



SM Transparency Catalog ► Coldspring ► StoneLite®

### StoneLite<sup>®</sup> Honeycomb Facade



### Performance dashboard



TESTED: Proven for 40+ years worldwide EASY INSTALL: Cuts costs, flexible scheduling STRONG & FLEXIBLE: 60x stronger than 3cm stone

LIGHTWEIGHT: 80% lighter than 3cm stone SUSTAINABLE: Meets LEED V3 and V4 standards

Visit Stone Panels International for more product information:

StoneLite®: Marble Falls, TX

MasterFormat® 04 42 00, 07 42 00 StoneLite® Guide Specification For spec help, contact us or 800-328-6275

### **Environment & materials**

### Improved by:

Lightweight honeycomb reduces resource use and structural load

Meets LEED V3 & V4 criteria for sustainable building

Low toxicity, comparable to Douglas fir wood

Reduced air infiltration & water resistance for energy efficiency

### Certifications, rating systems & disclosures:

ICC-ES ESR-1500

ASTM Standards (D-2015, E-108, E 84, E-695)

NFPA Fire Testing

Miami Dade - NOA certified/approved

See LCA, interpretation & rating systems

See materials, interpretation & rating systems











### SM Transparency Report (EPD)™ + Material Health Overview™

**EPD** 

LCA

3rd-party reviewed

0

Transparency Report (EPD)

3rd-party verified

Validity: 02/20/2025 - 02/19/2030 SM-SPI - 20250220 - 001

**MATERIAL HEALTH** 

Material evaluation

Self-declared



This environmental product declaration (EPD) was externally verified, according to ISO 21930:2017, ISO 14025:2006, UL Part A, and UL Part B: Cladding Product Systems by Jack Geibig, President, Ecoform.

Ecoform, LLC 11903 Black Road, Knoxville, TN 37932

(865) 850-1883



### SUMMARY

Reference PCR

Regions; system boundaries North America; Cradle to grave

Functional unit; reference service

1 m<sup>2</sup> of installed panels; 75 years LCIA methodology: TRACI 2.1

LCA software; LCI database SimaPro Developer 9.6; ecoinvent v3.10, US-El 2.2, Industry data 2.0

**Public LCA** 

In accordance with ISO 14044 and the reference PCR, this life cycle assessment was conducted by Sustainable Minds and reviewed by Jack Geibig, President, Ecoform.

### Coldspring

17482 Granite West Road Cold Spring, MN 56320 (800) 328-5040

## LCA results & interpretation

## Limestone panels

**StoneLite®** 

## Scope and summary

○ Cradle to gate ○ Cradle to gate with options **② Cradle to grave Application** 

environment and provide an outer layer to the building. It not only provides

### Stone cladding is applied to a building's exterior to separate it from the natural

protection from the weather elements but also a durable, aesthetically pleasing building appearance. StoneLite® limestone panels are crafted by bonding a thin layer of limestone to a durable aluminum honeycomb core. The stone veneer maintains the authentic appearance and texture of solid stone, while the aluminum honeycomb core offers a high strength-to-weight ratio, enabling the panel to absorb and evenly distribute impact forces. These features make StoneLite® panels a superior choice for both interior and exterior applications where aesthetics, strength, and efficiency are essential. **Functional unit** 

### estimated service life of 75 years. The installed panels, including accessories

and other materials, weigh 19.5 kg and have a reference service life of 75 years when installed per the manufacturer's instructions. Default installation, packaging, and disposal scenarios StoneLite® panels are cut to size based on customer-provided field

measurements so that at the installation site, minimal cuts are required. As

One square meter of installed StoneLite® limestone panels over the building's

### confirmed by an installer, approximately 1% of panels are disposed (23.95%

recycled, 24.0% landfilled, 1.7% incinerated).

landfilled, 1.67% incinerated, and the remainder recycled). 0.62 kg of masonry connectors are needed per functional unit. After installation is complete, lumber and foam packaging (67.16% landfilled, 15.70% incinerated, and the remainder recycled) and plastic packaging (69.44% landfilled, 16.93% incinerated, and the remainder recycled) are transported 100km via truck to the disposal site. After installation, the panels are not expected to require cleaning, repair, or other activities over their 75-year service life. At the end of life, the panels are manually removed and transported 100km via truck to final disposal (74.4%

Material composition by wt% PART MATERIAL **Panel** Limestone facing 55-65% **Panel** Pre-impregnated fiberglass cloth skins 5-8%



Construction

**End of life** 

## **LCA** results

LIFE CYCLE STAGE

3.90E+00

2.60E+00

1.30E+00

0.00E+00

### All life cycle stages For StoneLite® limestone panels, the production stage (A1-A3) dominates

What's causing the greatest impacts

### the life cycle impacts, which accounts for over ~88% of the total

environmental impacts across all impact categories. Raw material acquisition and preprocessing, transportation of stone to the facility, and electricity used during manufacturing are the primary contributors in that stage. The impacts from distribution to installation sites, installation and packaging waste, and disposal at the end of life account for the remainder of Raw material acquisition

### carcinogenics, non-carcinogenics, respiratory effects, and ecotoxicity.

These impacts mainly arise from limestone quarrying and the upstream production of honeycomb cores, pre-impregnated fiberglass cloth skins materials, and attachment plates. Impacts during transportation (A2) stem from the use of trucks to deliver raw materials to the manufacturing site, with the quarried limestone slabs contributing the most.

Raw material extraction and upstream processing (A1) has the most

substantial impact on five impact categories: smog formation,

Manufacturing The manufacturing stage (A3) is the largest contributor in four key impact categories: global warming, acidification, eutrophication, and fossil fuel

depletion. The primary drivers of these impacts are the consumption of

electricity and propane for various manufacturing operations within the production facility. Construction and use The distribution (A4) of panels to the installation site and activities during installation (A5) contribute about equally to the construction and use (B) phases. Transportation of the panels via truck is most impactful on ozone

### depletion, and the disposal of packaging and installation waste is more impactful on the global warming, smog, and non-carcinogenics impact

categories. Since the panels are expected to last the life of the building without any additional activities such as maintenance, replacement, or repair, there were no impacts in the use phase.

The transportation to disposal (C2) via truck dominates end-of-life impacts for most impact categories. Final product disposal (C4) contributes more to the eutrophication and carcinogenics impact categories in this phase.

### Embodied carbon can be defined as the cradle-to-gate (A1-A3) global warming potential impacts. The total embodied carbon per functional unit of

1.55E-01

1.36E-01

(X) A3

Manufacturing

Total impacts = 5.64E+00 mPts

RAW MATERIAL

(X) A1 Raw material

(X) A2 Upstream

components and

of limestone.

upstream transport

transportation

ACQUISITION

supply

**Embodied carbon** 

End of life

Manufacturing data Stone quarrying data was extracted from Natural Stone Institute's industrywide stone cladding LCA published in November 2022. Coldspring

fabrication data covers a reporting period of January 2021 – December 2023

StoneLite® limestone panels is 1.16E+02 kg CO<sub>2</sub>-eq per functional unit.

### Coldspring is focused on designing solutions for sustainable cladding. From exterior hardscape and cladding to interior design elements, natural

(X) A4 Distribution

(X) A5 Installation

to building site.

from the Marble Falls, TX manufacturing facility.

How we're making it greener

At Coldspring, we offer end-to-end solutions and the highest-quality stone, giving you peace of mind that the finished product will stay intact and looking great far into the future. By using naturally occurring materials in our cladding solutions, we minimize the amount of additional

processing needed to create an environment-conscious product

stone provides quality and durability that other materials cannot match.

See how we make it greener

(X) B1 Use

(X) B3 Repair

N/A

(X) B2 Maintenance

END OF LIFE

**Deconstruction** 

(X) C2 Waste

processing

**Transportation** (X) C3 Waste

transportation to

**END OF LIFE** 

½ product

1 product

1 product

2 points

.5 points

.75 points

1 point

disposal.

(X) C1

					processing
Information modules:				(X) B4 Replacement	(X) C4 Disposal
Included (X)   Excluded (MND)*  Stages B1-B7, C1, and C3 though included,				(X) B5 Refurbishment	
have no associated activities. *Module D is excluded from this system				(X) B6 Operational energy use	
boundary (MND).				(X) B7 Operational water use	
SM Single Score Learn about SM Single	e Score results				
Impacts per 1 square meter of installed StoneLite® limestone panels	3.15E+00 mPts	2.20E+00 mPts	1.55E-01 mPts	0 mPts	1.36E-01 mPts
Materials or processes contributing >20%	Manufacturing of purchased	Electricity and propane	Truck transportation	N/A	Waste transportation to

consumption during

manufacturing.

### RAW MATERIAL ACQUISITION LIFE CYCLE STAGE

Unit

TRACI v2.1 results per functional unit

to total impacts in each life cycle stage

**Ecological damage** 

Impact category

Global warming	kg CO₂ eq	0	5.67E+01	5.95E+01	4.16E+00	0	3.15E+00		
Ozone depletion	kg CFC-11 eq	0	5.44E-06	1.67E-06	4.55E-07	0	4.79E-07		
Acidification	kg SO <sub>2</sub> eq	0	2.12E-01	1.65E-01	1.26E-02	0	1.34E-02		
Eutrophication	kg N eq	0	3.01E-02	2.82E-02	1.39E-03	0	3.32E-03		
Human health damage									
Impact category	Unit								
Smog	kg O <sub>3</sub> eq	0	3.86E+00	1.79E+00	3.00E-01	0	3.92E-01		
Respiratory effects	kg PM <sub>2.5</sub> eq	0	1.12E-02	2.78E-02	9.64E-04	0	1.56E-03		
Carcinogenics	CTU <sub>h</sub>	0	3.75E-07	1.00E-08	7.64E-09	0	5.51E-09		
Non-carcinogenics	CTU <sub>h</sub>	0	3.00E-06	9.42E-07	1.64E-07	0	1.20E-07		
Additional enviro	onmental infor	mati	on						
Fossil fuel depletion	MJ surplus	0	8.62E+01	9.03E+01	5.26E+00	0	4.62E+00		
	CTU	0	85.6%	11.4%	2.1%	0%	0.9%		

### ISO 21930:2017, "Sustainability in Building Construction — Environmental Declaration of Building Products" serves as the core PCR.

upon request)

**EPD** 

Validity: 02/20/2025 – 02/19/2030

Material

evaluation

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SM-SPI - 20250220 - 001

**MATERIAL HEALTH** 

Self-declared

services"

References

**LCA Background Report** 

US-EI 2.2, and Industry Data 2.0 databases.

Download PDF SM Transparency Report/ EPD

### **UL Part A: Life Cycle Assessment Calculation Rules and Report** Requirements v4.0 March, 2022. PCR review conducted by Lindita Bushi, PhD, Chair (Athena

Tétreault (Group AGECO); and Jack Geibig (Ecoform). UL Part B: Cladding Product Systems EPD Requirements, v2.0 April, 2021. PCR review conducted by Jim Mellentine (Thrive ESG); Christoph White, Ph.D. (NIST); and Philip S. Mose, P.E. (MA) (Simpson Gumpertz & Heger).

UL Environment General Program Instructions v2.5, March 2021 (available

Sustainable Materials Institute), lindita.bushi@athenasmi.org; Hugues Imbeault-

LCA of StoneLite® panels (public version), Coldspring 2025. Developed using

methodologies, SimaPro Developer 9.6 modeling software, Ecoinvent v3.10,

ISO 14025, "Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and

the TRACI v2.1, CML, and Cumulative Energy Demand (LHV) impact assessment

comparable. Comparison of the environmental performance of Cladding Product Systems using EPD information shall be based on the product's use and impacts at the building level, and therefore EPDs may not be used for comparability purposes when not considering the building energy use phase. Full conformance with the PCR for stone cladding allows EPD comparability

standards, use the same sub-category PCR, and use equivalent scenarios with respect to construction works. However, variations and deviations are possible. Example of variations

only when all stages of a life cycle have been considered, when they comply with all referenced

Different LCA software and background LCI datasets may lead to differences results for upstream

SM Transparency Reports (TR) are ISO 14025 Type III environmental declarations (EPD) that

enable purchasers and users to compare the potential environmental performance of products on a life cycle basis. Environmental declarations from different programs (ISO 14025) may not be

or downstream of the life cycle stages declared

## LEED BD+C: New Construction | v4.1 - LEED v4.1

**Rating systems** 

performance.

Building product disclosure and optimization **Environmental product declarations** 

The intent is to reward project teams for selecting products from

LEED BD+C: New Construction | v4 - LEED v4

Building product disclosure and optimization

**Environmental product declarations** 

Industry-wide (generic) EPD

Product-specific Type III EPD

Industry-wide (generic) EPD

Product-specific Type III EPD

Third-party certified type III EPD

Materials and resources

Criteria

manufacturers who have verified improved life-cycle environmental

## Collaborative for High Performance Schools National

**Green Globes for New Construction and Sustainable Interiors** 

**MW C5.1 – Environmental Product Declarations** 

### **BREEAM New Construction 2018** Mat 02 - Environmental impacts from construction products

NC 3.5.1.2 Path B: Prescriptive Path for Building Core and Shell

NC 3.5.2.2 and SI 4.1.2 Path B: Prescriptive Path for Interior Fit-outs

☐ Industry-average EPD

Multi-product specific EPD

Product-specific EPD

**Environmental Product Declarations (EPD)** 

**SUMMARY** LCA Coldspring This environmental product Reference PCR 17482 Granite West Road 3rd-party reviewed V declaration (EPD) was externally Cold Spring, MN 56320 verified, according to ISO (800) 328-5040 Regions; system boundaries Transparency Report (EPD) 21930:2017, ISO 14025:2006, UL North America; Cradle to grave Part A, and UL Part B: Cladding 3rd-party verified Functional unit; reference service Product Systems by Jack Geibig,



**Eco**form

Ecoform, LLC

President, Ecoform.

11903 Black Road,

SM Transparency Report (EPD)™ + Material Health Overview™

1 m<sup>2</sup> of installed panels; 75 years LCIA methodology: TRACI 2.1

LCA software; LCI database

SimaPro Developer 9.6; ecoinvent

Sustainable Minds and reviewed by Jack Geibig, President, Ecoform.

v3.10, US-EI 2.2, Industry data 2.0 Public LCA In accordance with ISO 14044 and the reference PCR, this life cycle assessment was conducted by

Contact us

# Knoxville, TN 37932

## LCA results & interpretation

**StoneLite®** 

### Scope and summary

○ Cradle to gate ○ Cradle to gate with options **②** Cradle to grave

### **Application** Stone cladding is applied to a building's exterior to separate it from the natural

environment and provide an outer layer to the building. It not only provides protection from the weather elements but also a durable, aesthetically pleasing building appearance. StoneLite® granite panels are crafted by bonding a thin layer of granite to a durable aluminum honeycomb core. The stone veneer maintains the authentic appearance and texture of solid stone, while the aluminum honeycomb core offers a high strength-to-weight ratio, enabling the panel to absorb and evenly distribute impact forces. These features make StoneLite® panels a superior choice for both interior and exterior applications where aesthetics, strength, and efficiency are essential.

**Granite panels** 

### estimated service life of 75 years. The installed panels, including accessories

**Functional unit** 

and other materials, weigh 22.4 kg and have a reference service life of 75 years when installed per the manufacturer's instructions. Default installation, packaging, and disposal scenarios StoneLite® panels are cut to size based on customer-provided field

measurements so that at the installation site, minimal cuts are required. As

One square meter of installed StoneLite® granite panels over the building's

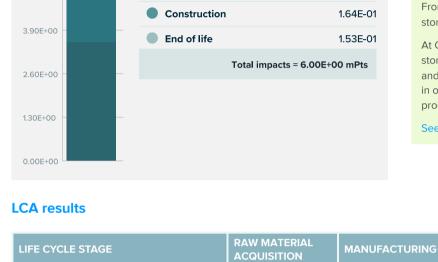
### confirmed by an installer, approximately 1% of panels are disposed (23.95%

recycled, 24.0% landfilled, 1.7% incinerated).

landfilled, 1.67% incinerated, and the remainder recycled). 0.62 kg of masonry connectors are needed per functional unit. After installation is complete, lumber and foam packaging (67.16% landfilled, 15.70% incinerated, and the remainder recycled) and plastic packaging (69.44% landfilled, 16.93% incinerated, and the remainder recycled) are transported 100km via truck to the disposal site. After installation, the panels are not expected to require cleaning, repair, or other activities over their 75-year service life. At the end of life, the panels are manually removed and transported 100km via truck to final disposal (74.4%

Material composition by wt% PART MATERIAL Panel Granite facing 55-65% Pre-impregnated fiberglass cloth skins 5-8% **Panel** Steel attachment plate 5-8%

Panel	Aluminum honeycomb core	3-5%
Panel	Bonding putty	3-5%
Panel	Epoxies and hardeners	3-5%
Panel	Fiberglass fabric	<2%
Packaging	Lumber packaging	15-20%
Packaging	Foam packaging	<1%
	fe cycle stage [mPts/func uni	
Total impacts by li	fe cycle stage [mPts/func uni	t] MPTS/FUNC. UNIT
	LIFE CYCLE STAGE	MPTS/FUNC. UNIT



(X) A1 Raw material

supply

of granite.

3.25E-02

4.45E+00

2.93E-02

4.09E-07

3.29E-06

components and

upstream transport

(X) A3

Manufacturing

### All life cycle stages

What's causing the greatest impacts

### life cycle impacts, which accounts for over ~88% of the total environmental

impacts across all impact categories. Raw material acquisition and preprocessing, transportation of stone to the facility, and electricity used during manufacturing are the primary contributors in that stage. The impacts from distribution to installation sites, installation and packaging waste, and disposal at the end of life account for the remainder of impacts. Raw material acquisition Raw material extraction and upstream processing (A1) has the most

For StoneLite® granite panels, the production stage (A1-A3) dominates the

### carcinogenics, respiratory effects, and ecotoxicity. These impacts mainly

arise from granite quarrying and the upstream production of honeycomb cores, pre-impregnated fiberglass cloth skins materials, and attachment plates. Impacts during transportation (A2) stem from the use of trucks to deliver raw materials to the manufacturing site, with the quarried granite slabs contributing the most.

substantial impact on four impact categories: carcinogenics, non-

Manufacturing The manufacturing stage (A3) is the largest contributor in four key impact categories: global warming, acidification, eutrophication, and fossil fuel depletion. The primary drivers of these impacts are the consumption of

### electricity and propane for various manufacturing operations within the

production facility. Construction and use The distribution (A4) of panels to the installation site and activities during installation (A5) contribute about equally to the construction and use (B) phases. Transportation of the panels via truck is most impactful on ozone

### depletion, and the disposal of packaging and installation waste is more

impactful on the global warming, smog, and non-carcinogenics impact categories. Since the panels are expected to last the life of the building without any additional activities such as maintenance, replacement, or repair, there were no impacts in the use phase.

The transportation to disposal (C2) via truck dominates end-of-life impacts for most impact categories. Final product disposal (C4) contributes more to the eutrophication and carcinogenics impact categories in this phase.

### **Embodied carbon** Embodied carbon can be defined as the cradle-to-gate (A1-A3) global

End of life

StoneLite® granite panels is 1.22E+02 kg CO<sub>2</sub>-eq per functional unit. Manufacturing data

Stone guarrying data was extracted from Natural Stone Institute's industrywide stone cladding LCA published in November 2022. Coldspring

fabrication data covers a reporting period of January 2021 – December 2023

warming potential impacts. The total embodied carbon per functional unit of

### How we're making it greener Coldspring is focused on designing solutions for sustainable cladding.

(X) A4 Distribution

Truck transportation

to building site.

1.48E-03

3.18E-01

1.01E-03

7.72E-09

1.72E-07

E 64E+00

N/A

0

0

0

0

0

The intent is to reward project teams for selecting products from

LEED BD+C: New Construction | v4 - LEED v4

Building product disclosure and optimization

**Environmental product declarations** 

manufacturers who have verified improved life-cycle environmental

from the Marble Falls, TX manufacturing facility.

stone provides quality and durability that other materials cannot match. At Coldspring, we offer end-to-end solutions and the highest-quality stone, giving you peace of mind that the finished product will stay intact and looking great far into the future. By using naturally occurring materials

in our cladding solutions, we minimize the amount of additional processing needed to create an environment-conscious product

From exterior hardscape and cladding to interior design elements, natural

See how we make it greener

(X) B1 Use

END OF LIFE

Deconstruction (X) C2 Waste

transportation to

disposal.

3.53E-03

4.52E-01

1.80E-03

5.61E-09

1.37E-07

E 33E+00

½ product

1 product

1 product

2 points

.5 points

.75 points

1 point

(X) C1

	(X) A2 Upstream transportation		(X) A5 Installation	(X) B2 Maintenance	(X) C2 Waste Transportation				
				(X) B3 Repair	(X) C3 Waste processing				
Information modules:				(X) B4 Replacement	(X) C4 Disposal				
Included (X)   Excluded (MND)*  Stages B1-B7, C1, and C3 though included,				(X) B5 Refurbishment					
have no associated activities. *Module D is excluded from this system				(X) B6 Operational energy use					
boundary (MND).				(X) B7 Operational water use					
SM Single Score Learn about SM Single	SM Single Score Learn about SM Single Score results								
Impacts per 1 square meter of installed StoneLite® granite panels	3.49E+00 mPts	2.19E+00 mPts	1.64E-01 mPts	0 mPts	1.53E-01 mPts				
Materials or processes contributing >20%	Manufacturing of purchased	Electricity and	Truck transportation		Waste				

## TRACI v2.1 results per functional unit

kg N eq

kg O<sub>3</sub> eq

CTU<sub>h</sub>

Fossil fuel depletion Mil surplus

kg PM<sub>2,5</sub> eq

Materials or processes contributing >20%

to total impacts in each life cycle stage

LIFE CYCLE STAGE			RAW MATERIAL ACQUISITION	MANUFACTURING	CONSTRUCTION	USE	END OF LIFE
Ecological damage							
Impact category	Unit						
Global warming	kg CO <sub>2</sub> eq	0	6.33E+01	5.92E+01	4.36E+00	0	3.52E+00
Ozone depletion	kg CFC-11 eq	0	6.62E-06	1.67E-06	4.97E-07	0	5.54E-07
Acidification	kg SO₂ eq	0	2.35E-01	1.67E-01	1.32E-02	0	1.55E-02

2.69E-02

1.80E+00

1.13E-02

1.62E-07

1.35E-06

0.005±01

propane

consumption during

manufacturing.

### Non-carcinogenics CTU **Additional environmental information**

LCA Background Report

US-EI 2.2, and Industry Data 2.0 databases.

Tétreault (Group AGECO); and Jack Geibig (Ecoform).

**Download PDF** SM Transparency Report/ EPD

or downstream of the life cycle stages declared

**EPD** 

3rd-party reviewed

UL Part B: Cladding Product Systems EPD Requirements, v2.0

Human health damage

Eutrophication

Impact category

Respiratory effects

Carcinogenics

Impact category

Smoa

rossii idei depietion	Mis surpius		9.80L+01	9.00L+01		5.04L+00	O	5.53L+00
Ecotoxicity	CTU <sub>e</sub>	0	86.3%	10.7%		2.1%	0%	0.9%
References								
References					Ratin	ig systems		

### ISO 21930:2017, "Sustainability in Building Construction — Environmental Declaration of Building Products" serves as the core PCR.

services'

### **UL Part A: Life Cycle Assessment Calculation Rules and Report** Requirements v4.0 March, 2022. PCR review conducted by Lindita Bushi, PhD, Chair (Athena Sustainable Materials Institute), lindita.bushi@athenasmi.org; Hugues Imbeault-

White, Ph.D. (NIST); and Philip S. Mose, P.E. (MA) (Simpson Gumpertz & Heger). UL Environment General Program Instructions v2.5, March 2021 (available upon request)

SM Transparency Reports (TR) are ISO 14025 Type III environmental declarations (EPD) that

enable purchasers and users to compare the potential environmental performance of products on a life cycle basis. Environmental declarations from different programs (ISO 14025) may not be comparable. Comparison of the environmental performance of Cladding Product Systems using EPD information shall be based on the product's use and impacts at the building level, and

April, 2021. PCR review conducted by Jim Mellentine (Thrive ESG); Christoph

LCA of StoneLite® panels (public version), Coldspring 2025. Developed using

methodologies, SimaPro Developer 9.6 modeling software, Ecoinvent v3.10,

ISO 14025, "Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and

the TRACI v2.1, CML, and Cumulative Energy Demand (LHV) impact assessment

energy use phase. Full conformance with the PCR for stone cladding allows EPD comparability only when all stages of a life cycle have been considered, when they comply with all referenced standards, use the same sub-category PCR, and use equivalent scenarios with respect to construction works. However, variations and deviations are possible. Example of variations Different LCA software and background LCI datasets may lead to differences results for upstream

therefore EPDs may not be used for comparability purposes when not considering the building

### LEED BD+C: New Construction | v4.1 - LEED v4.1 Building product disclosure and optimization

Industry-wide (generic) EPD

Product-specific Type III EPD

performance.

**Environmental product declarations** 

## **Collaborative for High Performance Schools National**

**Green Globes for New Construction and Sustainable** 

**MW C5.1 – Environmental Product Declarations** 

**BREEAM New Construction 2018** 

☐ Industry-average EPD

em boundaries North America; Cradle to grave

Public LCA In accordance with ISO 14044 and

## Industry-wide (generic) EPD

Criteria

Product-specific Type III EPD

Third-party certified type III EPD

Materials and resources

**Interiors** 

Mat 02 - Environmental impacts from construction products **Environmental Product Declarations (EPD)** 

NC 3.5.1.2 Path B: Prescriptive Path for Building Core and Shell

NC 3.5.2.2 and SI 4.1.2 Path B: Prescriptive Path for Interior Fit-outs

Multi-product specific EPD Product-specific EPD

> Coldspring 17482 Granite West Road Cold Spring, MN 56320 (800) 328-5040

Contact us

oduct	Reference PC
externally	UL Part B: Cla
SO	Regions; syst

Transparency Report (EPD) 21930:2017, ISO 14025 Part A, and UL Part B: Cladding 3rd-party verified President, Ecoform. Validity: 02/20/2025 - 02/19/2030 Ecoform, LLC SM-SPI - 20250220 - 001 11903 Black Road, Knoxville, TN 37932 Material **MATERIAL HEALTH** evaluation

LCA

V

Product Systems by Jack Geibig,

SM Transparency Report (EPD)™ + Material Health Overview™

This environmental pro

declaration (EPD) was

verified, according to I

Functional unit; reference service

**SUMMARY** 

1 m<sup>2</sup> of installed panels; 75 years LCIA methodology: TRACI 2.1 LCA software; LCI database SimaPro Developer 9.6; ecoinvent v3.10, US-El 2.2, Industry data 2.0

Jack Geibig, President, Ecoform.

the reference PCR, this life cycle assessment was conducted by **Eco**form Sustainable Minds and reviewed by

## (865) 850-1883 Self-declared V

Sustainable Minds:

## LCA results & interpretation

Marble panels

**StoneLite®** 

## Scope and summary

○ Cradle to gate ○ Cradle to gate with options **② Cradle to grave Application** 

environment and provide an outer layer to the building. It not only provides

### Stone cladding is applied to a building's exterior to separate it from the natural

protection from the weather elements but also a durable, aesthetically pleasing building appearance. StoneLite® marble panels are crafted by bonding a thin layer of marble to a durable aluminum honeycomb core. The stone veneer maintains the authentic appearance and texture of solid stone, while the aluminum honeycomb core offers a high strength-to-weight ratio, enabling the panel to absorb and evenly distribute impact forces. These features make StoneLite® panels a superior choice for both interior and exterior applications where aesthetics, strength, and efficiency are essential. **Functional unit** 

## estimated service life of 75 years. The installed panels, including accessories

and other materials, weigh 21.8 kg and have a reference service life of 75 years when installed per the manufacturer's instructions. Default installation, packaging, and disposal scenarios StoneLite® panels are cut to size based on customer-provided field

measurements so that at the installation site, minimal cuts are required. As

One square meter of installed StoneLite® marble panels over the building's

### confirmed by an installer, approximately 1% of panels are disposed (23.95% $\,$

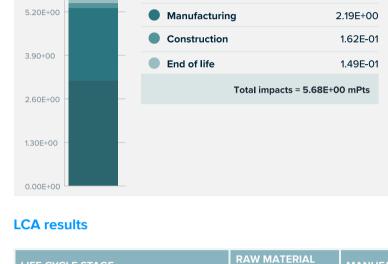
recycled, 24.0% landfilled, 1.7% incinerated).

landfilled, 1.67% incinerated, and the remainder recycled). 0.62 kg of masonry connectors are needed per functional unit. After installation is complete, lumber and foam packaging (67.16% landfilled, 15.70% incinerated, and the remainder recycled) and plastic packaging (69.44% landfilled, 16.93% incinerated, and the remainder recycled) are transported 100km via truck to the disposal site. After installation, the panels are not expected to require cleaning, repair, or other activities over their 75-year service life. At the end of life, the panels are manually removed and transported 100km via truck to final disposal (74.4%

Material composition by wt% PART MATERIAL **Panel** Marble facing 55-65%

Pre-impregnated fiberglass cloth skins

Panel	Steel attachment plate	5-8%						
Panel	Aluminum honeycomb core	3-5%						
Panel	Bonding putty	3-5%						
Panel	Epoxies and hardeners	3-5%						
Panel	Fiberglass fabric	<2%						
Packaging	Lumber packaging	15-20%						
Packaging	Foam packaging	<1%						
Total impacts by li	Total impacts by life cycle stage [mPts/func unit]							
6.50E+00	LIFE CYCLE STAGE	MPTS/FUNC. UNIT						
	<ul> <li>Raw material acquistion</li> </ul>	3.18E+00						



### All life cycle stages For StoneLite® marble panels, the production stage(A1-A3) dominates the

What's causing the greatest impacts

### life cycle impacts, which accounts for over "84% of the total environmental

impacts across all impact categories. Raw material acquisition and preprocessing, transportation of stone to the facility, and electricity used during manufacturing are the primary contributors in that stage. The impacts from distribution to installation sites, installation and packaging waste, and disposal at the end of life account for the remainder of impacts. Raw material acquisition

Raw materials extraction and upstream processing (A1) has the most

substantial impact on six impact categories: smog formation, acidification,

### carcinogenics, non-carcinogenics, respiratory effects, and ecotoxicity.

These impacts mainly arise from marble quarrying and the upstream production of honeycomb cores, pre-impregnated fiberglass cloth skins materials, and attachment plates. Impacts during transportation (A2) stem from the use of trucks to deliver raw materials to the manufacturing site, with the quarried marble slabs contributing the most.

Manufacturing The manufacturing stage (A3) is the largest contributor in three key impact categories: global warming, eutrophication, and fossil fuel depletion. The

primary drivers of these impacts are the consumption of electricity and

propane for various manufacturing operations within the production facility. Construction and use The distribution (A4) of panels to the installation site and activities during installation (A5) contribute about equally to the construction and use (B)

**phases.** Transportation of the panels via truck is most impactful on ozone

### depletion, and the disposal of packaging and installation waste is more

impactful on the global warming, smog, and non-carcinogenics impact categories. Since the panels are expected to last the life of the building without any additional activities such as maintenance, replacement, or repair, there were no impacts in the use phase.

End of life The transportation to disposal (C2) via truck dominates end-of-life impacts for most impact categories. Final product disposal (C4) contributes more to the eutrophication and carcinogenics impact categories in this phase.

### **Embodied carbon** Embodied carbon can be defined as the cradle-to-gate (A1-A3) global

5-8%

warming potential impacts. The total embodied carbon per functional unit of StoneLite® marble panels is 1.11E+02 kg CO<sub>2</sub>-eq per functional unit.

Stone quarrying data was extracted from Natural Stone Institute's industrywide stone cladding LCA published in November 2022. Coldspring

fabrication data covers a reporting period of January 2021 – December 2023

### from the Marble Falls, TX manufacturing facility.

How we're making it greener

Manufacturing data

Coldspring is focused on designing solutions for sustainable cladding. From exterior hardscape and cladding to interior design elements, natural stone provides quality and durability that other materials cannot match. At Coldspring, we offer end-to-end solutions and the highest-quality

stone, giving you peace of mind that the finished product will stay intact and looking great far into the future. By using naturally occurring materials

in our cladding solutions, we minimize the amount of additional

processing needed to create an environment-conscious product See how we make it greener

(X) B1 Use

(X) C1

Waste

disposal.

transportation to

½ product

1 product

1.5 products

2 points

.5 points

.75 points

1 point

Deconstruction

(X) A4 Distribution

Truck transportation

to building site.

N/A

	(X) A2 Upstream transportation		(X) A5 Installation	(X) B2 Maintenance	(X) C2 Waste Transportation		
				(X) B3 Repair	(X) C3 Waste processing		
Information modules:				(X) B4 Replacement	(X) C4 Disposal		
Included (X)   Excluded (MND)*  Stages B1-B7, C1, and C3 though included,				(X) B5 Refurbishment			
have no associated activities.  *Module D is excluded from this system				(X) B6 Operational energy use			
boundary (MND).				(X) B7 Operational water use			
SM Single Score Learn about SM Single Score results							
Impacts per 1 square meter of installed StoneLite® marble panels	3.18E+00 mPts	2.19E+00 mPts	1.62E-01 mPts	0 mPts	1.49E-01 mPts		
	Manufacturing of	<b>=</b>					

Electricity and

manufacturing.

consumption during

propane

(X) A3

Manufacturing

(X) A1 Raw material

supply

purchased

of marble.

components and

upstream transport

## TRACI v2.1 results per functional unit RAW MATERIAL ACQUISITION

Materials or processes contributing >20%

to total impacts in each life cycle stage

**Ecological damage** 

Impact category	Unit						
Global warming	kg CO <sub>2</sub> eq	0	5.15E+01	5.91E+01	4.32E+00	0	3.44E+00
Ozone depletion	kg CFC-11 eq	0	3.76E-06	1.67E-06	4.88E-07	0	5.39E-07
Acidification	kg SO₂ eq	0	2.18E-01	1.65E-01	1.31E-02	0	1.51E-02
Eutrophication	kg N eq	0	2.84E-02	2.71E-02	1.46E-03	0	3.49E-03
Human health d	amage						
Impact category	Unit						
Smog	kg O <sub>3</sub> eq	0	4.08E+00	1.79E+00	3.14E-01	0	4.40E-01
Respiratory effects	kg PM <sub>2.5</sub> eq	0	2.74E-02	1.12E-02	9.97E-04	0	1.75E-03
Carcinogenics	CTU <sub>h</sub>	0	4.58E-07	1.62E-07	7.70E-09	0	5.59E-09
Non-carcinogenics	CTU <sub>h</sub>	0	3.07E-06	1.35E-06	1.71E-07	0	1.34E-07
Additional envir	onmental infor	mati	on				
Impact category	Unit						
Fossil fuel depletion	MJ surplus	0	7.52E+01	9.03E+01	5.58E+00	0	5.19E+00
Ecotoxicity	CTU <sub>e</sub>	0	85.9%	11.0%	2.2%	0%	0.9%
References				_	ring systems		

### ISO 21930:2017, "Sustainability in Building Construction — Environmental Declaration of Building Products" serves as the core PCR.

### **UL Part A: Life Cycle Assessment Calculation Rules and Report** Requirements v4.0 March, 2022. PCR review conducted by Lindita Bushi, PhD, Chair (Athena Sustainable Materials Institute), lindita.bushi@athenasmi.org; Hugues Imbeault-

**LCA Background Report** 

US-El 2.2, and Industry Data 2.0 databases.

Tétreault (Group AGECO); and Jack Geibig (Ecoform).

**Download PDF** SM Transparency Report/ EPD

or downstream of the life cycle stages declared.

UL Part B: Cladding Product Systems EPD Requirements, v2.0

White, Ph.D. (NIST); and Philip S. Mose, P.E. (MA) (Simpson Gumpertz & Heger). UL Environment General Program Instructions v2.5, March 2021 (available upon request)

SM Transparency Reports (TR) are ISO 14025 Type III environmental declarations (EPD) that

enable purchasers and users to compare the potential environmental performance of products on a life cycle basis. Environmental declarations from different programs (ISO 14025) may not be comparable. Comparison of the environmental performance of Cladding Product Systems using

April, 2021. PCR review conducted by Jim Mellentine (Thrive ESG); Christoph

LCA of StoneLite® panels (public version), Coldspring 2025. Developed using

methodologies, SimaPro Developer 9.6 modeling software, Ecoinvent v3.10,

ISO 14025, "Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and

the TRACI v2.1, CML, and Cumulative Energy Demand (LHV) impact assessment

therefore EPDs may not be used for comparability purposes when not considering the building energy use phase. Full conformance with the PCR for stone cladding allows EPD comparability only when all stages of a life cycle have been considered, when they comply with all referenced standards, use the same sub-category PCR, and use equivalent scenarios with respect to construction works. However, variations and deviations are possible. Example of variations Different LCA software and background LCI datasets may lead to differences results for upstream

EPD information shall be based on the product's use and impacts at the building level, and

## LEED BD+C: New Construction | v4.1 - LEED v4.1 Building product disclosure and optimization

Industry-wide (generic) EPD

Product-specific Type III EPD

Product-specific Type III EPD

Third-party certified type III EPD

Rating systems

performance

**Environmental product declarations** ☐ Industry-wide (generic) EPD 1 product

The intent is to reward project teams for selecting products from

LEED BD+C: New Construction | v4 - LEED v4

Building product disclosure and optimization

**Environmental product declarations** 

manufacturers who have verified improved life-cycle environmental

## **Collaborative for High Performance Schools National**

**MW C5.1 – Environmental Product Declarations** 

**Green Globes for New Construction and Sustainable** Interiors Materials and resources

NC 3.5.1.2 Path B: Prescriptive Path for Building Core and Shell

NC 3.5.2.2 and SI 4.1.2 Path B: Prescriptive Path for Interior Fit-outs

### **BREEAM New Construction 2018** Mat 02 - Environmental impacts from construction products

☐ Industry-average EPD

**Environmental Product Declarations (EPD)** 

This environmental product Reference PCR 17482 Granite West Road declaration (EPD) was externally Cold Spring, MN 56320 Regions; system boundaries (800) 328-5040 North America; Cradle to grave

Multi-product specific EPD

Product-specific EPD

SM-SPI - 20250220 - 001 Material MATERIAL HEALTH evaluation (865) 850-1883 Ø Self-declared

**LCA** 

Ø

Transparency Report (EPD)

Validity: 02/20/2025 - 02/19/2030

3rd-party reviewed

3rd-party verified

verified, according to ISO 21930:2017, ISO 14025:2006, UL Part A, and UL Part B: Cladding Product Systems by Jack Geibig, President, Ecoform.

SM Transparency Report (EPD)™ + Material Health Overview™

Ecoform, LLC 11903 Black Road, Knoxville, TN 37932

**co**form

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Public LCA

**SUMMARY** 

Functional unit; reference service 1 m<sup>2</sup> of installed panels; 75 years LCIA methodology: TRACI 2.1 LCA software; LCI database

SimaPro Developer 9.6; ecoinvent v3.10, US-EI 2.2, Industry data 2.0

In accordance with ISO 14044 and the reference PCR, this life cycle assessment was conducted by

Sustainable Minds and reviewed by Jack Geibig, President, Ecoform.

Sustainable Minds

## LCA results & interpretation

COLDSPRING

Porcelain panels

**StoneLite®** 

## Scope and summary

○ Cradle to gate ○ Cradle to gate with options **② Cradle to grave** 

### **Application** Porcelain cladding is applied to a building's exterior to separate it from the

natural environment and provide an outer layer to the building. It not only provides protection from the weather elements but also a durable, aesthetically pleasing building appearance. StoneLite® porcelain panels are crafted by bonding a thin layer of porcelain to a durable aluminum honeycomb core. The porcelain veneer maintains the authentic appearance and texture, while the aluminum honeycomb core offers a high strength-to-weight ratio, enabling the panel to absorb and evenly distribute impact forces. These features make StoneLite® panels a superior choice for both interior and exterior applications where aesthetics, strength, and efficiency are essential.

### **Functional unit** One square meter of installed StoneLite® porcelain panels over the building's

estimated service life of 75 years. The installed panels, including accessories and other materials, weigh 19.9 kg and have a reference service life of 75 years when installed per the manufacturer's instructions. Default installation, packaging, and disposal scenarios

## measurements so that at the installation site, minimal cuts are required. As

recycled, 24.0% landfilled, 1.7% incinerated).

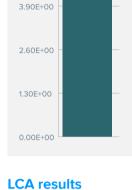
StoneLite® panels are cut to size based on customer-provided field

confirmed by an installer, approximately 1% of panels are disposed (23.95%  $\,$ landfilled, 1.67% incinerated, and the remainder recycled). 0.62 kg of masonry connectors are needed per functional unit. After installation is complete, lumber and foam packaging (67.16% landfilled, 15.70% incinerated, and the remainder recycled) and plastic packaging (69.44% landfilled, 16.93% incinerated, and the remainder recycled) are transported 100km via truck to the disposal site. After installation, the panels are not expected to require cleaning, repair, or other activities over their 75-year service life. At the end of life, the panels are

Material composition by wt% PART MATERIAL Panel Porcelain facing 55-65%

manually removed and transported 100km via truck to final disposal (74.4%

Panel	Pre-impregnated fiberglass cloth ski	ins 5-8%				
Panel	Steel attachment plate	5-8%				
Panel	Aluminum honeycomb core	3-5%				
Panel	Bonding putty	3-5%				
Panel	Epoxies and hardeners	3-5%				
Panel	Fiberglass fabric	<2%				
Packaging	Lumber packaging	15-20%				
Packaging	Foam packaging	<1%				
Total impacts by life cycle stage [mPts/func unit]						
6.50E+00 LIFE CYCLE STAGE MPTS/FUNC. UNI						



5.20E+00

1.56E-01 Construction **End of life** 1.38E-01 Total impacts = 6.46E+00 mPts

Raw material acquistion

Manufacturing

RAW MATERIAL

ACQUISITION (X) A1 Raw material

Manufacturing of

purchased

6.37E+01

5.40E-06

2.24E-01

3.13E-02

4.14E+00

2.03E+00

(X) A3

### All life cycle stages

What's causing the greatest impacts

### For StoneLite® porcelain panels, the production stage (A1-A3) dominates the life cycle impacts, which accounts for over "88% of the total

environmental impacts across all impact categories. Raw material acquisition and preprocessing, transportation of porcelain to the facility, and electricity used during manufacturing are the primary contributors in that stage. The impacts from distribution to installation sites, installation and packaging waste, and disposal at the end of life account for the remainder of Raw material acquisition

substantial impact on six impact categories: smog formation, acidification, carcinogenic effects, non-carcinogenic effects, respiratory effects, and ecotoxicity. These impacts mainly arise from upstream production of porcelain sheets, honeycomb cores, pre-impregnated fiberglass cloth skins materials, and attachment plates. Impacts during transportation (A2) stem from the use of trucks to deliver raw materials to the manufacturing site, with the porcelain sheets contributing the

Raw materials extraction and upstream processing (A1) has the most

most. Manufacturing The manufacturing stage (A3) is the largest contributor in three key impact

categories: global warming, eutrophication, and fossil fuel depletion. The primary drivers of these impacts are the consumption of electricity and propane for various manufacturing operations within the production facility. Construction and use The distribution (A4) of panels to the installation site and activities during

### installation (A5) contribute about equally to the construction and use (B) phases. Transportation of the panels via truck is most impactful on ozone

impactful on the global warming, smog, and non-carcinogenics impact categories. Since the panels are expected to last the life of the building without any additional activities such as maintenance, replacement, or repair, there were no impacts in the use phase.

depletion, and the disposal of packaging and installation waste is more

End of life The transportation to disposal (C2) via truck dominates end-of-life impacts for most impact categories. Final product disposal (C4) contributes more to

the eutrophication and carcinogenics impact categories in this phase.

## **Embodied carbon**

Embodied carbon can be defined as the cradle-to-gate (A1-A3) global warming potential impacts. The total embodied carbon per functional unit of StoneLite® porcelain panels is 1.18E+02 kg CO<sub>2</sub>-eq per functional unit.

## December 2023 from the Marble Falls, TX manufacturing facility.

Manufacturing data

How we're making it greener Coldspring is focused on designing solutions for sustainable cladding. From exterior hardscape and cladding to interior design elements, natural

Coldspring fabrication data covers a reporting period of January 2021 -

At Coldspring, we offer end-to-end solutions and the highest-quality porcelain, giving you peace of mind that the finished product will stay intact and looking great far into the future. By using naturally occurring

stone provides quality and durability that other materials cannot match.

materials in our cladding solutions, we minimize the amount of additional processing needed to create an environment-conscious product See how we make it greener

**END OF LIFE** 

(X) C1

Waste

disposal.

3.19E+00

4.89E-07

1.37E-02

3.35E-03

½ product

1 product

1 product

2 points

.5 points

.75 points

1 point

1.5 products

transportation to

Truck transportation

to building site.

4.18E+00

4.61E-07

1.26E-02

1.41E-03

Rating systems

performance.

N/A

0

0

0

0

## LIFE CYCLE STAGE

Impacts per 1 square meter of installed	4.14E+00 mPts	2.03E+00 mPts	1.56E-01 mPts	0 mPts	1.38E-01 mPts
<b>5M Single Score</b> Learn about SM Singl	e Score results				
boundary (MND).				(X) B7 Operational water use	
have no associated activities.  *Module D is excluded from this system				(X) B6 Operational energy use	
Included (X)   Excluded (MND)* Stages B1-B7, C1, and C3 though included,				(X) B5 Refurbishment	
Information modules:				(X) B4 Replacement	(X) C4 Disposal
				(X) B3 Repair	(X) C3 Waste processing
	(X) A2 Upstream transportation		(X) A5 Installation	(X) B2 Maintenance	(X) C2 Waste Transportation
	(X) A1 Raw material supply	(X) A3 Manufacturing	(X) A4 Distribution	(X) B1 Use	(X) C1 Deconstruction

### Materials or processes contributing >20% components and to total impacts in each life cycle stage upstream transport

Unit

kg CO<sub>2</sub> eq

kg CFC-11 eq

StoneLite® porcelain panels

Ecological damage					
LIFE CYCLE STAGE	RAW MATERIAL ACQUISITION	MANUFACTURING	CONSTRUCTION	USE	END OF LIFE
TRACI v2.1 results per functional	unit				
	of porcelain.	manufacturing.			disposal.

consumption during

Electricity and

propane

5.42E+01

1.54E-06

1.48E-01

2.66E-02

### **Acidification** kg SO₂ eq Eutrophication kg N eq

Impact category

**Global warming** 

**Ozone depletion** 

U	Human health damage
<b>•</b>	Additional environmental information
R	eferences

### the TRACI v2.1, CML, and Cumulative Energy Demand (LHV) impact assessment methodologies, SimaPro Developer 9.6 modeling software, Ecoinvent v3.10, US-EI 2.2, and Industry Data 2.0 databases.

**LCA Background Report** 

### rules for environmental product declarations of construction products and services"

Declaration of Building Products" serves as the core PCR. **UL Part A: Life Cycle Assessment Calculation Rules and Report** March, 2022. PCR review conducted by Lindita Bushi, PhD, Chair (Athena

Sustainable Materials Institute), lindita.bushi@athenasmi.org; Hugues Imbeault-

LCA of StoneLite® panels (public version), Coldspring 2025. Developed using

ISO 14025, "Sustainability in buildings and civil engineering works -- Core

ISO 21930:2017, "Sustainability in Building Construction — Environmental

April, 2021. PCR review conducted by Jim Mellentine (Thrive ESG); Christoph White, Ph.D. (NIST); and Philip S. Mose, P.E. (MA) (Simpson Gumpertz & Heger).

UL Environment General Program Instructions v2.5, March 2021 (available

SM Transparency Reports (TR) are ISO 14025 Type III environmental declarations (EPD) that

 $\ensuremath{\mathsf{EPD}}$  information shall be based on the product's use and impacts at the building level, and therefore EPDs may not be used for comparability purposes when not considering the building

enable purchasers and users to compare the potential environmental performance of products on a life cycle basis. Environmental declarations from different programs (ISO 14025) may not be mparable. Comparison of the environmental performance of Cladding Product Systems using

upon request) **Download PDF** SM Transparency Report/ EPD

UL Part B: Cladding Product Systems EPD Requirements, v2.0

Tétreault (Group AGECO); and Jack Geibig (Ecoform).

energy use phase. Full conformance with the PCR for stone cladding allows EPD comparability only when all stages of a life cycle have been considered, when they comply with all referenced standards, use the same sub-category PCR, and use equivalent scenarios with respect to construction works. However, variations and deviations are possible. Example of variations: Different LCA software and background LCI datasets may lead to differences results for upstream

or downstream of the life cycle stages declared.

## Industry-wide (generic) EPD

Product-specific Type III EPD

Industry-wide (generic) EPD

Product-specific Type III EPD

Third-party certified type III EPD

Materials and resources

LEED BD+C: New Construction | v4.1 - LEED v4.1

The intent is to reward project teams for selecting products from

LEED BD+C: New Construction | v4 - LEED v4

Building product disclosure and optimization

**Environmental product declarations** 

manufacturers who have verified improved life-cycle environmental

**Environmental product declarations** 

Building product disclosure and optimization

Collaborative for High Performance Schools National Criteria **MW C5.1 – Environmental Product Declarations** 

**Green Globes for New Construction and Sustainable Interiors** 

### NC 3.5.1.2 Path B: Prescriptive Path for Building Core and Shell NC 3.5.2.2 and SI 4.1.2 Path B: Prescriptive Path for Interior Fit-outs

**BREEAM New Construction 2018** Mat 02 - Environmental impacts from construction products

**Environmental Product Declarations (EPD)** 

☐ Industry-average EPD Multi-product specific EPD

Product-specific EPD

Contact us

(800) 328-5040

Road

320

SM Transp	parency R	eport (EPD)™ + Material Heal	lth Overview™ SUMMARY	Coldspring
rty reviewed	<b>©</b>	This environmental product declaration (EPD) was externally	Reference PCR UL Part B: Cladding Product Systems	17482 Granite West F Cold Spring, MN 563

Material **MATERIAL HEALTH** evaluation (865) 850-1883 Self-declared

Transparency Report (EPD)

Validity: 02/20/2025 - 02/19/2030

SM-SPI - 20250220 - 001

3rd-party reviewed

3rd-party verified

verified, according to ISO 21930:2017, ISO 14025:2006, UL Part A, and UL Part B: Cladding Product Systems by Jack Geibig, President, Ecoform. Ecoform, LLC 11903 Black Road, Knoxville, TN 37932

Functional unit; reference service

Regions; system boundaries

North America; Cradle to grave

1 m<sup>2</sup> of installed panels; 75 years

LCIA methodology: TRACI 2.1 LCA software; LCI database SimaPro Developer 9.6; ecoinvent

v3.10, US-El 2.2, Industry data 2.0

Jack Geibig, President, Ecoform.

Public LCA In accordance with ISO 14044 and the reference PCR, this life cycle assessment was conducted by Sustainable Minds and reviewed by

# cotorm

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**StoneLite®** 

## EPD additional content

SM Transparency Catalog ► Coldspring ► StoneLite®

Scenarios and additional technical information

Waste disposal

Assumed quality of work

Available product finishes

purposes."

1.67E-06

5.95E+01

1.79E+00

1.65E-01

2.82E-02

1.63E-07

1.35E-06

1.12E-02

7.16E+00

3.23E-07

1.62E+00

1.33E-01

5.07E-03

6.82E-04

6.72E-10

6.08E-08

3.18E-04

8.82E-01

0

0

0

0

2.17E+01

1.32E-07

2.54E+00

1.67E-01

7.48E-03

7.12E-04

6.96E-09

1.04E-07

6.45E-04

4.44E-01

9.85E-04

2.76E+01

0

0

0

4.76E-07

2.37E+00

3.85E-01

1.31E-02

1.34E-03

6.78E-10

1.13E-07

1.53E-03

3.05E-01

3.55E-09

7.75E-01

6.91E-03

3.49E-04

1.98E-03

4.83E-09

6.48E-09

3.04E-05

2.40E-01

0

0

0

0

0

4.87E-02

4 54F-01

8.05E-06

1.23E+02

6.34E+00

4.03E-01

6.30E-02

5.51E-07

4.64E-06

4.15E-02

6.25E+01

9.95E-02

1.72E+03

1.30E+02

0

0

0

0

LCIA results, resource use, output and waste flows, and carbon emissions & removals per functional unit

8.06E-07

3.28E+01

3.65E-07

2.06E-06

2.31E-02

3.94E+01

4.05E+01

2.34E+01

3.46E-01

2.37E+01

4.56E+02

9.85E-02

4.56E+02

0

0

0

4.63E-06

2.39E+01

1.91E+00

7.30E-02

9.75E-03

1.00E-08

9.42E-07

4.73E-03

1.41E+01

4.57E+01

5.24E-01

5.24E-01

3.20E+02

3.20E+02

0

0

0

0

8.59E+02

0

0

0

0

0

**Data** 

### Background This product-specific plant-specific declaration was created by

data. Secondary data sources include those available in the ecoinvent v3.10, US-EI 2.2, and Industry data 2.0 databases. Allocation Since manufacturing resources other than electricity were used across all types of StoneLite® panels, and not dedicated solely to specific panel types, they were evenly distributed based on production area. The annual manufacturing resource use was calculated relative to the annual production area and further weighted according to each year's production levels, providing

a comprehensive, area-based annual resource allocation. Electricity

collecting production and supply chain data for Coldspring's manufacturing

facility in Marble Falls, TX. Upstream data for stone quarrying operations was

adopted from Natural Stone Institute's (NSI) industry-wide stone cladding LCA published in November 2022. All unit processes were modeled using primary

measurement varied due to specific equipment requirements, and porcelain processing was estimated to need approximately 15% less electricity than stone-based processing. The total amount of electricity consumed each year was therefore calculated separately for natural stone panels and porcelain panels. No recycled materials are used in the product system, and there were no co-products manufactured. Cut-off criteria for the inclusion of mass and energy flows are 1% of renewable primary resource (energy) usage, 1% nonrenewable primary resource (energy) usage, 1% of the total mass input of that unit process, and 1% of environmental

impacts. The total of neglected input flows per module does not exceed 5% of energy usage, mass, and environmental impacts. The only exceptions to these criteria are substances with hazardous and toxic properties, which must be listed even when the given process unit is under the cut-off criterion of 1% of the total mass. In the absence of suitable proxy data sets, some ingredients making up the epoxies and bonding putties were excluded; however, the cumulative mass of excluded ingredients is less than 1% of the product system. No known energy flow has been omitted in this study, and the excluded ingredients are expected to have an insignificant effect on environmental impacts.

All known hazardous wastes released from the manufacturing facility have

been included in this study, including methyl ethyl ketone which is used for cleaning purposes and is not a part of the final product. No carbonation or

panels. Biogenic carbon is included in reported results.

calcination is expected to occur during the production and manufacture of the

Quality Temporal and technological representativeness are considered to be

high. Geographical representativeness is considered to be high. All relevant process steps for the product system were considered and modeled. The process chain is considered sufficiently complete with regards to the goal and scope of this study. The product system was checked for mass balance and completeness of the inventory. Capital goods were excluded since they are assumed not to significantly affect the conclusions of the LCA. Otherwise, no data were

knowingly omitted. For more information on data quality, see the LCA

Manufacturing [A3] celain brating,

desired size

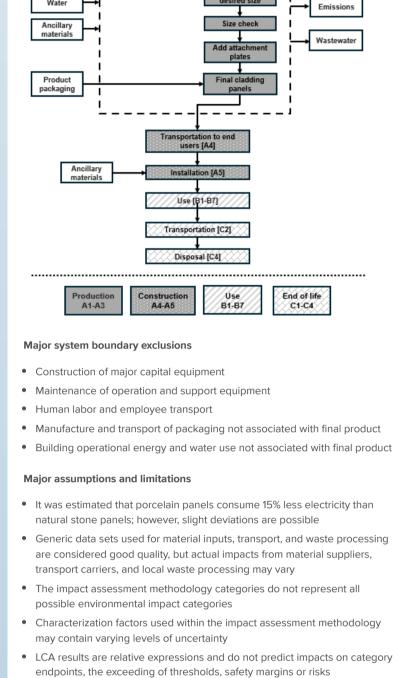
### natural gas Water

Electricity,

background report.

erial supply [A1]

Flow diagram



## **LCIA** results

Additional environmental information

Renewable primary energy used as

Renewable primary resources with

energy content used as material Total use of renewable primary

resources with energy content Non-renewable primary resources

used as an energy carrier (fuel) Non-renewable primary resources with

energy content used as material Total use of non-renewable primary

resources with energy content

Renewable secondary fuels

Non-renewable secondary fuels

Calcination carbon emissions

Carbonation carbon removals

production processes

**LCIA** results

Ozone depletion

Global warming

Acidification

Eutrophication

Carcinogenics

Ecotoxicity

Non-carcinogenics

Respiratory effects

Additional environmental information

Carbon Emissions from Combustion of

Carbon Emissions from Combustion of Waste from Non-Renewable Sources

StoneLite® marble panels: results per functional unit

Waste from Non-Renewable Sources

used in Production Processes

used in Production Processes

kg CO2

kg CO2

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

Smog

Carbon emissions from combustion of waste from renewable sources used in

Carbon emissions from combustion of

StoneLite® granite panels: results per functional unit

waste from non-renewable sources

used in production processes

Secondary materials

Ozone depletion

Global warming

Carcinogenics

**Ecotoxicity** 

Non-carcinogenics

Respiratory effects

Fossil fuel depletion

energy carrier (fuel)

Resource use indicators

Smog kg O3 eq 1.95E+00 Acidification kg SO2 eq 1.39E-01 Eutrophication kg N eq 2.03E-02

StoneLite® limestone panels: results per functional unit

Modules B1-B7, C1, and C2 each have a reported value of zero. Module D is not declared.

kg CFC-11 eq

kg CO2 eq

CTUh

CTUh

CTUe

MJ surplus

MJ, LHV

kg CO2

kg CO2

kg CO2

kg CO2

kg CFC-11 eq

kg CO2 eq

kg O3 eq

kg N eq

CTUh

**CTUh** 

CTLIA

kg SO2 eq

kg PM2.5 eq

0

0

0

0

8.55E-07

3.37E+01

2.07E+00

1.44E-01

2.04E-02

3.97E-07

2.14E-06

2.35E-02

0

0

0

0

5.77E-06

2.96E+01

2.37E+00

9.07E-02

1.21E-02

1.24E-08

1.16E-06

5.84E-03

4 07F+01 1 72F+01

0

0

0

0

1.67E-06

5.92E+01

1.80E+00

1.67E-01

2.69E-02

1.62E-07

1.35E-06

1.13E-02

0

0

0

0

3.63E-07

1.82E+00

1.50E-01

5.71E-03

7.68E-04

7.56E-10

6.84E-08

3.58E-04

0

0

0

0

1.33E-07

2.54E+00

1.68E-01

7.50E-03

7.14E-04

6.96E-09

1.04E-07

6.48E-04

717E+00 9 93E-01 4 45E-01 3 52E-01 2 40E-01

0

0

0

0

5.50E-07

2.74E+00

4.45E-01

1.51E-02

1.55E-03

7.83E-10

1.31E-07

1.76E-03

0

0

0

0

3.86E-09

7.77E-01

7.44E-03

3.67E-04

1.98E-03

4.83E-09

6.50E-09

3.27E-05

0

0

0

0

9.34E-06

1.30E+02

7.02E+00

4.31E-01

6.44E-02

5.85E-07

4.96E-06

4.34E-02

6 70F+01

kg

kg PM2.5 eq

### Fuel type Diesel Vehicle type Lorry (16-32 metric ton)

Transport to the building site [A4]

EPD additional content

			,		
Liters of fuel	0.10	0.11	0.11	0.10	l/100 km
Avg distance from facility to installation site	500				km
Capacity utilization (mass based)	100				%
Gross density	766	882	858	782	kg/m³
Capacity utilization volume factor	1				
Installation into the building [A5	5]				
Installation scrap rate	1				%
Ancillary materials: Masonry connectors	0.62				kg
Product loss per functional unit	0.19	0.22	0.21	0.19	kg
Waste materials at the					

Product loss per functional unit	0.19	0.22	0.21	0.19	kg
Waste materials at the construction site before waste processing (installation scraps, and packaging waste)	4.78	4.81	4.8	4.78	kg
Output materials from on-site waste processing	0				kg
Mass of wood (lumber) packaging waste	4.44				kg
Mass of plastic foam packaging waste	0.15				kg
Biogenic carbon contained in packaging	8.15				kg CO2
Direct emissions to ambient air, soil, and water	0				kg
VOC emissions	0				μg/m3
Note: All other A5 parameters (ne resources, electricity consumption applicable.					
Use parameters [B1-B7]					
Reference service life (RSL)	75		years		
Estimated service life (ESL)	75		years		
Declared product properties	Refer t		ct techni	cal inforr	nation'
Design application parameters	ASTM combu Modifie	D-2015 F Istion: 115 ed ASTM	me Sprea Potential 50 BTU/II I E-108 Fi tes fire ex	heat of b maximu ire evalua	um

maximum

ASTM E 283 Air infiltration: 0.06 cfm/ft2

Panel is expected to last the life of the

Available finishes are honed, polished,

finishes are applicable for all types of

sanded, thermal, brushed, bush hammered, and water jet. Not all

LCIA impact factors required by the PCR are global warming, ozone

depletion, acidification, eutrophication, smog, and fossil fuel depletion; "These

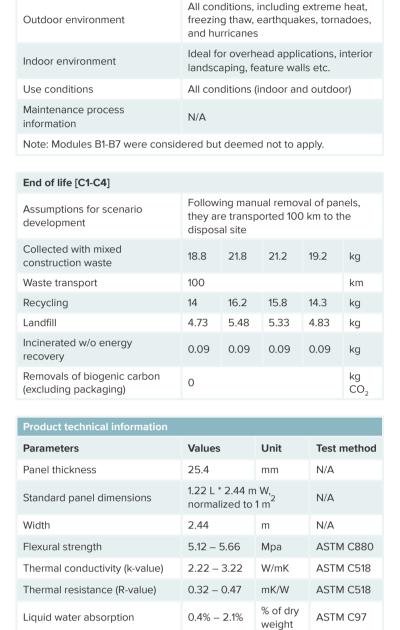
and defined and LCA should continue making advances in their development.

six impact categories are globally deemed mature enough to be included in

Type III environmental declarations. Other categories are being developed

However, the EPD users shall not use additional measures for comparative

building when installed per manufacturer's instructions



1.86E+02 9.03E+01 3.10E+00 2.16E+00 4.57E+00 5.06E-02 1.59E+02 6.26E-01 1.84E+02 3.53E-02 5.14E-02 1.72E-02 3.49E-01 0 0 3.46E-03 0 0 3.53E-02 1.59E+02 5.14E-02 1.72E-02 1.84E+02 6.29E-01 8.59E+02 3.20E+01 4.54E-01 1.72E+03 2.17E+01 2.76E+01

0

0

0

0

3.20E+01

### Recovered energy MJ, LHV 0 0 0 0 0 0 Use of net fresh water resources 1.74E+01 m3 1.11E+02 1.53E+00 1.01E-01 1.62E-01 1.47E-01

Abiotic depletion potential for fossil resources	MJ, LHV	4.15E+02	3.20E+01	2.40E+01	6.12E+01	1.60E+00	2.60E+00	2.37E+00	5.39E+02
Output flows and waste category indica	itors								
Hazardous waste disposed	kg	2.65E-04	0	0	0	0	0	0	2.65E-04
Non-hazardous waste disposed	kg	1.12E-02	0	1.09E+01	0	3.13E+00	0	4.73E+00	1.87E+01
High-level radioactive waste, conditioned, to final repository	kg	1.02E-04	5.58E-06	3.47E-04	3.82E-07	2.39E-07	5.55E-07	1.85E-07	4.55E-04
Intermediate- and low-level radioactive waste, conditioned, to final repository	kg	2.44E-04	1.24E-05	7.74E-04	8.51E-07	5.32E-07	1.24E-06	4.13E-07	1.03E-03
Components for re-use	kg	0	0	0	0	0	0	0	0
Materials for recycling	kg	4.88E+01	0	1.01E+01	0	9.23E-01	0	1.40E+01	7.38E+01
Materials for energy recovery	kg	0	0	4.39E-01	0	7.23E-01	0	9.29E-02	1.25E+00
Exported energy	MJ, LHV	0	0	0	0	0	0	0	0
Carbon emissions and removals									
Biogenic carbon removal from product	kg CO2	0	0	0	0	0	0	0	0
Biogenic carbon emission from product	kg CO2	0	0	0	0	0	0	0	0
Biogenic carbon removal from packaging	kg CO2	0	0	8.15E+00	0	0	0	0	8.15E+00
Biogenic carbon emission from packaging	kg CO2	0	0	0	0	8.15E+00	0	0	8.15E+00
Biogenic carbon emission from combustion of waste from renewable sources used in production processes	kg CO2	0	0	0	0	0	0	0	0

Ecotoxicity	CTUe	4.07E+01	1.72E+01	7.17E+00	9.93E-01	4.45E-01	3.52E-01	2.40E-01	6.70E+01
Fossil fuel depletion	MJ surplus	4.20E+01	5.66E+01	9.05E+01	3.49E+00	2.16E+00	5.28E+00	5.43E-02	2.00E+02
Resource use indicators									
Renewable primary energy used as energy carrier (fuel)	MJ, LHV	2.41E+01	6.48E-01	1.59E+02	3.97E-02	6.25E-01	5.94E-02	1.73E-02	1.85E+02
Renewable primary resources with energy content used as material	MJ, LHV	4.22E-01	0	0	0	4.22E-03	0	0	4.26E-01
Total use of renewable primary resources with energy content	MJ, LHV	2.45E+01	6.48E-01	1.59E+02	3.97E-02	6.29E-01	5.94E-02	1.73E-02	1.85E+02
Non-renewable primary resources used as an energy carrier (fuel)	MJ, LHV	4.71E+02	3.96E+02	8.63E+02	2.44E+01	2.77E+01	3.69E+01	4.80E-01	1.82E+03
Non-renewable primary resources with energy content used as material	MJ, LHV	1.20E-01	0	0	0	1.20E-03	0	0	1.21E-01
Total use of non-renewable primary resources with energy content	MJ, LHV	4.72E+02	3.96E+02	8.63E+02	2.44E+01	2.77E+01	3.69E+01	4.80E-01	1.82E+03
Secondary materials	kg	0	0	0	0	0	0	0	0
Renewable secondary fuels	MJ, LHV	0	0	0	0	0	0	0	0
Non-renewable secondary fuels	MJ, LHV	0	0	0	0	0	0	0	0
Recovered energy	MJ, LHV	0	0	0	0	0	0	0	0
Use of net fresh water resources	m3	1.14E+02	1.89E+00	1.73E+01	1.14E-01	1.62E-01	1.70E-01	4.89E-02	1.34E+02
Abiotic depletion potential for fossil resources	MJ, LHV	4.15E+02	3.20E+01	2.96E+01	6.08E+01	1.81E+00	2.60E+00	2.74E+00	5.45E+02
Output flows and waste category indica	ntors								
Hazardous waste disposed	kg	3.24E-04	0	0	0	0	0	0	3.24E-04
Non-hazardous waste disposed	kg	1.37E-02	0	1.09E+01	0	3.14E+00	0	5.48E+00	1.95E+01
High-level radioactive waste, conditioned, to final repository	kg	1.13E-04	6.91E-06	3.47E-04	4.29E-07	2.40E-07	6.42E-07	1.86E-07	4.68E-04
Intermediate- and low-level radioactive waste, conditioned, to final repository	kg	2.64E-04	1.54E-05	7.74E-04	9.57E-07	5.34E-07	1.43E-06	4.14E-07	1.06E-03
Components for re-use	kg	0	0	0	0	0	0	0	0
Materials for recycling	kg	5.96E+01	0	1.23E+01	0	9.44E-01	0	1.62E+01	8.90E+01
Materials for energy recovery	kg	0	0	4.39E-01	0	7.23E-01	0	9.29E-02	1.25E+00
Exported energy	MJ, LHV	0	0	0	0	0	0	0	0
Carbon emissions and removals									
Biogenic Carbon Removal from Product	kg CO2	0	0	0	0	0	0	0	0
Biogenic Carbon Emission from Product	kg CO2	0	0	0	0	0	0	0	0
Biogenic Carbon Removal from Packaging	kg CO2	0	0	8.15E+00	0	0	0	0	8.15E+00
Biogenic Carbon Emission from Packaging	kg CO2	0	0	0	0	8.15E+00	0	0	8.15E+00
Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes	kg CO2	0	0	0	0	0	0	0	0
Calcination Carbon Emissions	kg CO2	0	0	0	0	0	0	0	0
Carbonation Carbon Removals	kg CO2	0	0	0	0	0	0	0	0

LCIA results									
Ozone depletion	kg CFC-11 eq	9.06E-07	2.85E-06	1.67E-06	3.55E-07	1.33E-07	5.35E-07	3.80E-09	6.45E-06
Global warming	kg CO2 eq	3.66E+01	1.50E+01	5.91E+01	1.78E+00	2.54E+00	2.67E+00	7.77E-01	1.18E+02
Smog	kg O3 eq	2.91E+00	1.17E+00	1.79E+00	1.47E-01	1.68E-01	4.33E-01	7.33E-03	6.62E+0
Acidification	kg SO2 eq	1.73E-01	4.50E-02	1.65E-01	5.58E-03	7.50E-03	1.47E-02	3.63E-04	4.11E-01
Eutrophication	kg N eq	2.24E-02	5.99E-03	2.71E-02	7.50E-04	7.13E-04	1.51E-03	1.98E-03	6.05E-0
Carcinogenics	CTUh	4.51E-07	6.29E-09	1.62E-07	7.39E-10	6.96E-09	7.62E-10	4.83E-09	6.33E-0
Non-carcinogenics	CTUh	2.46E-06	6.07E-07	1.35E-06	6.69E-08	1.04E-07	1.27E-07	6.49E-09	4.72E-0
Respiratory effects	kg PM2.5 eq	2.44E-02	2.97E-03	1.12E-02	3.50E-04	6.47E-04	1.72E-03	3.23E-05	4.13E-02
Additional environmental information									
Ecotoxicity	CTUe	4.63E+01	9.21E+00	7.10E+00	9.71E-01	4.44E-01	3.43E-01	2.40E-01	6.46E+0
Fossil fuel depletion	MJ surplus	4.66E+01	2.86E+01	9.03E+01	3.41E+00	2.16E+00	5.14E+00	5.35E-02	1.76E+0
Resource use indicators									
Renewable primary energy used as energy carrier (fuel)	MJ, LHV	3.07E+01	3.29E-01	1.59E+02	3.88E-02	6.25E-01	5.78E-02	1.72E-02	1.91E+0
Renewable primary resources with energy content used as material	MJ, LHV	4.07E-01	0	0	0	4.07E-03	0	0	4.11E-01
Total use of renewable primary resources with energy content	MJ, LHV	3.11E+01	3.29E-01	1.59E+02	3.88E-02	6.29E-01	5.78E-02	1.72E-02	1.91E+02
Non-renewable primary resources used as an energy carrier (fuel)	MJ, LHV	5.13E+02	2.00E+02	8.59E+02	2.39E+01	2.76E+01	3.60E+01	4.75E-01	1.66E+0
Non-renewable primary resources with energy content used as material	MJ, LHV	1.16E-01	0	0	0	1.16E-03	0	0	1.17E-01
Total use of non-renewable primary resources with energy content	MJ, LHV	5.13E+02	2.00E+02	8.59E+02	2.39E+01	2.76E+01	3.60E+01	4.75E-01	1.66E+0
Secondary materials	kg	0	0	0	0	0	0	0	0
Renewable secondary fuels	MJ, LHV	0	0	0	0	0	0	0	0
Non-renewable secondary fuels	MJ, LHV	0	0	0	0	0	0	0	0
Recovered energy	MJ, LHV	0	0	0	0	0	0	0	0
Use of net fresh water resources	m3	1.19E+02	9.76E-01	1.73E+01	1.11E-01	1.62E-01	1.65E-01	4.89E-02	1.38E+0
Abiotic depletion potential for fossil resources	MJ, LHV	4.15E+02	3.20E+01	1.50E+01	6.08E+01	1.77E+00	2.60E+00	2.67E+00	5.30E+0
Output flows and waste category indica	ators								
Hazardous waste disposed	kg	3.12E-04	0	0	0	0	0	0	3.12E-0
Non-hazardous waste disposed	kg	1.32E-02	0	1.09E+01	0	3.14E+00	0	5.33E+00	1.94E+0
High-level radioactive waste, conditioned, to final repository	kg	1.36E-04	3.47E-06	3.47E-04	4.20E-07	2.40E-07	6.24E-07	1.86E-07	4.88E-0
Intermediate- and low-level radioactive waste, conditioned, to final repository	kg	3.02E-04	7.75E-06	7.74E-04	9.36E-07	5.34E-07	1.39E-06	4.14E-07	1.09E-0
Components for re-use	kg	0	0	0	0	0	0	0	0
Materials for recycling	kg	5.74E+01	0	1.18E+01	0	9.39E-01	0	1.58E+01	8.60E+0
Materials for energy recovery	kg	0	0	4.39E-01	0	7.23E-01	0	9.29E-02	1.25E+0
Exported energy	MJ, LHV	0	0	0	0	0	0	0	0
Carbon emissions and removals									
Biogenic Carbon Removal from Product	kg CO2	0	0	0	0	0	0	0	0
Biogenic Carbon Emission from Product	kg CO2	0	0	0	0	0	0	0	0
Biogenic Carbon Removal from Packaging	kg CO2	0	0	8.15E+00	0	0	0	0	8.15E+0
Biogenic Carbon Emission from Packaging	kg CO2	0	0	0	0	8.15E+00	0	0	8.15E+0
Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes	kg CO2	0	0	0	0	0	0	0	0
Calcination Carbon Emissions	kg CO2	0	0	0	0	0	0	0	0
Carbonation Carbon Removals	kg CO2	0	0	0	0	0	0	0	0
Carbon Emissions from Combustion of Waste from Non-Renewable Sources used in Production Processes	kg CO2	0	0	0	0	0	0	0	0
Carbon Emissions from Combustion of Waste from Non-Renewable Sources used in Production Processes	kg CO2	0	0	0	0	0	0	0	0

Parameter	Unit	A1	A2	А3	Α4	A5	C2	C4	Total
LCIA results									
Ozone depletion	kg CFC-11 eq	9.85E-07	4.42E-06	1.54E-06	3.28E-07	1.33E-07	4.86E-07	3.59E-09	7.89E-06
Global warming	kg CO2 eq	4.09E+01	2.28E+01	5.42E+01	1.65E+00	2.54E+00	2.42E+00	7.75E-01	1.25E+0
Smog	kg O3 eq	2.02E+00	1.82E+00	1.64E+00	1.36E-01	1.67E-01	3.93E-01	6.98E-03	6.18E+0
Acidification	kg SO2 eq	1.55E-01	6.96E-02	1.48E-01	5.16E-03	7.48E-03	1.33E-02	3.51E-04	3.99E-0
Eutrophication	kg N eg	2.20E-02	9.30E-03	2.66E-02	6.94E-04	7.12E-04	1.37E-03	1.98E-03	6.27E-0
Carcinogenics	CTUh	4.03E-07	9.55E-09	1.55E-07	6.83E-10	6.96E-09	6.92E-10	4.83E-09	5.80E-0
Non-carcinogenics	CTUh	2.75E-06	9.02E-07	1.23E-06	6.18E-08	1.04E-07	1.15E-07	6.48E-09	5.17E-0
Respiratory effects	kg PM2.5 eq	1.80E-01	4.52E-03	1.03E-02	3.24E-04	6.45E-04	1.56E-03	3.07E-05	1.97E-0
Additional environmental information									
Ecotoxicity	CTUe	4.07E+01	1.35E+01	6.89E+00	8.97E-01	4.44E-01	3.11E-01	2.40E-01	6.30E+
Fossil fuel depletion	MJ surplus	5.28E+01	4.36E+01	8.27E+01	3.15E+00	2.16E+00	4.66E+00	5.11E-02	1.89E+0
Resource use indicators	·								
Renewable primary energy used as energy carrier (fuel)	MJ, LHV	2.94E+01	5.00E-01	1.50E+02	3.59E-02	6.27E-01	5.25E-02	1.72E-02	1.80E+0
Renewable primary resources with energy content used as material	MJ, LHV	2.23E-01	0	0	0	2.23E-03	0	0	2.25E-0
Total use of renewable primary resources with energy content	MJ, LHV	2.96E+01	5.00E-01	1.50E+02	3.59E-02	6.29E-01	5.25E-02	1.72E-02	1.81E+0
Non-renewable primary resources used as an energy carrier (fuel)	MJ, LHV	5.74E+02	3.06E+02	7.79E+02	2.21E+01	2.76E+01	3.26E+01	4.58E-01	1.74E+0
Non-renewable primary resources with energy content used as material	MJ, LHV	6.34E-02	0	0	0	6.34E-04	0	0	6.40E-0
Total use of non-renewable primary resources with energy content	MJ, LHV	5.74E+02	3.06E+02	7.79E+02	2.21E+01	2.76E+01	3.26E+01	4.58E-01	1.74E+0
Secondary materials	kg	0	0	0	0	0	0	0	0
Renewable secondary fuels	MJ, LHV	0	0	0	0	0	0	0	0
Non-renewable secondary fuels	MJ, LHV	0	0	0	0	0	0	0	0
Recovered energy	MJ, LHV	0	0	0	0	0	0	0	0
Use of net fresh water resources	m3	1.47E+02	1.47E+00	1.64E+01	1.03E-01	1.62E-01	1.50E-01	4.88E-02	1.65E+0
Abiotic depletion potential for fossil resources	MJ, LHV	4.16E+02	3.20E+01	2.29E+01	5.59E+01	1.63E+00	2.60E+00	2.42E+00	5.33E+
Output flows and waste category indica	ators								
Hazardous waste disposed	kg	1.71E-04	0	0	0	0	0	0	1.71E-0
Non-hazardous waste disposed	kg	7.23E-03	0	1.09E+01	0	3.13E+00	0	4.83E+00	1.88E+0
High-level radioactive waste, conditioned, to final repository	kg	1.39E-04	5.32E-06	3.04E-04	3.88E-07	2.39E-07	5.67E-07	1.85E-07	4.50E-0
Intermediate- and low-level radioactive waste, conditioned, to final repository	kg	3.44E-04	1.19E-05	6.80E-04	8.65E-07	5.32E-07	1.26E-06	4.13E-07	1.04E-0
Components for re-use	kg	0	0	0	0	0	0	0	0
Materials for recycling	kg	3.14E+01	0	0.00E+00	0	9.25E-01	0	1.43E+01	4.66E+
Materials for energy recovery	kg	0	0	4.39E-01	0	7.23E-01	0	9.29E-02	1.25E+
Exported energy	MJ, LHV	0	0	0	0	0	0	0	0
Carbon emissions and removals									
Biogenic Carbon Removal from Product	kg CO2	0	0	0	0	0	0	0	0
Biogenic Carbon Emission from Product	kg CO2	0	0	0	0	0	0	0	0
Biogenic Carbon Removal from Packaging	kg CO2	0	0	8.15E+00	0	0	0	0	8.15E+
Biogenic Carbon Emission from Packaging	kg CO2	0	0	0	0	8.15E+00	0	0	8.15E+
Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes	kg CO2	0	0	0	0	0	0	0	0
Calcination Carbon Emissions	kg CO2	0	0	0	0	0	0	0	0
Carbonation Carbon Removals	kg CO2	0	0	0	0	0	0	0	0
Carbon Emissions from Combustion of Waste from Non-Renewable Sources	kg CO2	0	0	0	0	0	0	0	0



EPD

## SM Transparency Report (EPD)™ + Material Health Overview™

kg CO2

3rd-party reviewed Transparency Report (EPD) 3rd-party verified Validity: 02/20/2025 - 02/19/2030 SM-SPI - 20250220 - 001

MATERIAL HEALTH evaluation

Self-declared

used in Production Processes

Carbon Emissions from Combustion of

LCA

Material

used in Production Processes

This environmental product declaration (EPD) was externally verified, according to ISO 21930:2017, ISO 14025:2006, UL Part A, and UL Part B: Cladding Product Systems by Jack Geibig, President, Ecoform. Ecoform, LLC

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11903 Black Road, Knoxville, TN 37932 (865) 850-1883

**SUMMARY** Reference PCR Regions; system boundaries North America; Cradle to grave Functional unit; reference service

1 m<sup>2</sup> of installed panels; 75 years LCIA methodology: TRACI 2.1 LCA software; LCI database

SimaPro Developer 9.6; ecoinvent v3.10, US-El 2.2, Industry data 2.0 Public LCA

Contact us

17482 Granite West Road

Cold Spring, MN 56320

Coldspring

(800) 328-5040

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In accordance with ISO 14044 and the reference PCR, this life cycle assessment was conducted by Sustainable Minds and reviewed by Jack Geibig, President, Ecoform.

**ECO**form

Sustainable Minds

Material health

## LCA & material health results & interpretation

**StoneLite®** 

## **Evaluation programs**

### The Health Product Declaration®

The HPD Open Standard provides a consistent, and transparent format to accurately disclose the material contents and associated hazard classifications for a building product.

### How it works

Material ingredients are screened and categorized according to the hazards that international governmental bodies and toxicology experts have associated with them, based on two listings:

- Authoritative lists maintained or recognized by government bodies
- Screening lists, which include chemicals that government bodies determined need further scrutiny, as well as chemical lists not recognized by any government body.

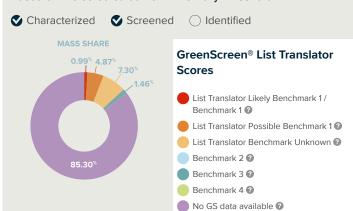
### Assessment scope and results

### Health Product Declaration®

StoneLite® Stone Panel

Inventory threshold: 1,000 ppm Full disclosure known hazards: Yes

Based on the selected content inventory threshold:



Learn about the GreenScreen® List Translator

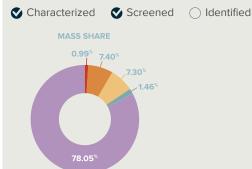
### Total VOC Content®

VOC Content data is not applicable for this product category.

### StoneLite® Porcelain Panel Inventory threshold: 1,000 ppm

Full disclosure known hazards: Yes

Based on the selected content inventory threshold:



### Total VOC Content®

VOC Content data is not applicable for this product category.

## What's in this product and why

Once the StoneLite® panels (stone and porcelain) are manufactured and installed, minimal to no exposure is expected during the normal, daily use of the product. Many of the listed hazards are only present during the manufacturing process.

Natural stone is a geologically derived material that constitutes a significant portion of stone panels. Under HPDC's special conditions policy, hazard screening is not applicable to natural stone, as it is considered to have inherently minimal human health impacts in its finished form. Being a naturally occurring material, it does not undergo significant chemical transformations during processing, and any trace elements present are typically bound within its mineral structure, limiting potential exposure risks.

In the case of porcelain panels, the porcelain mass also constitutes a significant portion of the material composition. While frits used in porcelain may exhibit human health hazards during screening, they undergo a hightemperature vitrification process that renders them insoluble and chemically stable. In the final product, any hazardous raw materials are rendered inert, minimizing human health risks during use. Additionally, porcelain's low porosity and resistance to degradation further reduce the likelihood of any chemical release over time.

In the composition of both types of StoneLite  $\ensuremath{^{\circledcirc}}$  panels, potential chemical exposure hazards are primarily associated with the manufacturing stage. Certain ingredients in resins, epoxies, and hardeners may present health warnings in their raw form. However, once these materials are fully cured and the panels are installed, they undergo chemical changes that stabilize them. As a result, under normal use conditions, the finished product is not expected to pose health hazards to customers.

### How we're making it healthier

In the case of porcelain panels, Coldspring uses porcelain with unleaded frits, eliminating lead and heavy metals that pose health risks. This reduces worker exposure and prevents harmful leaching, making the final product safer for consumers. By choosing unleaded frits, Coldspring ensures a healthier product with lower human health risks, both during production and throughout its use.

The epoxies and bonding agents used in the panels are free from isocyanates, reducing health risks associated with these chemicals. Isocyanates can trigger allergic reactions and respiratory issues. By opting for safer formulations, Coldspring protect workers during production and minimize harmful off-gassing, improving indoor air quality in spaces where the products are installed.

Coldspring opts for non-toxic adhesives and binders whenever **possible**. This choice reduces the use of volatile organic compounds (VOCs) that can degrade indoor air quality and pose long-term health risks. It enhances safety in manufacturing environments and helps create healthier living spaces by minimizing exposure to harmful chemicals, ensuring the final products are safer for end users.

See how we make it greener

## References

## Health Product Declaration®

StoneLite® Stone Panel StoneLite® Porcelain Panel

## Health Product Declaration Open Standard v2.3

The standard provides guidance to accurately disclose the material contents of a building product using a standard, consistent, and transparent format.

## **Rating systems**

✓ 1. Reporting

## LEED BD+C: New Construction | v4 - LEED v4

Building product disclosure and optimization **Material Ingredients** 

2. Optimization

Credit value options

1 product each

3. Supply Chain Optimization

1 product each

LEED BD+C: New Construction | v4.1 - LEED v4.1

Materials and resources

**Material Ingredients** Credit value options

✓ 1. Reporting 2. Optimization 3. Supply Chain Optimization

Living Building Challenge

Materials petals imperatives

WELL Building Standard®

**Air and Mind Features** X07 Materials Transparency

Collaborative for High Performance Schools National Criteria

 $\bigcirc$  10. Red List Free  $\bigcirc$  12. Responsible Industry  $\bigcirc$  13. Living Economy Sourcing

**EQ C7.1 Material Health Disclosures** 

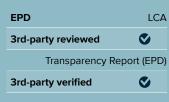
Performance Approach

2 points

2 points

Prescriptive Approach

## SM Transparency Report (EPD)™ + Material Health Overview™



Validity: 02/20/2025 - 02/19/2030 SM-SPI - 20250220 - 001 Material

**MATERIAL HEALTH** evaluation Self-declared

declaration (EPD) was externally verified, according to ISO 21930:2017, ISO 14025:2006, UL Part A, and UL Part B: Cladding Product Systems by Jack Geibig, President, Ecoform.

This environmental product

Ecoform, LLC

Knoxville, TN 37932

11903 Black Road,

(865) 850-1883



### **SUMMARY** Reference PCR

Regions; system boundaries

North America; Cradle to grave

Functional unit; reference service 1 m<sup>2</sup> of installed panels; 75 years

LCIA methodology: TRACI 2.1

LCA software; LCI database SimaPro Developer 9.6; ecoinvent v3.10, US-EI 2.2, Industry data 2.0

**Public LCA** 

In accordance with ISO 14044 and the reference PCR, this life cycle assessment was conducted by Sustainable Minds and reviewed by

Jack Geibig, President, Ecoform.

### 17482 Granite West Road Cold Spring, MN 56320

Coldspring

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### How we make it greener

Sustainable Minds

StoneLite<sup>®</sup>

Expand all

### RAW MATERIAL ACQUISITION



### Lightweight

StoneLite® panels are 80% lighter than traditional stone cladding, with a panel averaging 3-4 lb/sqft as compared to the 20-30 lb/sqft of a 3cm natural stone slab. In addition to being lightweight, the impact strength of StoneLite® panels is 60x greater than that of 3cm stone.

Substantial reductions in the structure and foundations of a building are possible with this reduced weight, which can have a profound effect on the amount of steel and concrete required.

### TRANSPORTATION



### Local sourcing

Coldspring offers locally sourced stone as a finishing option for StoneLite® panels, minimizing the amount of transportation necessary to transfer stone from the quarry to its fabrication facility. This cuts down on emissions from truck transportation, leading to less impact on the environment.

### MANUFACTURING



### Water savings

Water usage in the manufacturing facility operates within a closedloop system, where water is continuously reclaimed and recirculated through four sets of retention ponds for treatment.

### Waste reclamation

A methyl ethyl ketone reclamation system was installed in Coldspring's fabrication facility in March of 2024, which is expected to greatly reduce the amount of hazardous waste generated and treated.

### INSTALLATION



### Speed and ease of installation

StoneLite® panels are cut to size based on customer-provided field measurements, minimizing installation waste. The precut panels allow for limited or no crane time or field cuts, resulting in less waste going to landfill and incineration.



### SM Transparency Report (EPD)™ + Material Health Overview™

This environmental product

verified, according to ISO

President, Ecoform.

Ecoform, LLC

11903 Black Road,

(865) 850-1883

Knoxville, TN 37932

declaration (EPD) was externally

21930:2017, ISO 14025:2006, UL

Part A. and UL Part B: Cladding

Product Systems by Jack Geibig,

EPD 3rd-party reviewed LCA

Transparency Report (EPD)

3rd-party verified

Validity: 02/20/2025 - 02/19/2030 SM-SPI - 20250220 - 001

MATERIAL HEALTH

Material

Self-declared

**Ø** 

coform

### **SUMMARY**

### Reference PCR

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### Coldspring

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