sub Phone:			email		
Manufacturer:					Mfg. Phone:			email		
Description:										
<i>*Directions: sub/vendor fill in all applicable boxes and attach manufacturer letter</i>										



Environmental Product Declarations

Option 1 - An Environmental Product Declaration (EPD)

A document that demonstrates the environmental impacts of a product. It is a transparency tool to share the life cycle analysis (LCA) of product



Material and Resource (Select Only Applicable Cells)	
MR Credit 2: Option 1 - EPD (Environmental Product Declaration)	-> Cost of Material (Cost is required)
EPD Program Operator:	Select One - EPD
MR Credit 2: Option 2 - Embodied Carbon	Product Specific Type III (ISO 14044) - External Review (1.5 Products)
	Product Specific Type III (ISO 14044) - Internal Review
MR Credit 4: Option 1 - Material	Industry Wide Type III Generic (.5 Products)
Does the report have third-party verification?	Product Specific: Type III (1.5 Products)
MR Credit 4: Option 2 - Material	None
GBCI "Docverification" ID (if available)	(Diverted from Landfill)
General Note:	Biobased Material Testing & Sealing or Meets Sealing
*For MR Credit 2: Option 2 and MR Credit 3 - Add zip code to Regional Material if products are sourced (extracted, manufactured, and purchased) within 100 miles or 160.9km of the project site, they are valued at twice their value.	

There are 3 main types

- Product Specific Type III - External Review (1.5 Products)
- Product Specific Type III - Internal Review (1 Products)
- Industry Wide Type III Generic (.5 Products)

Parts of EPD

- Products applied to
- Program Owner
- Standards adhered to - ISO and EN
- PCR - determines the product and what category it goes in
- LCA Results
- Reviewer

EPD Resources

[Mindful Materials](#)

[SM Transparency Catalog](#)

[The International EPD](#)

[System](#)

[Origin](#)

What's in an EPD?

Option 1 - Environmental Product Declarations



ENVIRONMENTAL PRODUCT DECLARATION

ROCKWOOL™ STONE WOOL Insulation

ROCKWOOL NORTH AMERICA



ROCKWOOL™ Stone Wool/Mineral Wool Insulation is optimized for performance, delivering on Thermal Comfort, Acoustics, Fire protection and more.



ROCKWOOL North America is Part of the ROCKWOOL Group, the world's leading stone wool/mineral wool manufacturer. Operating globally for over 80 years, over 30 years in North America the company manufactures stone wool insulation products that serve a wide range of applications in the Commercial, Residential, and Industrial/Technical segments.

Across the full range of our products and operations, ROCKWOOL is dedicated to enriching modern living. We strive to increase our positive impact on people and society by maximizing our positive product impact and minimizing our operational footprint. We recognize that operating with integrity and as a responsible business is equally important and underpins everything we do.

The United Nations Sustainable Development Goals (SDGs) steer our ambitions. We committed to 10 out of the 17 SDGs—pursuing the goals where we can have the greatest impact and that are the most aligned with our business competencies.

Our Environmental Product Declaration is another element of our commitment to serving our customers and the industry's requirements for sustainable solutions.



1. General Information

Bauen mit Backstein
Zweischalige Wand Marketing e. V.

Programme holder
IBU - Institut Bauen und Umwelt e.V.
Panoramastr. 1
10178 Berlin
Germany

Declaration number
EPD-ZWM-20160126-ICG1-EN

This Declaration is based on the Product Category Rules:
Bricks, 01.2016
(PCR tested and approved by the SVR)

Issue date
20.10.2016

Valid to
19.10.2021

Horst J. Bossenmayer

Prof. Dr.-Ing. Horst J. Bossenmayer
(President of Institut Bauen und Umwelt e.V.)

Dr. Burkhard Lehmann

Dr. Burkhard Lehmann
(Managing Director IBU)

Facing bricks, clay pavers and brick slips

Owner of the Declaration
Bauen mit Backstein
Zweischalige Wand Marketing e. V.
Schaumburg-Lippe-Straße 4
53113 Bonn

Declared product / Declared unit
1 tonne facing bricks, clay pavers and brick slips

Scope:
This document refers to facing bricks, clay pavers and brick slips manufactured by "Bauen mit Backstein Zweischalige Wand Marketing e.V." 12 member companies supplied data from 2014 for this Declaration. The companies involved represent 90% of the member companies merged as manufacturers of facing bricks, clay pavers and brick slips in the Zweischalige Wand association. The production volume of these companies accounts for approx. 95% of the German market. The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Verification

The CEN Norm /EN 15804/ serves as the core PCR

Independent verification of the declaration according to /ISO 14025/

☐ internally ☒ externally

Dr. Stefan Diederichs

Dr. Stefan Diederichs
(Independent verifier appointed by SVR)

LCA results interpretation

In the production of SGG DIAMANT, we find two main sources of impacts.

One is the energy consumed in the furnace and the other one is the impacts generated in the production of one of the main raw materials, the soda ash.

Soda ash is in the origin of more than 25% of the GWP, more than 60% of the abiotic depletion for non fossil fuels (ADP elements) and more than 20% of the energy consumption.

		Environmental impacts (A1-A3) SGG DIAMANT 6mm	Unit
	Global warming	19.5	Kg CO ₂ equiv/FU
	Non-Renewable resources consumption ^[1]	232	MJ/FU
	Energy consumption ^[2]	252.2	MJ/FU
	Water consumption ^[3]	0.0544	M ³ /FU
	Waste production ^[4]	0.4875	Kg/FU

^[1] This indicator corresponds to the abiotic depletion potential of

^[2] This indicator corresponds to the total use of primary energy.

^[3] This indicator corresponds to the use of fresh net water.

^[4] This indicator corresponds to the sum of hazardous, non-haza

The LCA results are the baseline for an Optimized EPD

Cover Page

2nd Page

EPD Results

*This is what a typical EPD looks like, unfortunately most EPD looks different

EPD Examples

Option 1 - Environmental Product Declarations

Note: Highlighting is a good way to verify requirements and help the LEED verifiers

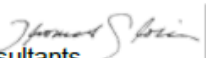
ENVIRONMENTAL PRODUCT DECLARATION



Aluminum Extrusions
Mill Finished, Painted, and Anodized

According to ISO 14025
and ISO 21930:2017

EPD PROGRAM AND PROGRAM OPERATOR NAME, ADDRESS, LOGO, AND WEBSITE	UL ENVIRONMENT 333 PFINGSTEN RD, NORTHBROOK, IL 60062 WWW.UL.COM WWW.SPOT.UL.COM
GENERAL PROGRAM INSTRUCTIONS AND VERSION NUMBER	Program Operator Rules v 2.7 2022
ASSOCIATION NAME AND ADDRESS	Aluminum Extruders Council (AEC) 1000 N Old Rand Rd. Suite 214 Wauconda, IL 60084
DECLARATION NUMBER	4790414446.102.1
DECLARED PRODUCT & DECLARED UNIT	Aluminum extrusion products: mill finished, painted, and anodized; declared unit: 1 metric ton of aluminum extrusion products.
REFERENCE PCR AND VERSION NUMBER	Product Category Rules for Building Related Products and Services, Part A: Life Cycle Assessment Calculation Rules and Report Requirements, v3.2 (UL, 2018) ; Part B: Aluminum Construction Product EPD Requirements, UL Standard 10010-38 , Edition 1 (UL, 2022).
DESCRIPTION OF PRODUCT APPLICATION/USE	Non-thermally enhanced aluminum extrusions, including mill finished, painted (liquid and powder paint) and anodized used in construction.
MARKETS OF APPLICABILITY	North America
DATE OF ISSUE	November 1, 2022
PERIOD OF VALIDITY	5 years
EPD TYPE	Industry-average
EPD SCOPE	Cradle to gate with required options, (modules A1-A3, modules C1-C4, and module D)
YEAR(S) OF REPORTED PRIMARY DATA	2020-2021
LCA SOFTWARE & VERSION NUMBER	GaBi v10
LCI DATABASE(S) & VERSION NUMBER	GaBi 2021 (CUP 2021.2)
LCIA METHODOLOGY & VERSION NUMBER	IPCC AR5 (GWP 100), TRACI 2.1 and CML-IA v4.8 (ADP1)

The sub-category PCR review was conducted by:	UL Environment
	PCR Review Panel
	epd@ul.com
This declaration was independently verified in accordance with ISO 14025: 2006. The UL Environment "Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Project Report," v3.2 (UL, 2018) in conformance with ISO 21930:2017, serves as the core PCR ☐ INTERNAL ☒ EXTERNAL	 Cooper McCollum, UL Environment
The EPD conforms with:	ISO 21930:2017
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	Thomas P. Gloria, Industrial Ecology Consultants 

Industry-Average EPD | Example

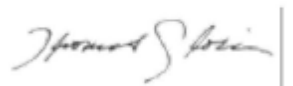
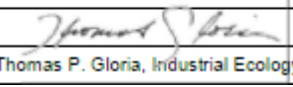
ENVIRONMENTAL PRODUCT DECLARATION



Allegion plc
Ives Architectural Hinges

According to ISO 14025,
EN 15804, and ISO21930:2017



PROGRAM OPERATOR	UL Environment 333 Pfingsten Road Northbrook, IL 60611
GENERAL PROGRAM INSTRUCTIONS AND VERSION NUMBER	General Program Instructions v.2.5 March 2020
MANUFACTURER NAME AND ADDRESS	Allegion plc 2720 Tobey Dr, Indianapolis, IN 46219
DECLARATION NUMBER	4789828313.113.1
DECLARED PRODUCT & FUNCTIONAL UNIT	Three average architectural hinges installed on a 3'x7' standard door for 75 years
REFERENCE PCR AND VERSION NUMBER	UL PCR Part A - Version 3.2 UL Part B Builders Hardware EPD Requirements
DESCRIPTION OF PRODUCT'S INTENDED APPLICATION AND USE	Installed on a door and a frame to connect the two components together and permit the door to swing
PRODUCT RSL DESCRIPTION	25 Years
MARKETS OF APPLIABILITY	Americas
DATE OF ISSUE	10/1/2021
PERIOD OF VALIDITY	5 Years
EPD TYPE	Product-specific
EPD SCOPE	Cradle to grave
YEAR OF REPORTED MANUFACTURER PRIMARY DATA	2019
LCA SOFTWARE & VERSION NUMBER	GaBi ts Version 10.0.0.71
LCI DATABASE & VERSION NUMBER	GaBi Content Version 2020.2
LCIA METHODOLOGY & VERSION NUMBER	CML 2001-Jan 2016 and TRACI 2.1
The sub-category PCR review was conducted by:	UL Environment
	PCR Review Panel epd@ulenvironment.com
This declaration was independently verified in accordance with ISO 14025:2006. The UL Environment "Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Project Report," v3.2 (Dec 2018), based on ISO 21930:2017, serves as the core PR, with additional considerations from CEN Norm EN 15804 (2013) and the USGBC/UL Environment Part A Enhancement (2017) ☐ INTERNAL ☒ EXTERNAL	
This life cycle assessment was conducted in accordance with ISO 14044 and the reference PCR by:	Thomas P. Gloria, Industrial Ecology Consultants 
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	WAP Sustainability Consulting
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	
Thomas P. Gloria, Industrial Ecology consultants 	

Product Specific: Type III EPD | Example



EPD Examples

Product Specific Type III

ENVIRONMENTAL PRODUCT DECLARATION



Rockwool International A/S (Rockwool North America)
Rockwool Stone wall thermal Insulation

According to EN 15804 and ISO 14025
Dual Recognition by UL Environment and Institut Bauen und Umwelt e.V.

This declaration is an environmental product declaration (EPD) in accordance with ISO 14025. EPDs rely on Life Cycle Assessment (LCA) to provide information on a number of environmental impacts of products over their life cycle. Exclusions: EPDs do not indicate that any environmental or social performance benchmarks are met, and there may be impacts that they do not encompass. LCAs do not typically address the site-specific environmental impacts of raw material extraction, nor are they meant to assess human health toxicity. EPDs can complement but cannot replace tools and certifications that are designed to address these impacts and/or set performance thresholds – e.g. Type 1 certifications, health assessments and declarations, environmental impact assessments, etc. Accuracy of Results: EPDs regularly rely on estimations of impacts, and the level of accuracy in estimation of effect differs for any particular product line and reported impact. Comparability: EPDs are not comparative assertions and are either not comparable or have limited comparability when they cover different life cycle stages, are based on different product category rules or are missing relevant environmental impacts. EPDs from different programs may not be comparable.



PROGRAM OPERATOR	UL Environment
DECLARATION HOLDER	ROCKWOOL International A/S (Rockwool North America)
ULE DECLARATION NUMBER	4789092768.101.1
IBU DECLARATION NUMBER	EPD-RWI-20190075-CCD1-EN
DECLARED PRODUCT	ROCKWOOL stone wool Thermal Insulation
REFERENCE PCR	Product Category Rules Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Background Report, 03.2018 Product Category Rules Part B: Mineral insulating materials, 12.2018

DATE OF ISSUE	17/07/2019
DATE OF EXPIRATION	17/06/2024

CONTENTS OF THE DECLARATION	General information Product / Product description LCA calculation rules LCA scenarios and further technical information LCA results References
The PCR review was conducted by:	IBU – Institut Bauen und Umwelt e.V. PCR was approved by the Independent Expert Committee (IEC) of IBU
The CEN Norm EN 15804 serves as the core PCR. This declaration was independently verified in accordance with ISO 14025 by Underwriters Laboratories ☐ INTERNAL ☒ EXTERNAL	Grant R. Martin, UL Environment
This life cycle assessment was independently verified in accordance with EN 15804 and the reference PCR by:	IBU – Institut Bauen und Umwelt e.V.

EN 15804 & EN 14025
and External box checked

Industry Wide

ENVIRONMENTAL PRODUCT DECLARATION



AMERICAN INSTITUTE OF STEEL CONSTRUCTION
FABRICATED HOT-ROLLED STRUCTURAL STEEL SECTIONS

According to ISO 14025
and ISO 21930:2017

EPD PROGRAM AND PROGRAM OPERATOR NAME, ADDRESS, LOGO, AND WEBSITE	UL Environment 333 Pfingsten Road Northbrook, IL 60611 https://www.ul.com/ https://spot.ul.com
GENERAL PROGRAM INSTRUCTIONS AND VERSION NUMBER	General Program Instructions v.2.5 March 2020
ASSOCIATION NAME AND ADDRESS	American Institute of Steel Construction 130 E Randolph Street, Suite 2000 Chicago, IL 60601
DECLARATION NUMBER	4789556099.102.1
DECLARED PRODUCT & DECLARED UNIT	Fabricated Hot-Rolled Structural Steel Sections, 1 metric ton
REFERENCE PCR AND VERSION NUMBER	Part A: Calculation Rules for the LCA and Requirements Project Report, (IBU/UL Environment, V3.2, 12.12.2018) and Part B: Designated Steel Construction Product EPD Requirements (UL Environment, V2.0, 08.26.2020).
DESCRIPTION OF PRODUCT APPLICATION/USE	Hot rolled structural steel sections used in building, bridge, and industrial projects
MARKETS OF APPLICABILITY	North America
DATE OF ISSUE	January 1, 2021
PERIOD OF VALIDITY	5 years
EPD TYPE	Industry-average
EPD SCOPE	Cradle-to-gate
YEAR(S) OF REPORTED PRIMARY DATA	2019-2020
LCA SOFTWARE & VERSION NUMBER	GaBi v10
LCI DATABASE(S) & VERSION NUMBER	GaBi 2020 (CUP 2020.2)
LCIA METHODOLOGY & VERSION NUMBER	TRACI 2.1

	UL Environment
This PCR review was conducted by:	PCR Review Panel epd@ulenvironment.com
This declaration was independently verified in accordance with ISO 14025: 2006. ☐ INTERNAL ☒ EXTERNAL	Grant R. Martin, UL Environment
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	Thomas P. Gloria, Industrial Ecology Consultants

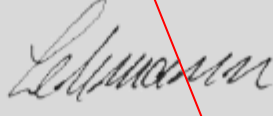


EPD Examples

All certification documents must be valid during design or construction. If it expires before that date, the certification will be rejected.



1. General Information

Bauen mit Backstein Zweischalige Wand Marketing e. V.	Facing bricks, clay pavers and brick slips
Programme holder IBU - Institut Bauen und Umwelt e.V. Panoramastr. 1 10178 Berlin Germany	Owner of the Declaration Bauen mit Backstein Zweischalige Wand Marketing e. V. Schaumburg-Lippe-Straße 4 53113 Bonn
Declaration number EPD-ZWM-20160126-ICG1-EN	Declared product / Declared unit 1 tonne facing bricks, clay pavers and brick slips
This Declaration is based on the Product Category Rules: Bricks, 01.2016 (PCR tested and approved by the SVR)	Scope: This document refers to facing bricks, clay pavers and brick slips manufactured by "Bauen mit Backstein Zweischalige Wand Marketing e.V." 12 member companies supplied data from 2014 for this Declaration. The companies involved represent 90% of the member companies merged as manufacturers of facing bricks, clay pavers and brick slips in the Zweischalige Wand association. The production volume of these companies accounts for approx. 95% of the German market. The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.
Issue date 20.10.2016	Verification The CEN Norm /EN 15804/ serves as the core PCR Independent verification of the declaration according to /ISO 14025/ ☐ internally ☒ externally
Valid to 19.10.2021	
 Prof. Dr.-Ing. Horst J. Bossenmayer (President of Institut Bauen und Umwelt e.V.)	 Dr. Stefan Diederichs (Independent verifier appointed by SVR)
 Dr. Burkhard Lehmann (Managing Director IBU)	

Expired – Doesn't count

EPD – Not Accepted

Listing the certification will reject the product

Table 1

CREDIT CATEGORY	LEED® V4 REQUIREMENT	LEED® 2009 REQUIREMENT	OWENS CORNING® PRODUCT COMPARISON
Energy and Atmosphere (EA)			
Minimum Energy Performance-Prerequisite 2:	Whole Building Energy Simulation Performance improvement or Prescriptive Compliance in accordance with ANSI/ ASHRAE/IESNA Standard 90.1-2010,	Whole Building Energy Simulation Performance improvement dependent on building type, baseline performance according to ANSI/ ASHRAE/IESNA Standard 90.1-2007, Appendix G.	Fiberglas™ Rigid and Semi Rigid Insulation helps reduce building energy demand while improving thermal comfort for occupants. The project team is responsible for conducting the energy analysis to determine the overall building energy efficiency.
Optimize Energy Performance	Whole Building Energy Simulation improvement beyond prerequisite or Prescriptive Compliance using ASHRAE 50% Advanced Energy Design.	Improved performance rating compared with baseline building performance rating per ANSI/ ASHRAE/IESNA Standard 90.1-2007, Appendix G.	Fiberglas™ Rigid and Semi Rigid Insulation helps reduce building energy demand while improving thermal comfort for the occupants. Dependent on U-value of construction assembly. Project team responsible for conducting energy analysis to determine the overall building energy efficiency.
Materials & Resources (MR)			
Building Product Disclosure & Optimization-Environmental Product Declaration	Use at least 20 different permanently installed products sourced from at least five different manufacturers that have third-party certified EPD	NA	Owens Corning® Fiberglas™ 700 Series Insulations carry third party certified EPDs. See UL.com/EPD for certifications.
Raw Material Source and Extraction Reporting	Sum of postconsumer recycled content plus ½ the pre-consumer recycled content, constitutes 25%, by cost, of the total value of the project. Products sourced within 100 miles (160 km) of project site valued at 200% of cost.	Sum of post-consumer recycled content plus ½ the pre-consumer content by cost, of the total value of the project. Products sourced within 500 miles of project site by cost, of the total materials value.	Fiberglas™ Rigid and Semi-Rigid Insulation, U.S. manufacturing plant provides regionally available material and contain a minimum 22% post-consumer and 31% pre-consumer recycled content, 53% total. Please contact 1-800-GET-PINK® for specific product information.
Building Product Disclosure and Optimization Material Ingredients	Option 1. Material Ingredient Reporting (1 point) Use at least 20 different permanently installed products from at least five different manufacturers that use any of the following programs to demonstrate the chemical inventory of the product to at least 0.1% (1000 ppm).	NA	Owens Corning® Fiberglas™ 700 Series Insulation has published Health Product Declarations which meet the LEED MR credit requirements for disclosure.

Need the EPD documentation

Ok to use for SRM*
Need the MIR documentation

*Better if you get documentation direct from the manufacture or invoice. They will provide location of the Plant and Extraction

Option 2 - Embodied Carbon/LCA Optimization

Embodied Carbon/LCA Optimization (EPD Optimized):

- Utilizes an EPD to create a Baseline Impact report and creates an optimized action plan to reduce an impact category
- An action plan of LCA to reduce a GWP by a certain amount. A goal is not a plan
- Can also reduce impact categories

Material and Resource (Select Only Applicable Cells)		MR Credit 3: Responsible S
MR Credit 2: Option 1 - EPD (Environmental Product Declaration)		-> Cost of Material (Cost is required for this credit)
Select One - EPD		
EPD Program Operator:		-> Regional Material (200% of cost contr
		Manufacturing Location:
MR Credit 2: Option 2 - Embodied Carbon/LCA Optimization*		Extraction Location:
Select One-Embodied Carbon/LCA Optimization		Percentage both sourced within 100 m
Select One-Embodied Carbon/LCA Optimization		
MR Credit 4: Option 1 - Materi		
LCA impact reduction action plan (0.5 Products)		
Does the report have third-party		
Third party verified impact reductions in GWP		
MR Credit 4: Option 2 - Materi		
Third Party verified impact reduction min. 10% reduction in GWP (1.5 Products)		
Third Party impact reductions with min. 20% reduction in GWP & 5% in two other categories (2 Products)		
GBCI "Docverification" ID (if a		None
General Note:		
*For MR Credit 2: Option 2 and M		
products are sourced (extracted, manufactured, and purchased) within 100 miles or 160.9km of the project site, they are valued at twice their value.		or Meets San's Basic Criteria (Testing Onl
Supporting Documentation:		FSC Certified Wood
Did you provide the Supporting Documentation?	Y/N	Forest Stewardship Council Certified Woc
Name of Document		meets the alternative compliance path (se
	Page #	
See LEEDv4.1 credit requirement tabs for explanations of each credit option.		Extended Producer Responsibility
		Meets Extended Manufacturer Responsib
		Closed Loop or Take Back Program Name

Report Type	Reference Document(s) for the Optimization Report	Report Verification
Embodied Carbon/LCA Action Plan	Product-specific LCA or product-specific Type III EPD	Prepared by the manufacturer and signed by company executive
Reductions in Embodied Carbon: less than 10% reduction in GWP relative to baseline	Baseline: Product-specific LCA, Product-specific Type III EPD, or Industry-wide Type III EPD	Comparative analysis is verified by an independent party
Reductions in Embodied Carbon: 10%+ reduction in GWP relative to baseline	Optimized: Product-specific LCA or product-specific Type III EPD	
Reductions in Embodied Carbon: 20%+ reduction in GWP and 5%+ reduction in two additional impact categories, relative to baseline	Baseline: Product-specific LCA or Product-specific Type III EPD	
	Optimized: Product-specific LCA or product-specific Type III EPD	

Option 2 - Embodied Carbon/LCA Optimization

- Independent verification of Reduction in GWP = <10%
- OR
- 20% GWP with 5% reduction of the following **Impact Categories**:
 - global warming potential (greenhouse gases), in CO2e;
 - depletion of the stratospheric ozone layer, in kg CFC-11e;
 - acidification of land and water sources, in moles H+ or kg SO2e;
 - eutrophication, in kg nitrogen equivalent or kg phosphate equivalent;
 - formation of tropospheric ozone, in kg NOx, kg O3 eq, or kg ethene;
 - depletion of nonrenewable energy resources, in MJ using CML / depletion of fossil fuels in TRACI.

32% reduction in GWP
and a reduction >5% in
4 Impact categories



Embodied Carbon/LCA Optimization Example

Usually says
“Optimized”

EPD Optimization Summary

Armstrong®
World Industries



PRODUCT EPD NAME AND VALIDITY PERIOD	Ultima® Low Embodied Carbon Ceiling Panels 2/15/2024 - 2/15/2029
REFERENCE EPD NAME AND VALIDITY PERIOD	Ultima® Ceiling Panels 2/15/2024 - 2/15/2029
PRODUCT CATEGORY RULES	UL Environment PCR for Building-Related Products & Services – Part A (Dec. 2018, V.3.2) UL Environment PCR Part B: Non-Metal Ceiling Panel & Wall Panel System (April 2021, V.2.0)
LIFE CYCLE STAGES	Cradle to Gate (A1-C4) with Options
DECLARED UNIT	1 square foot of product

Ultima® Low
Embodied Carbon

ENVIRONMENTAL IMPACT REDUCTION

	Global Warming Potential, incl. biogenic carbon [kg CO ₂ eq./ft²]
Ultima® Ceiling Panels (A1-A3)	0.327
Ultima® Low Embodied Carbon Ceiling Panels (A1-A3)	0.187
Global Warming Potential Reduction	-43%

OPTIMIZATION SOURCES

Ultima® Low Embodied Carbon Ceiling Panels are formulated to replace high embodied raw materials with renewable, biobased materials (biochar) that sequester carbon and have a lower global warming potential.

COMPARISON SUMMARY

Ultima® Low Embodied Carbon Ceiling Panels reduce the Global Warming Potential (GWP) by 43% when compared to standard Ultima® Ceiling Panels.

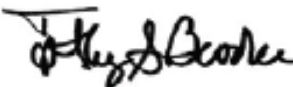
INTERPRETATION

The LCA studies for both optimized Ultima® Low Embodied Carbon Ceiling Panels and standard Ultima® Ceiling Panels used the same PCR. Both studies used the same scope, boundaries, software (LCA FE) and model, background process datasets, and allocation procedures. All relevant criteria were identical between the two studies. It is for these reasons that the LCA results in the EPD are comparable and the comparison is valid.

LEED CREDIT ACHIEVEMENT

Contributes to LEED v4.1 MR Environmental Product Declarations Credit, Option 1 and Option 2 – Embodied Carbon/LCA Optimization at 1.5 products.

VERIFIER


Tim Brooke, Vice President, Laboratory Services

EXPIRATION DATE

2/15/2029

43% reduction in GWP.

Does not reference
impact categories so this
is Third Party verified
impact reduction min.
10% reduction in GWP
(1.5 Products)

Third Party Verified

Sourcing of Raw Materials

MR Credit 3: Responsible Sourcing of Raw Materials*		
-> Cost of Material (Cost is required for this credit)		
	\$	
-> Regional Material (200% of cost contributes for local criteria)		
Manufacturing Location:	zip/postal code	
Extraction Location:	zip/postal code	
Percentage both sourced within 100 mi/160.9km		%
Material Reuse		
Reused/salvaged material		%
Recycled Content		
Post-consumer Recycled Cont. (consumer waste; end-of-life of product)		%
Pre-consumer Recycled Cont. (Diverted from manufacturing process)		%
Biobased Material		
Testing & Sustainable Agriculture Network's Compliant or Meets San's Basic Criteria (Testing Only)		%
FSC Certified Wood		
Forest Stewardship Council Certified Wood	OR	
meets the alternative compliance path (see MRc3 tab)		%
Extended Producer Responsibility		
Meets Extended Manufacturer Responsibility criteria		
Closed Loop or Take Back Program Name		

Sourcing of Raw Material (SRM) Consist of 5 different Categories

Material Reuse
Recycled Content
Biobased Material
FSC Certified Wood
Extended Producer Responsibility

Notes

- **Cost is required**
- Percentage multiplied by Cost determines the score.
- Manufacture Location AND Extraction within a 100 miles doubles the score

Recycled Content

If the Manufacturing Plant and Extraction location is within 100 miles, it doubles the points

Use the smaller amount

TABLE 1—RECYCLED CONTENT BY WEIGHT SUMMARY

PRODUCT NAME	PLANT LOCATION	% PRE-CONSUMER RECYCLED CONTENT	% POST-CONSUMER RECYCLED CONTENT	% IN-PROCESS RECYCLED CONTENT—TREATED ²	% TOTAL RECYCLED CONTENT
Generic Stone Wool Insulation	Milton, ON	25 - 35	1 - 1.35	44 - 56.6	70 - 93 ¹

Notes:

¹The values represent the minimum and maximum range of available recycled content for the products. The actual recycled content amount for the products provided to the end user depends on the product formulation requested by the customer. ROCKWOOL will provide the customer the ROCKWOOL Recycled Content Calculator output with each order.

²This category is considered pre-consumer recycled content as defined in EC101.

- Post-consumer – Materials that have served a useful purpose in the consumer market before being used again.
- Pre-consumer – Process waste that is used to make a different product.

You can find it online, but the manufacture or the invoice will have the most up-to-date info. The invoice or manufacture also knows where it was manufactured and extracted.

FSC Certified Wood



Reference
[FSC Database](#)

SCS Global Services does hereby certify that an independent audit has been completed and conformity to the applicable standard(s) has been confirmed for:

Forest Products Certification Group, LLC, dba Renewable Resources Certification Group

PO Box 186, Shelburne, VT 05470, United States

Certified Group Member:

Black Locust Lumber Global

2058 US Hwy 70 SE #228, Hickory NC 28602

This group certificate covers the production, distribution, and trade of lumber, doors, cabinetry, windows, plywood, moulding, flooring, paper, and printed material using the transfer and percentage systems. It also covers the purchase and sale of FSC Controlled Wood.

The facility(ies) are hereby Chain of Custody certified to sell products as:

FSC 100%, FSC Mix, FSC Recycled, FSC Controlled Wood

The assessment has been conducted by SCS Global Services in accordance with the protocols of the Forest Stewardship Council® A.C. (FSC®).

FSC Standard: FSC-STD-40-003 V2-1; FSC-STD-40-004 V3-0; FSC-STD-40-007 V2-0; FSC-STD-50-001 V2-0

Certificate Code: SCS-COC-004377-AQ Trademark License Code: FSC-C113128

AWI ARCHITECTURAL WOODS

ARCHITECTURAL WOODS
2312 KAME AVE. A. WY #E3
ONOLULU, HI 96815-USA
Phone: (808) 433-1600

Remit To: ARCHITECTURAL WOODS LP
PO BOX 2077
TACOMA, WA 98401-2077

INVOICE
ON00462307-001

Invoice Date: 06/11/18
Account: OA: 7100 0001
Branch: 1 ON
Phone: (808) 454-0770
Fax: (808) 454-0772
Delivery: TA00462563-001

ENTERED

JUN 21 2018

BILL TO:
OA: U WOODWORKING INC
2045 LAUWILUMILI STREET
BUILDING#16, UNIT#1603
KAPOLEI HI 96707

SHIP TO:
OA: U WOODWORKING INC
2045 LAUWILUMILI STREET
BUILDING#16, UNIT#160
KAPOLEI HI 96707



Page 1 of 1

PO: KA ALU CORRAC		REF: 80462307 TOM462563		JOB: ETR0128		
ORDER DATE: 04/20/18		SALES CAJ		ORDER TYPE: Dist		
S: IP DATE: 05/08/18		AGENTSALC		S: IP VIA: Flat Pack		
				FRT TERM: Destination		
		ORDERED BY: JO: N PAUL		AUT: C: IG:		
ENTERED BY: Aal						
QTY ORDERED	QTY SHIPPED	UOM	ITEM/DESCRIPTION	CONVERTED QTY	PRICE/UOM	AMOUNT
909	909	LF	NS0000046041 1-1/2 X 2-1/2 TEAK ANDRAIL FSC FSC 100% RA-COC-002089 909/LF Content:	909/LF	19.95/LF	18,134.55
181	181	LF	NS0000046042 1-1/2 X 1-1/2 TEAK FULL ROUND FSC FSC 100% RA-COC-002089 181/LF Content:	181/LF	14.95/LF	2,705.95
SUBTOTAL						20,840.50
TAX						104.62

Invoice with the certification on it. Sometimes the percentage is on the invoice and not the certification

Preferred by Nature™



Preferred by Nature - NEPCON OÜ hereby confirms that the Chain of Custody and Controlled Wood system of

Volga JSC

Gorkogo 1
Balahna, Nizhny Novgorod oblast, Balakhninsky rayon 606407
Russian Federation

has been assessed and certified as meeting the requirements of
FSC-STD-40-004 V3-0; FSC-STD-40-005 V3-1; FSC-STD-50-001 V2-0

The certificate is valid from 03-11-2020 to 20-02-2024
Certificate version date: 07-04-2021

Scope of certificate

Certificate type: Single Chain of Custody and Controlled Wood

Certificate registration code

NC-COC-031831
NC-CW-031831

FSC License Code
FSC-C146241

Justinas Janulaitis
Management board member
Filosoofi 31, Tartu
Estonia

Specific information regarding products and sites is listed in the appendix(es) of this certificate. The validity and exact scope covered by this certificate shall always be verified at www.info.fsc.org.

FSC® A000535 | The mark of responsible forestry | www.ic.fsc.org

This certificate itself does not constitute evidence that particular product supplied by the certificate holder is FSC® certified (or FSC Controlled Wood). Products offered, shipped or sold by the certificate holder can only be considered covered by the scope of this certificate when the required FSC claim is clearly stated on invoices and shipping documents. The physical printed certificate remains the property of NEPCON OÜ and shall be returned upon request.



Legal Wood ACP

As an alternative to FSC certified you can apply use the Alternative Compliance Path (ACP) for Sourcing of Raw Material. It requires:

- All wood has to pass a basic screen for risk of illegal harvesting (“Legal”), and provide additional documentation if it isn’t low risk; AND
- At least 70% (by cost) of the wood has to meet the ASTM’s standard for “wood from responsible sources.”



To get points it must be Legal, Responsible AND Certified.

This means the wood must have Chain of Custody.

	Program	Legal	Responsible	Certified
1	FSC - forest management via FSC chain of custody	Yes	Yes	Yes
2	FSC - controlled wood	Yes	No	No
3	SFI - forest management via SFI or PEFC chain of custody	Yes	Yes	Yes
4	SFI - fiber sourcing	Yes	Yes	No
5	ATFS - forest management via SFI or PEFC chain of custody	Yes	Yes	Yes
6	CSA - forest management via SFI or PEFC chain of custody	Yes	Yes	Yes
7	PEFC - forest management via PEFC chain of custody	Yes	Yes	Yes
8	PEFC - due diligence	Yes	No	No
9	Not certified	No	No	No

Option 1 - Material Ingredients Reporting

Material and Resource (Select Only Applicable Cells)	
MR Credit 2: Option 1 - EPD (Environmental Product Declaration)	
EPD Program Operator:	Select One - EPD
MR Credit 2: Option 2 - Embodied Carbon/LCA Optimization*	
	Select One-Embodied Carbon/LCA Optimization
MR Credit 4: Option 1 - Material Ingredients (HPD, Declare, Cradle to Cradle...)	
Does the report have third-party	Select One - Material Ingredient
MR Credit 4: Option 2 - Material	HPD: Healthy Product Declaration
	C2C: Cradle to Cradle MHC
GBCI "Docverification" ID (if a	C2C: v3+ with Material Health achievement level at Bronze+
General Note:	Declare
For MR Credit 2: Option 2 and M	Global Green Tag
products are sourced (extracted,	ANSI/BIFMA e3 Furniture Sustainability Standard
160.9km of the project site, they	Facts
Supporting Documentation:	Living Product Challenge
Did you provide the Supporting Doc	Product Lens
Name of Document	Manufacturer Inventory
	None
See LEEDv4.1 credit requ	

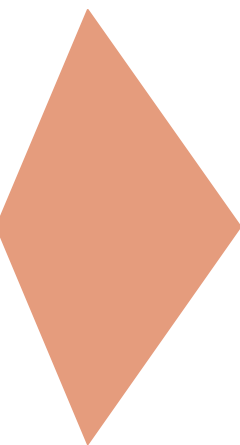
Material Ingredient Reporting (MIR) demonstrate the chemical inventory of the product to at least 0.1% (1000 ppm). It can be any of the following Certifications:

- ANSI/BIFMA e3 Furniture Sustainability Standard
- Cradle to Cradle (C2C)
- Declare.
- Facts
- Global Green TAG
- Health Product Declaration
- Living Product Challenge
- Manufacturer Inventory
- Product Lens Certification

Option 1 – MIR Cert Requirements

ANSI/BIFMA e3 Furniture Sustainability Standard. The documentation from the assessor or scorecard from BIFMA must demonstrate the product earned at least 3 points under 7.5.1.3 Advanced Level in e3-2014 or 3 points under 7.4.1.3 Advanced Level in e3-2012.
Cradle to Cradle (C2C). Product has Material Health Certificate or is Cradle to Cradle Certified™ under standard version 3 or later with a Material Health achievement level at the Bronze level or higher.
Declare. The Declare product label must meet the following requirements:
Declare labels designated as Red List Free, LBC Red List Free, or Declared.
Declare labels designated as LBC Red List Approved or LBC Compliant that demonstrate content inventory to 0.1% (1000 ppm).
Facts – NSF/ANSI 336: Sustainability Assessment for Commercial Furnishings Fabric at any certification level.
Global Green TAG PHD labels issued after January 1, 2020.

Health Product Declaration. The end use product has a published and complete Health Product Declaration with full disclosure of known hazards in compliance with the Health Product Declaration Open Standard.
Living Product Challenge. The included Declare product label must demonstrate content inventory to 0.1% (1000 ppm).
Manufacturer Inventory. The manufacturer has published complete content inventory for the product following these guidelines:
A publicly available inventory of all ingredients identified by name and Chemical Abstract Service Registration Number (CASRN) and/or European Community Number (EC Number).
*Greenscreen List Translator (LT) score and/or Full GreenScreen Benchmark (BM)
*The Globally Harmonized System of Classification and Labeling of Chemicals rev.6 (2015) (GHS)
*The hazard screen must be applied to each trade secret ingredient and the inventory lists the hazard category for each of the health hazards included in Part 3 of GHS (e.g. “GHS Category 2 Carcinogen”).
Product Lens Certification Any compliant reports above with third-party verification that includes the verification of content inventory are worth 1.5 products for credit achievement calculations.



MIR Common Examples – Health Product Declaration (HPD)

Reference - [HPDRepository](https://www.hpdrepository.org/)

EcoWorx® Tile with Nylon Fiber
by Shaw Contract

Health Product Declaration v2.3
created via: HPDC Online Builder

HPD UNIQUE IDENTIFIER: 1934854167552
CLASSIFICATION: 09 68 00 Carpeting
PRODUCT DESCRIPTION: THIS HPD REPRESENTS ALL CARPET TILE STYLES WITH ECOWORX® BACKING AND NYLON FACE FIBER RANGING FROM 14-60 OZ/SY, INCLUDING ECOSOLUTION Q100™, ECOSOLUTION Q®, SOLUTION Q®, AND SOLUTION Q EXTREME® with or without ES adhesive.

Section 1: SummaryBasic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format

Threshold Level

Residuals/Impurities Evaluation

For all contents above the threshold, the manufacturer has:

☐ 100 ppm
☒ 1,000 ppm
☐ Per GHS SDS
☐ Other

☐ Completed
☐ Partially Completed
☒ Not Completed

Characterized
Provided weight and role.
Screened
Provided screening results using HPDC-approved methods.
Identified
Provided name and CAS RN or other identifier.

☒ Yes ☐ No

☐ Yes ☒ No

Threshold Disclosed Per

Material
Product

Explanation(s) provided :
☒ Yes ☐ No

CONTENT IN DESCENDING ORDER OF QUANTITY

Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

Number of GreenScreen BM-4/BM3 contents ... 2
Contents highest-concern GreenScreen score(s) (BM-1, LT-1, LT-P1) ... LT-P1, BM-1, LT-1
Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

ALL INGREDIENTS HAVE BEEN SCREENED AGAINST HPD AUTHORITATIVE LISTS, BUT NOT ALL CAS #'S HAVE BEEN DISCLOSED TO PROTECT PROPRIETARY FORMULATIONS.

PRODUCT | MATERIAL OR SUBSTANCE | RESIDUAL OR IMPURITY
GREENSCREEN SCORE | HAZARD TYPE
ECOWORX® TILE WITH NYLON FIBER | NYLON 6 POLYMER | LT-UNK
CALCIUM CARBONATE | BM-3dg | 1-PROPENE, POLYMER WITH ETHENE | LT-UNK | ETHENE-1-OCTENE COPOLYMER | LT-UNK
POLYPROPYLENE | LT-UNK | VINYL ACETATE/ETHYLENE COPOLYMER | LT-UNK | ALUMINUM TRIHYDRATE (ATH) | BM-2 | SKI | EYE
HYDROCARBONS, C8-20, POLYMERS, HYDROGENATED | LT-UNK | POLYETHYLENE TEREPHTHALATE (PET) | LT-P1 | FIBERGLASS
LT-UNK | QUARTZ (FROM CALCIUM CARBONATE) | BM-1 | CAN | MAM | GEN
ETHYLENE/HEXANE-1 COPOLYMER | LT-UNK | MODIFIED ACRYLIC BINDER | LT-UNK | POLY VINYL ALCOHOL | LT-UNK
TRIDECYL ALCOHOL ETHOXYLATE | LT-P1 | MUL | SKI | EYE
MAGNESIUM CARBONATE | BM-3dg | UNDISCLOSED | LT-1 | CAN | MUL | MAM | DEV | REP | SKI
RESIN ACIDS AND ROSIN ACIDS, ESTERS WITH GLYCEROL | LT-UNK | UNDISCLOSED | NoGS | RESIN ACIDS AND ROSIN ACIDS, ESTERS WITH TRIETHYLENE GLYCOL | LT-UNK
BENZENE, ETHENYL-, POLYMER WITH 2-METHYL-1,3-BUTADIENE | LT-UNK | UNDISCLOSED | LT-UNK | UNDISCLOSED | LT-UNK | EYE | MAM | NEU |

VOLATILE ORGANIC COMPOUND (VOC) CONTENT
VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE See Section 3 for additional listings.
VOC emissions: Green Label Plus
: Cradle to Cradle Certified® V4.0 Silver
: NSF-140 Gold

CONSISTENCY WITH OTHER PROGRAMS
Pre-checked for LEED v4 Option 1.
Pre-checked for LEED v4.1 Option 1.

EcoWorx Tile with Nylon Fiber

HPD v2.3 created via HPDC Builder Page 1 of 16

Third Party Verified?
☐ Yes
☒ No

PREPARER: Self-Prepared
VERIFIER:
VERIFICATION #:

SCREENING DATE: 2023-12-20
PUBLISHED DATE: 2023-12-20
EXPIRY DATE: 2026-12-20

CONTENT INVENTORY

Inventory Reporting Format

- ☐ Nested Materials Method
☒ Basic Method

Threshold Disclosed Per

- ☐ Material
☒ Product

Threshold Level

- ☐ 100 ppm
☒ 1,000 ppm
☐ Per GHS SDS
☐ Other

Residuals/Impurities Evaluation

- ☐ Completed
☐ Partially Completed
☒ Not Completed

Explanation(s) provided :

- ☒ Yes ☐ No

For all contents above the threshold, the manufacturer has:

Characterized ☒ Yes ☐ No

Provided weight and role.

Screened ☒ Yes ☐ No

Provided screening results using HPDC-approved methods.

Identified ☐ Yes ☒ No

Provided name and CAS RN or other identifier.

Parts Per Million Threshold

Third Party Verified?

- ☐ Yes
☒ No

PREPARER: Self-Prepared

VERIFIER:

VERIFICATION #:

SCREENING DATE: 2022-04-21

PUBLISHED DATE: 2022-04-22

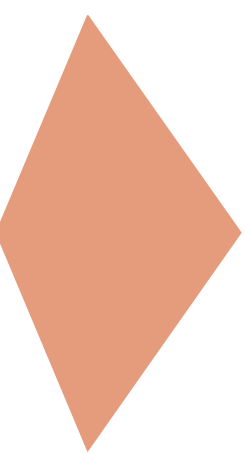
EXPIRY DATE: 2025-04-21

Thermafiber RainBarrier Continuous Mineral Wool Insulation
hpdrepository.hpd-collaborative.org

HPD v2.2 created via HPDC Builder Page 1 of 8

Third Party Verification 1.5 points





MIR Common Examples - Declare

Reference [Declare Database](#)

Declare labels designated as Red List Free.

Declare.

Collins Pine FreeForm Particleboard

Collins

Final Assembly: Klamath Falls, Oregon, USA

Life Expectancy: 25 Year(s)

End of Life Options: Salvageable/Reusable in its Entirety, Biodegradable/Compostable, Recyclable (100%)

Ingredients:

Panel: Wood; MDI binder: Polymeric MDI; Emulsified wax: Emulsified wax

Living Building Challenge Criteria: Compliant

I-13 Red List

LBC Red List Free

% Disclosed: 100% at 100ppm

LBC Red List Approved

VOC Content: Not Applicable

Declared

I-10 Interior Performance: Not Applicable

I-14 Responsible Sourcing: Product Available with FSC Chain of Custody

CCO-0002

EXP. 01 OCT 2023

Original Issue Date: 2014

MANUFACTURER RESPONSIBLE FOR LABEL ACCURACY

INTERNATIONAL LIVING FUTURE INSTITUTE™ [living-future.org/declare](#)

Declare labels designated as LBC Red List Free

Expired

Declare.

Thermafiber® RainBarrier® Continuous Insulation - Mineral Wool Insulation

Owens Corning Sales LLC

Final Assembly: Joplin, MO, USA

Life Expectancy: 60 Years

End of Life Options: Salvageable/Reusable in its Entirety, Landfill (100%)

Ingredients:

Mineral Wool, Cured Resin¹, Urea, Proprietary (<0.20%)²

¹LBC Temp Exception I10-E9 Mineral Wool Insulation

²LBC Temp Exception I10-E4 Proprietary Ingredients <1%

Living Building Challenge Criteria:

OWC-0024

EXP. 01 OCT 2018

VOC Content: N/A

VOC Emissions: N/A

Declaration Status

LBC Red List Free

LBC Compliant

Declared

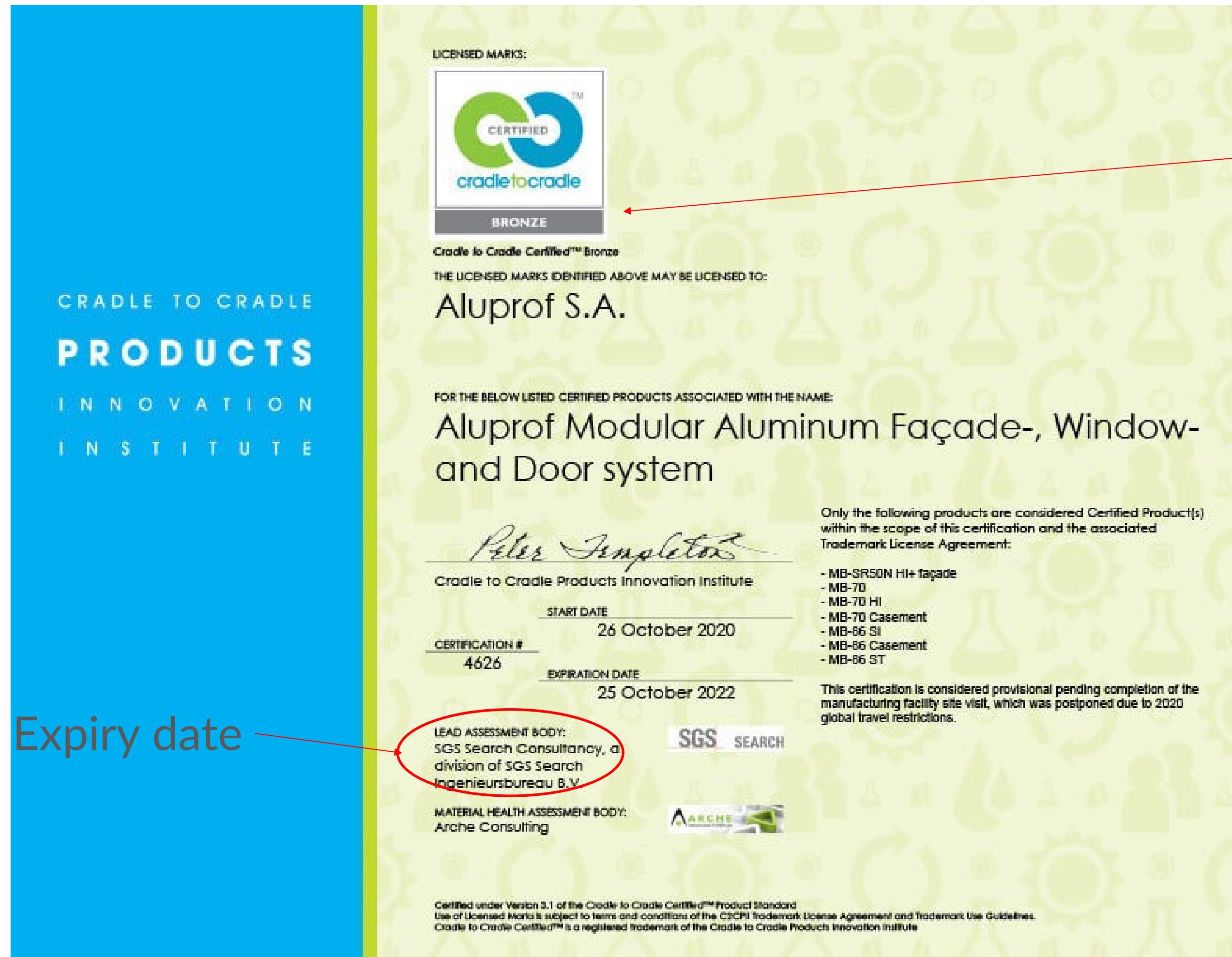
MANUFACTURER RESPONSIBLE FOR LABEL ACCURACY

INTERNATIONAL LIVING FUTURE INSTITUTE™ [declareproducts.com](#)

GREEN CANARY

MIR Common Examples – Cradle to Gate

Reference - [Cradle to Cradle Database](#)



Certification and Level

Expiry date

Describes the full cycle of a material from extraction to end of use and then back into the product.

Option 2 - Material Ingredient Optimization

Material and Resource (Select Only Applicable Cells)		
MR Credit 2: Option 1 - EPD (Environmental Product Declaration)		-> Cost of M
	Specific Type III (ISO 14044) - External Review (1.5	(Cost is requ
EPD Program Operator:		-> Regional
MR Credit 2: Option 2 - Embodied Carbon/LCA Optimization*		Manufacturin
	Select One-Embodied Carbon/LCA Optimization	Extraction Lo
MR Credit 4: Option 1 - Material Ingredients (HPD, Declare, Cradle to Cradle...)		Percentage I
	Select One - Material Ingredient	Material Reu
Does the report have third-party verification of the content inventory	Y/N	Reused/salva
MR Credit 4: Option 2 - Material Ingredient Optimization		Recycled Co
	Select One - Material Ingredient Optimization	Post-consum
GBCI "Docverification" ID (if a	Select One - Material Ingredient Optimization	(consumer w
	Material Ingredient Screening & Optimization Action Plan (.5 Products)	
	Advanced Inventory & Assessment	
	Material Ingredient Optimization (1.5 Products)	
	REACH (International Only)	
	Global Green Tag PhD (International Only)	
	None	
General Note:		
*For MR Credit 2: Option 2 and M		
products are sourced (extracted,		
160.9km of the project site, they		
Supporting Documentation:		
Did you provide the Supporting Doc		
Name of Document		
See LEEDv4.1 credit requ		

Option 2 - Material Ingredient Optimization (MIO) is complicated and as of 2024 there are only a handful of manufacturers applying for this certification. There are three types of certification LEED is looking for:

- Material Ingredient Screening and Optimization Action Plan
- Advanced Inventory & Assessment
- Material Ingredient Optimization

Option 2 – MIO Requirements

Option 2 must meet:

Report Type & Criteria	Product Documentation
Material Ingredient Screening and Optimization Action Plan	Action Plan based on publicly available material inventory to at least 1,000ppm.
Advanced Inventory & Assessment: Inventory to at least 0.01% by weight (100 ppm) and no GreenScreen LT-1 hazards or GHS Category 1 hazards are present. Third-party Verified Or Inventory to at least 0.01% by weight (100ppm) and at least 75% by weight of product is assessed using GreenScreen. The remaining 25% by weight of product has been inventoried and the GreenScreen assessment is publicly available. Third-party Verified	• <i>Cradle to Cradle Certified</i> or <i>Material Health Certificate</i> at Bronze level or higher. • <i>Declare</i> labels designated as Red List Free or LBC Red List Free. • <i>Green Seal</i>. Products certified under the Standard for Paints, Coatings, Stains and Sealers (GS-11, Edition 4.0) that do not include GHS Reproductive toxins (categories 1 and 2). • <i>Health Product Declaration</i> that meet optimization and verification criteria. • <i>Living Product Challenge</i> certified products that include a Red List Free or LBC Red List Free Declare label. • <i>Manufacturer Inventory</i> that meet optimization and verification criteria.
Material Ingredient Optimization: Inventory to at least 0.01% by weight (100 ppm) and at least 95% by weight of product is assessed using GreenScreen. No BM-1 hazards are present. The remaining 5% not assessed has been inventoried and screened using GreenScreen List Translator and no GreenScreen LT-1 hazards are present. Third-party Verified	• <i>Cradle to Cradle Certified</i> or <i>Material Health Certificate</i> at Silver level or higher. • <i>Health Product Declaration</i> that meet optimization and verification criteria. • <i>Living Product Challenge</i> certified products that achieve Imperative 09: Transparent Material Health. • <i>Manufacturer Inventory</i> that meet optimization and verification criteria.
International Alternative Compliance Path: Available to projects located outside of the US*	<i>REACH Optimization:</i> • Material Inventory to 100ppm with no substances found on the Authorization List – Annex XIV, the Restriction list – Annex XVII and the SVHC candidate list. OR • <i>Global Green TAG</i> PHD report.

Option 2 – MIO Simplified



Flooring

- **Shaw Ecoworx Tiles:** Mohawk, or Milliken, Shaw adhesive
- **Cradle to Cradle or Material Health:** XL Brands, Tarkett, Forbo, Shaw, Armstrong,
- **Tarkett Baseworks Wall Base**
- **Rubber Flooring:** Tarkett or Nora

Ceilings

- **Armstrong Prelude System:** Ultima+ and Perla acoustical ceiling tiles.
- **Kawneer Curtainwall:** For exterior walls.
- **Construction Specialties Louvers and Entrance Systems:** walls and entrances.

Other Options

- **Nucor Rebar:** A sustainable choice for structural reinforcement.
- **Additional Flooring:** Explore other flooring options if needed, especially for mechanical rooms.

Option 2 – MIO Examples

Sample of a Compliant
Material Ingredient Optimization
Action Plan
for LEED version 4.1 credit:
Material Ingredients, Option 2 (BD+C and ID+C rating systems)
Note: This sample Action Plan is fictitious and is intended for illustrative purposes only. The information and analysis results shown herein do not represent any real company, manufacturer or product line.

Sample of a Material Ingredient Screening and Optimization Action Plan Report

Summary Table: BCD Action Plan #1001A	
Document ID or report number	BCD Action Plan Product #123
Manufacturer	BCD Gypsum Company
Contact info of organizational representative responsible for implementation and success of the plan	John Doe, John.Doe@SAMPLEABC.com
Product Name	BCD Product 123 (Gypsum Finishing Compound)
Product Lines/Series Covered by the Action Plan	BCD Product 123x, BCD Product 123yz, BCD Product 123-b43, BCD Product 123-c54, BCD Product 123 Pro
Product Type	Commercial Building Product
Product Description or Role	Gypsum finishing product used for commercial installation
Describe the hazard assessment platform used for the material ingredient disclosure report	The product was screened against GHS, Green Screen, and HPDC v2.1 Priority Hazard and Warning List.
Disclosure Threshold for the Action Plan assessment	☐ 1,000 ppm ☐ 100 ppm
Is the action plan third party verified and does the verification include third party review of content inventory? (Optional)	☐ Yes ☐ No

Sample of a Compliant Material Ingredient Optimization Action Plan

for LEED version 4.1 credit:
Material Ingredients, Option 2 (BD+C and ID+C rating systems)

Note: This sample Action Plan is fictitious and is intended for illustrative purposes only. The information and analysis results shown herein do not represent any real company, manufacturer or product line.

Sample of a Material Ingredient Screening and Optimization Action Plan Report

Summary Table: BCD Action Plan #1001A

Summary Table: BCD Action Plan #1001A	
Document ID or report number	BCD Action Plan Product #123
Manufacturer	BCD Gypsum Company
Contact info of organizational representative responsible for implementation and success of the plan	John Doe, John.Doe@SAMPLEABC.com
Product Name	BCD Product 123 (Gypsum Finishing Compound)
Product Lines/Series Covered by the Action Plan	BCD Product 123x, BCD Product 123yz, BCD Product 123-b43, BCD Product 123-c54, BCD Product 123 Pro
Product Type	Commercial Building Product
Product Description or Role	Gypsum finishing product used for commercial installation
Describe the hazard assessment platform used for the material ingredient disclosure report	The product was screened against GHS, Green Screen, and HPDC v2.1 Priority Hazard and Warning List.
Disclosure Threshold for the Action Plan assessment	☐ 1,000 ppm ☐ 100 ppm
Is the action plan third party verified and does the verification include third party review of content inventory? (Optional)	☐ Yes ☐ No

Enhanced Indoor Air Quality Strategies

Low-Emitting Materials

If a product is not within the weatherproofing a IEQ SMDS sheet is not needed

Cost/Volume/Surface area is pre-determined by the LEED Coordinator. **IT IS REQUIRED** and it can be estimated

Adhesives and Paints always require SF, not cost

Low Emitting Materials (Choose one from each section)			
1.) Is the product "Interior" of the Weatherproofing		Y/N	
If no, no further information needed, the Submittal is N/A			
2.) Provide cost of Material or Surface Area		3.) (EQ) Product Categories (Continued, Pick One)	
Adhesives & Sealant, Paints & Coatings must enter a surface area		COMPOSITE WOOD (Excludes flooring, ceiling, wall panels, or furniture)	
COST		Does it Meet (Pull-down list)	
*Volume (not a preferred metric)		Composite Wood Emission Evaluation	
SURFACE AREA		FURNITURE (Exclude office accessories from the credit)	
		Does it Meet (Pull-down list)	
		Furniture Emission Evaluation	
		FLOORING (Excludes subflooring and wet-applied products)	
		Does it Meet (Pull-down list)	
		Flooring Emission Evaluation	
		WALL PANELS (Exclude removable panels, cabinetry & structure)	
		Does it Meet (Pull-down list)	
		Wall Panel Emission Evaluation	
		CEILING (Exclude overhead structural elements)	
		Does it Meet (Pull-down list)	
		Ceiling Emission Evaluation	
		INSULATION (Exclude HVAC and plumbing insulation)	
		Does it Meet (Pull-down list)	
		Insulation Emission Evaluation	
4.) Supporting Documentation			
Did you provide the Supporting Documentation?			
Y/N			
Name of Document			
Page #			
DO NOT PDF save as .xlsx			

Plan ahead, how you are going to break up the cost for your product?

Enhanced Indoor Air Quality Strategies

Low-Emitting Emission Evaluations

Each category has their own Emission Evaluation. You can see the Evaluations methods allowed on the SMDS sheet pull down menus.

We break up the Emission Evaluation by the Standards and common Certifications.

Inherently non-emitting: stone, ceramic, powder-coated metals, plated or anodized metal, glass, concrete, clay brick, and unfinished or untreated solid wood. It has no binders, surface coatings, or sealants that include organic chemicals.

3.) (EQ) Product Categories (Continued, Pick One)	
COMPOSITE WOOD	(Excludes flooring, ceiling, wall panels, or furniture)
Does it Meet (Pull-down list)	Composite Wood Emission Evaluation
FURNITURE	(Exclude office accessories from the credit)
Does it Meet (Pull-down list)	Furniture Emission Evaluation
FLOORING	(Excludes subflooring and wet-applied products)
Does it Meet (Pull-down list)	Flooring Emission Evaluation
WALL PANELS	Flooring Emission Evaluation
Does it Meet (Pull-down list)	None
CEILING	None
Does it Meet (Pull-down list)	CDPH Standard Method v1.2
INSULATION	EN 16516:2017
Does it Meet (Pull-down list)	NSF/ ANSI 332
4.) Supporting Documentation	
Did you provide the Supporting Documentation?	
Name of Document	Salvaged and reused materials
Page #	Inherently Non-Emitting Material
NOT PDF	' - - USGBC Equivalents - -
as .xlsx	FloorScore
	Green Label Plus
	UL Greenguard Gold
	SCS Indoor Advantage Gold

IEQ Evaluation



Enhanced Indoor Air Quality Strategies

Low-Emitting Emission Evaluations

SCS Global Services does hereby certify that an independent assessment has been conducted on behalf of:

Mohawk Industries

508 East Morris Street, Dalton, GA, United States

For the following product(s):

See Addendum

The product(s) meet(s) all of the necessary qualifications to be certified for the following claim(s):

FloorScore®

Indoor Air Quality Certified to SCS-EC10.3-2014 v4.0.

Conforms to the CDPH/EHLB Standard Method v1.2-2017 (California Section 01350), effective April 1, 2017, for the school classroom and private office parameters when modeled as Flooring.

Measured Concentration of Total Volatile Organic Compounds (TVOC): Less than/equal to 0.5 mg/m³ (in compliance with CDPH/EHLB Standard Method v1.2-2017)

Registration # SCS-FS-03732

Valid from: December 1, 2021 to November 30, 2022

SCS Global Services is currently the only certification body approved by the Resilient Floor Covering Institute (RFCI) to provide FloorScore® product certification; certified products are only listed on the SCS Green Products Guide, <http://www.scsglobalservices.com/certified-green-products-guide>.



CERTIFIED BY
SCS Global Services



SCSglobal
SERVICES

Stanley Mathuram

Stanley Mathuram, PE, Executive Vice President
SCS Global Services
2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA

Floor Score is the Certifier

Standard used: Standard Method v1.2-2017

TVOC level < .5 mg/m² within the TVOC ranges:
0.5 mg/m³ or less, between 0.5 and 5 mg/m³, or 5
mg/m³ or more

expired

Enhanced Indoor Air Quality Strategies

Common Low-Emitting Emission Evaluations

CERTIFICATE
OF COMPLIANCE



PRODUCT CERTIFIED FOR
LOW CHEMICAL EMISSIONS
UL.COM/GG
UL 2818
GOLD

Owens Corning

Owens Corning Canada -
PROPINK® FIBERGLAS® Blown
Insulation

14206-420
Certificate Nu

02/17/2006 - 1
Certificate Per

Certified
Status

UL 2818 - 2013 Gold Standard for Chemical Emissions for Building Materials, Finishes and Furnishings

Wall finishes are determined compliant in accordance with California Department of Public Health (CDPH) Standard Method V1.2-2012 using a Classroom Environment with an air change of 0.82 h⁻¹ and Wall finishes are determined compliant in accordance with California Department of Public Health (CDPH) Standard Method V1.2-2012 using an Office Environment with an air change of 0.82 h⁻¹.
Product tested in accordance with UL 2818 test method to show compliance to emission limits on UL 2818, Section 7.1 and 7.2.

UL

UL investigated representative samples of the identified Product(s) to the identified Standard(s) or other requirements in accordance with the agreements and any applicable program service terms in place between UL and the Certificate Holder (collectively "Agreement"). The Certificate Holder is authorized to use the UL Mark for the identified Product(s) manufactured at the production site(s) covered by the UL Test Report, in accordance with the terms of the Agreement. This Certificate is valid for the identified dates unless there is non-compliance with the Agreement.

GREEN LABEL PLUS

The Carpet and Rug Institute, Inc.

THIS CERTIFIES THAT

Zhejiang Artistic Carpets
Manufacturing Co., Ltd.

GLP2509

HAS MET THE REQUIREMENTS
OF THE CARPET AND RUG
INSTITUTE'S GREEN LABEL
PLUS PROGRAM

FOR CATEGORY:

26% Pre-dyed Wool with 58 Latex Unitary Backing





GREEN LABEL PLUS



ANSI

Product Category: Residential
Commercial
Institutional
Public Buildings
Healthcare
Education
Government
Industrial
Marine
Transportation
Agriculture
Food Processing
Retail
Other

For more information, visit
www.carpetandruginstitute.com
or call 1-800-393-6343

SCS Global Services does hereby certify that an independent assessment has been conducted on behalf of:

Hallmark Floors

2560 Arduball Ave, Ontario, CA, United States

For the following product(s):

Vinyl Tile:
Castle & Cottage (3mm/12mil), Countler, El Dorado (3mm/20mil), Hermosa Stone (3mm/20mil),
Polaris, San Simeon (4mm/20mil), Sierra Madre (3mm/20mil), Town & Country (2mm/12mil)

The product(s) meet(s) all of the necessary qualifications to be certified for the following claim(s):

FloorScore®
Indoor Air Quality Certified to SCS-EC10.3-2014 v4.0
Conforms to the CDPH/EHLB Standard Method v1.2-2017 (California Section 01380), effective April 1, 2017, for the school
classroom and private office environments when installed as flooring.

Measured Concentration of Total Volatile Organic Compounds (TVOC): Less than equal to 0.5 mg/m³ (in compliance with
CDPH/EHLB Standard Method v1.2-2017)

Registration # SCS-FS-03695

Valid from: October 1, 2018 to September 30, 2019

SCS Global Services is currently the only certification body approved by the Resilient Floor Covering Institute (RFCI) to provide FloorScore® product
certification, verified products are only listed on the SCS Green Product Guide, <http://www.scsglobal.com/en/certified-green-product-guide>







SCSglobal
SERVICES

Stanley Matheson, PE, Vice President

SCS Global Services

2560 Arduball Street, Ste. 100, Ontario, CA 91764 USA

[GreenGuard Gold Database](#)

[CRI Green Label Plus Database](#)

[SCS Indoor Advantage Gold Database](#)

ecoreal
solutions

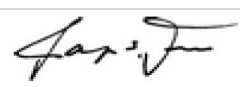
Enhanced Indoor Air Quality Strategies

Low-Emitting Certification Examples



COMPLIANCE TESTED by **berkeley analytical**
VOC Emission Test Certificate

Product Name: LATICRETE® LATASIL™ - 6244-0120-2

Product Sample Information		Certificate Information	
Company:	Laticrete International	Certificate No:	180418-02
Company Website:	www.laticrete.com	Certified By:	 Raja S. Tannous, Laboratory Director
Product Type:	Elastomeric joint sealant for tile/stone	Date:	April 18, 2018
Date Produced:	2/1/2018		

Reference Standard: California Department of Public Health CDPH/EHLB/Standard Method Version 1.2, 2017 (Emission testing method for CA Specification 01350)

Reference Standard: California Department of Public Health CDPH/EHLB/Standard Method Version 1.2, 2017 (Emission testing method for CA Specification 01350)

Acceptance Criteria and Results Demonstrating Compliance of Product Sample to Referenced Standard:

Exposure Scenario ¹	Individual VOCs of Concern ²		Formaldehyde ³		TVOC ⁴
	Criterion	Compliant?	Criterion	Compliant?	
School Classroom	≤½ Chronic REL	YES	≤9.0 µg/m³	YES	≤ 0.5 mg/m³
Private Office	≤½ Chronic REL	YES	≤9.0 µg/m³	YES	≤ 0.5 mg/m³

Product Coverage⁵: 18.9 g/in³

- Exposure scenarios & product quantities for classroom & office are defined in Tables 4-2 – 4-5 (CDPH Std. Mtd. V1.2-2017)
- Maximum allowable concentrations of individual target VOCs are specified in Table 4-1 (*ibid.*)
- Maximum allowable formaldehyde concentration is ≤9 µg/m³, effective Jan 1, 2012; previous limit was ≤16.5 µg/m³ (*ibid.*)
- Informative only; predicted TVOC Range in three categories, i.e., ≤0.5 mg/m³, >0.5 – 4.9 mg/m³, and ≥5.0 mg/m³
- Informative and applicable only to tests of wet-applied products; grams of sample applied per square meter of substrate

Standards & Codes Recognizing CDPH Standard Method V1.2 (partial list)

COMMERCE THAT MAY BE BASED ON THIS TEST. BERKELEY ANALYTICAL PROVIDES THIS CERTIFICATE OF COMPLIANCE "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PURPOSE.



Safety Data Sheet
SDS No. SST-6422-060220
Conforms to HazCom 2012/U.S.

Section 1: IDENTIFICATION

Product Name(s): Performance Grade Asphalt Binder(s)

Product Identifiers: Asphalt Cement; Asphalt Binder; PG 58-22; PG 58-28; PG 64-22; PG 64-28; PG 70-22; PG 70-28; 76-22; 88-22; Asphalt Flux; AC-10; AC-20; AC-30; AC-40;

Manufacturer: and/or Marketer: S&S Terminal, Inc.
1731 Old State Route #7
P.O. Box 66
Rayland, Ohio 43943

Information Telephone Number:
1-740-859-2131 (8am to 5pm EST)

For Chemical Emergency ONLY:
(spill, leak, fire, exposure or accident)

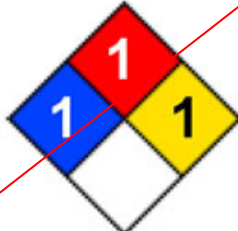
CHEMTREC
1-800-424-9300 24 HOURS / 7 Days

Product Use: Asphalt cement is used in HMA for paving roads, driveways, parking lots, school yards, and other surface, base, or sub-base applications.

Note: This MSDS covers many types of Asphalt cement. Individual composition of hazardous constituents will vary between asphalt cement grades

Section 2: HAZARD(S) IDENTIFICATION

Hazard Classifications: Category 2, Health Hazard. Skin Irritation
Category 1, Health Hazard. Skin Sensitization
Category 2, Health Hazard. Eye Irritation
Category 2, Health Hazard. Carcinogenicity / Inhalation
Category 4, Fire Hazard. Ignitability at Elevated Temperatures
Special Hazard: Elevated Temperature > 280° F (137.8° C)



NFPA



WARNING



WARNING



DANGER

Hazard Statements: Hot Product will cause SEVERE THERMAL BURNS!
May produce Hydrogen Sulfide Gas at Elevated Temperatures
May cause skin Irritation
May cause allergic skin reactions.
May cause eye Irritation.
Possibly carcinogenic to humans.

Is not tested to a recognized standard

ecoreal
solutions

Enhanced Indoor Air Quality Strategies

Low-Emitting Materials



Benjamin Moore®

REGAL® SELECT
PREMIUM INTERIOR PAINT & PRIMER
PEARL 550

Features

- Excellent hide
- Excellent durability
- Easy application
- Zero VOC, low odor
- Premium flow and leveling

General Description

A premium quality, easy to use, durable and washable pearl finish. Beautiful finish for trim and accents. Ideal for surfaces subject to abuse and soil such as corridors, stairwells, cafeterias, locker rooms, laboratories, etc. Easy to apply by brush, roller, or spray gun. Excellent hiding and leveling properties. Self-priming on most substrates.

Recommended For

Ideal for interior trim, doors, cabinets, walls, and new or coated acoustic ceilings. For new or previously painted wallboard, plaster, masonry, and primed or previously painted wood and metal

Limitations

- Do not apply when air and surface temperatures are below 50 °F (10 °C)

Product Information			
Colors — Standard: White (01)		Technical Data	
— Tint Bases: Benjamin Moore® Gennex® Bases 1X, 2X, 3X, & 4X		Pastel Base	
— Special Colors: Contact your Benjamin Moore® representative.		Vehicle Type Proprietary 100% Acrylic Latex	
Certifications & Qualifications: VOC compliant in all regulated areas Zero VOC according to EPA Method 24 Class A (0-25) over non-combustible surfaces when tested in accordance with ASTM E-84 Master Painter Institute MPI # 43, 43 X-Green™, 140 and 140 X-Green™ Anti-microbial - This product contains antimicrobial additives that inhibit the growth of mold and mildew on the surface of the paint film.		Pigment Type Titanium Dioxide	
 Benjamin Moore's Green Promise® designation is our company's assurance that this product meets – and often exceeds – rigorous environmental and performance criteria regarding VOCs, emissions, application, washability, scrubability and packaging, while also delivering the premium levels of performance you expect from Benjamin Moore.		Volume Solids 40.5%	
Qualifies for LEED® v4 Credit	CDPH v1 Emission Certified	Qualifies for CHPS low emitting credit (Collaborative for High Performance Schools)	VOC (in any color)
YES	YES	YES	0 g/L
This Benjamin Moore product has been tested by independent third parties and meets or exceeds the published chemical restriction and performance criteria of the Green Seal™ GS-11 2015 standard			
Technical Assistance: Available through your local authorized independent Benjamin Moore® retailer. For the location of the retailer nearest you, call 1-866-708-9180, see www.benjaminmoore.com , or consult your local Yellow Pages.			

3.) (EQ) Product Categories (Pick One)

ADHESIVES & SEALANT (Only interior products applied on-site)

Product actual VOC Rating (must not exceed VOC limit below)

Pick both pull-downs

Does it meet

Adhesives, Sealants VOC Limit

Adhesives and Sealant Evaluations

PAINTS & COATINGS (Only interior products applied on-site)

Product actual VOC Rating (must not exceed VOC limit below)

Pick both pull-downs

Does it meet

Primers, Sealers, and Undercoaters

Primers, Sealers, and Undercoaters

Paints, Coatings VOC Limit

Bond Breakers

Varnish

Sanding Sealers

Lacquer

Concrete-Curing Compounds

Concrete-Curing Compounds For Roadways and Bridges

Concrete Surface Retarder

Driveway Sealer

Dry-Fog Coatings

Clear Topcoat

Pull down automatically selects the VOC Limit

VOC content

References

https://transparencycatalog.com/	MR 2-4
https://giga-auth.com/equinox-identity/login	MR 2-4 & IEQ
https://buildingclean.org/	IEQ
https://www.c2ccertified.org/	C2C
https://www.hpd-collaborative.org/	HPD
https://declare.living-future.org/	Declare
https://leeduser.buildinggreen.com/	Questions
https://bettermaterials.gbci.org/	Most Certificates
https://www.compositepanel.org/product-finder/?parent-category=126 -	Composite Wood
https://www.apawood.org/plywood	Plywood
https://app.powerbi.com/view?r=eyJrIjojN2U3NGMyNWEtZTAxNS00MzVhLWExNmMtOThhZjdiYjQ4MWNkIiwidCI6IjEyNGU2OWRiLWVmNjUtNDk2Yi05NmE5LTVkNTZiZWxZDI5MSIsImMiOiI9	FSC Certified Wood
Manufacture Website sometimes has LEED documentation	Most Certificates



GREEN CANARY

We make green building attainable for all