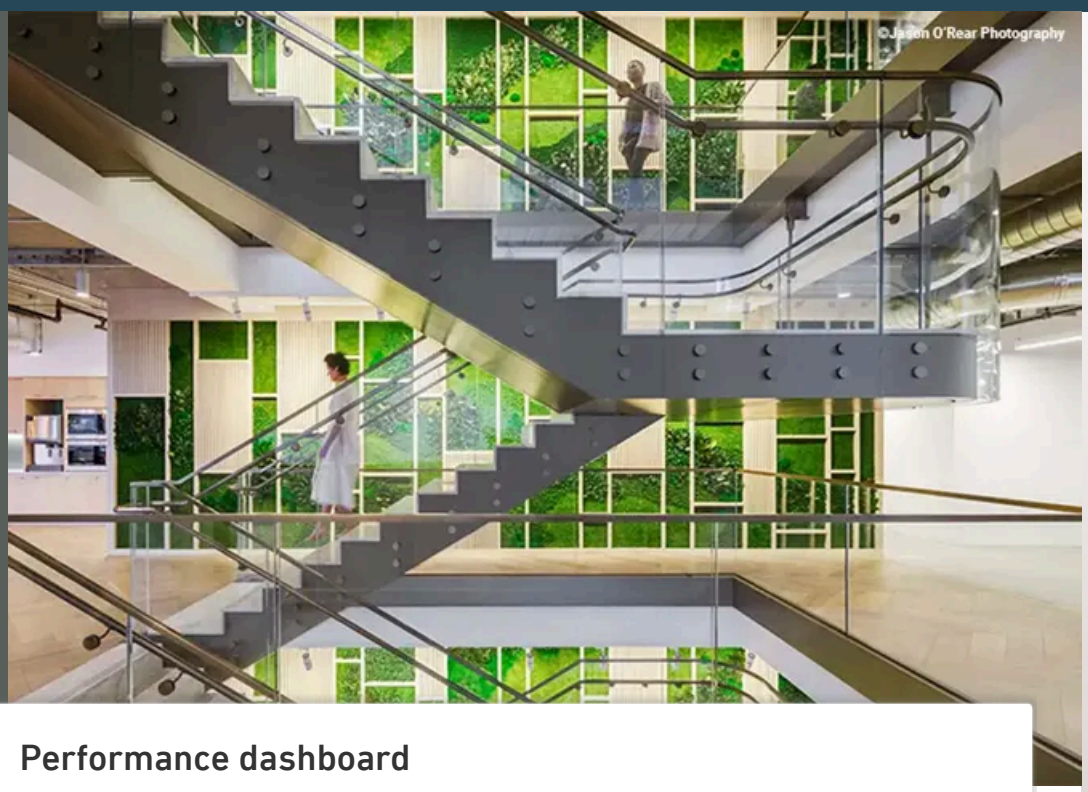
garden on the wall®
THE ART OF PRESERVED NATURE

Preserved Wall Gardens

Garden on the Wall® is a no-maintenance plant art system crafted with all-natural preserved moss and plant species, offering a wide variety of benefits to occupants and improving their well-being in subtle, subliminal ways. We are dedicated to re-establishing the human-nature connection by helping designers curate human-centric spaces with preserved botanical installations.





Performance dashboard

Features & functionality

Meticulously designed to harmonize with the client's unique space

Feature a clean, manicured appearance, free from visible seams between moss sheets or garden panels, and without any patchy or antiquated floral aesthetics

Lifespan of 10-12 years, extendable to over 20 years through our rejuvenation program

Zero water consumption - no irrigation systems, no water waste

Zero energy requirements - no grow lights, no HVAC adjustments, no ongoing utilities

Zero maintenance chemicals - no fertilizers, pesticides, or cleaning agents

Visit Garden on the Wall® for more product information:
Preserved Garden Walls

MasterFormat® 09 77 53, 09 78 00
Preserved Wall Gardens guide spec

Environment & materials

Improved by:

Re-Leaf Take-Back Program: repurposes or donates aging gardens, supporting a circular economy

100% utilization of plywood in garden panel and crate manufacturing

100% Bio-Based Carbon Content per ASTM 6866, ensuring zero off-gassing and full compostability

Class 1 and Class A Flame Spread and Smoke Index per ASTM E-84 for whole gardensystem, to comply with all 50 States fire codes

Certifications, rating systems & disclosures:

Health Product Declaration, 100 ppm

Declare Label, Red List Free

CDPH VOC Standards v1.2 compliance, meeting California's strictest indoor air quality requirements

Healthy Hospitals Initiative (HHI)

Fitwel®

See LCA, interpretation & rating systems

See materials, interpretation & rating systems

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

VERIFICATION	LCA
3rd-party reviewed	✓
	Transparency Report (EPD)
3rd-party verified	✓

Validity: 01/28/26 – 01/28/31
SM-GAR – 01282026 – 001

MATERIAL HEALTH	Material evaluation
Self-declared	✓

This environmental product declaration (EPD) was externally verified by Beth Cassese, LCACP, CLAR according to ISO 21930:2017; ISO 14025:2006; UL Part A; and UL Part B for Non-Metal Ceiling and Interior Wall Panels.

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

Horizon LCA Services
910-356-5720
admin@horizonlca.com

Horizon LCA Services

SUMMARY

Reference PCR
UL Part B: Non-Metal Ceiling and Interior Wall Panels v2.0

System boundary
Cradle to grave

Market of applicability: N. America

Declared unit: 0.093 m^2 (1 square foot)

LCIA methodology: IPCC 2013, IPCC 2021, TRACI 2.1

LCA software; LCI database
SimaPro Craft 10.2; ecoinvent v3.11, US-EI 2.2, and World Food LCA

Public LCA: LCA of Garden on the Wall® preserved wall gardens

EPD holder: Garden on the Wall®

Further explanatory materials may be obtained from: Sustainable Minds

Garden on the Wall®
30 Wychwood Road,
Livingston NJ, 07039
gardenonthewall.com
(973) 567-6800

© 2026 | The SM Transparency Report [EPD]™ Program is operated by Sustainable Minds® (www.sustainableminds.com) | Privacy policy

LCA results & interpretation

Preserved Wall Gardens

LCA results & interpretation | EPD additional content | Material health

Scope and summary

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

Application

Preserved Gardens are a no-maintenance plant art system made from all-natural preserved moss and plant species. Using all-natural preserved moss and foliage, Garden on the Wall® crafts biophilic design features that retain a "fresh cut" aesthetic without needing water, sunlight, or soil. As a pioneer in preserved garden, moss wall, and planter insert applications within the interior design space, Garden on the Wall® emphasizes longevity, low-maintenance performance, and environmental transparency.

Functional unit

0.093 m^2 (1 square foot) of constructed area using the product, including all layers required to achieve the expected performance. A reference flow of 0.64 kg (1.6 lb) of cured product is needed to fulfill the functional unit, at a thickness of 2.54 cm (1 inch) and a density of 271 kg/m^3 (16.9 lb/ft^3).

Production process

Raw materials are transported to the manufacturing site. Plywood panels are cut and marked, sorted moss and foliage are hand-applied with adhesive, and quality checks are performed. The finished panels are then placed in wooden crates and shipped to the installation site. The wooden crates are assumed to be reused multiple times.

Installation and use

Once on site, the installation team secures each panel in its designated location using deck screws. They close any visible seams by applying small amounts of moss and the same adhesive used during fabrication, allowing the moss sheets on adjacent panels to blend naturally with no visible gaps.

Since the reference service life (RSL) of the panels is 30 years, the product is expected to be replaced 1.5 times over the building's estimated service life (ESL) of 75 years.

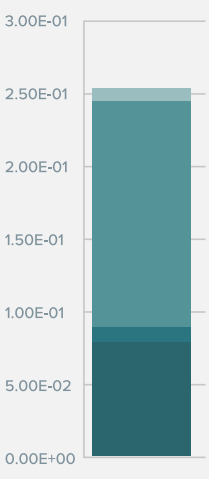
End of life scenarios

Garden on the Wall® offers a Take-Back Program that reuses end-of-life products by donating units to medical systems and hospitals. Although Garden on the Wall® has not landfilled any returned installations to date, it was conservatively assumed that 85% of panels are reused, 10% are recycled, and 5% are disposed of in a landfill.

Material composition by wt%

PART	WT%
Plywood panels	40-50%
Adhesive	20-30%
Moss	15-25%
Plant species	10-20%

Total impacts by life cycle stage [mPts/func unit]



LIFE CYCLE STAGE	MPTS/FUNC. UNIT
Production	8.19E-02
Construction	9.17E-03
Use	1.52E-01
End of life	1.01E-02

Total impacts = 2.53E-01 mPts per 75 years installed

What's causing the greatest impacts

All life cycle stages

The use stage dominates the results for all impact categories. Overall, the study found that environmental performance is primarily driven by the production stage, except for global warming potential. The negative global warming potential results in this stage are attributed to the biogenic carbon uptake from natural sources by using bio-based materials. The construction stage and end-of-life stage contribute relatively minor impacts. The use stage accounts for approximately 60% of the total impacts, since 1.5 product replacements are included in the stage.

Raw materials acquisition and transportation

Raw material acquisition (A1) has the second most significant contribution to all impact categories except for global warming potential (GWP). Since much of the raw material content is bio-based, the adhesive used in the preserved wall gardens is a major contributor to the overall impacts from raw materials. Transportation of materials to the manufacturing facility (A2) contributes minimally to the results.

Manufacturing

Manufacturing (A3) is the third highest contributor to all impact categories. Activities in this stage include on-site operations, cutting and marking the panels, final product packaging, and manufacturing waste disposal. Electricity use for equipment and waste disposal are the major contributors, but they account for minimal impacts to the overall life cycle.

Distribution and installation

Distribution (A4) and installation (A5) are minor contributors to the total results. Transporting the finished product contributes to smog formation. Vehicle activity emits nitrogen oxides (NOx), a key precursor to photochemical smog. Installation is largely handcrafted and requires minimal adhesive.

Use

Replacements (B4) dominate the results for all impact categories. Across the lifetime of the building, panels are assumed to be reused, recycled, or landfilled after 30 years and then replaced by a new panel. The impacts of those 1.5 replacements account for 60% of the total impacts. No other activities during use contribute to impacts in the use stage.

End of life

Waste disposal (C4) is the second highest contributor to global warming potential. Biogenic carbon leaves the product system at the end of life, causing biogenic CO_2 emissions. Since a high proportion of products are reused or recycled at the end of life, waste disposal contributes only minor impacts of less than 1% across all impact categories other than global warming potential. End-of-life transportation (C2) contributes less than 6% of results across all impact categories.

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 applied insulation is -1.35E-01 CO_2-eq per functional unit. The negative GWP values in the production stage (A1–A3) are attributed to the biogenic carbon uptake from natural sources by using bio-based materials.

Manufacturing data

Reporting period: January 2024 – December 2024
Location: Fairfield, New Jersey

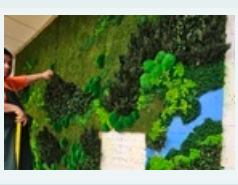
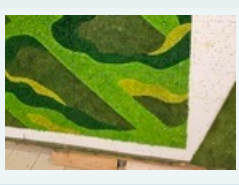
How we're making it greener

At Garden on the Wall®, sustainability is not an aspiration - it is the foundation of everything we create. We believe that bringing nature into a built environment should never come at the expense of environmental health, occupant well-being, or future generations. Since our founding, we have committed to redefining industry standards through radical transparency, circular economy principles, and uncompromising material health practices.

We are dedicated to creating preserved garden installations that contribute to healthier buildings, healthier people, and a healthier planet - with zero greenwashing and full accountability.

See how we make it greener

LCA results

LIFE CYCLE STAGE	PRODUCTION	CONSTRUCTION	USE	END OF LIFE
	(X) A1 Raw materials	(X) A4 Transportation/ Delivery	(X) B1 Use	(X) C1 Deconstruction/ Demolition
	(X) A2 Transportation	(X) A5 Construction/ Installation	(X) B2 Maintenance	(X) C2 Transportation
	(X) A3 Manufacturing		(X) B3 Repair	(X) C3 Waste processing
			(X) B4 Replacement	(X) C4 Disposal
			(X) B5 Refurbishment	
Information modules: **Included (X)** | Excluded (MND)*			(X) B6 Operational energy use	
			(X) B7 Operational water use	
				

SM Single Score

Learn about SM Single Score results

Impacts per functional unit	8.19E-02 mPts	9.17E-03 mPts	1.52E-01 mPts	1.01E-02 mPts
Materials or processes contributing >20% to total impacts of each life cycle stage	Upstream material extraction, material transportation, and product manufacturing.	Transportation of the product to installation site and use of adhesive.	Product replacements required to meet the ESL.	Transport of material flows to reuse, recycling, or landfill, and final disposal/treatment.

IPCC & TRACI v2.1 results per functional unit

LIFE CYCLE STAGE	PRODUCTION	CONSTRUCTION	USE	END OF LIFE
Ecological damage				
Impact category / **Unit**				
$IPCC_{Land-use\ change}$ (2021 GWP 100) — **kg CO_2 eq**	1.03E-03	3.78E-05	1.61E-03	5.30E-06
$IPCC_{Total}$ (2013 GWP 100) — **kg CO_2 eq**	-1.34E-01	1.45E-01	1.73E+00	1.15E+00
$IPCC_{Biogenic}$ (2013 GWP 100) — **kg CO_2 eq**	-1.05E+00	0.00E+00	0.00E+00	1.05E+00
$IPCC_{Fossil}$ (2013 GWP 100) — **kg CO_2 eq**	9.13E-01	1.45E-01	1.73E+00	9.88E-02
Ozone depletion — **kg CFC-11 eq**	7.46E-09	1.75E-09	1.59E-08	1.37E-09
Acidification — **kg SO_2 eq**	5.32E-03	4.88E-04	9.18E-03	3.16E-04
Eutrophication — **kg N eq**	2.89E-03	5.09E-05	4.45E-03	2.33E-05
Human health damage				
Impact category / **Unit**				
Smog — **kg O_3 eq**	8.86E-02	1.08E-02	1.62E-01	8.39E-03
Respiratory effects — **kg $PM_{2.5}$ eq**	6.78E-04	7.79E-05	1.17E-03	2.56E-05
Additional environmental information				
Impact category / **Unit**				
Carcinogenics — **CTU_h**	32.94%	6.64%	60.00%	0.41%
Non-carcinogenics — **CTU_h**	38.74%	0.80%	60.00%	0.46%
Ecotoxicity — **CTU_e**	24.00%	9.20%	60.00%	6.79%
Fossil fuel depletion — **MJ surplus**	1.95E+00	2.11E-01	3.50E+00	1.72E-01

References

LCA Background Report
Life Cycle Assessment of Garden on the Wall® Preserved Wall Gardens, Garden on the Wall® 2025; TRACI v2.1, IPCC 2013 AR5, IPCC 2021 AR6, CML, and Cumulative Energy Demand (LHV) impact assessment methodologies; SimaPro Craft 10.2 software; ecoinvent v3.11, US-EI 2.2, and World Food LCA databases.

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

ISO 21930:2017, "Sustainability in Building Construction — Environmental Declaration of Building Products" serves as the core PCR along with UL Part A.

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

UL Part B: Non-Metal Ceiling and Interior Wall Panel EPD Requirements v2.0
April, 2021. PCR review conducted by Lindita Bushi, PHD, (ATHENA Sustainable Materials Institute) lindita.bushi@athenasmi.org; Thomas Gloria, PhD, (Industrial Ecology Consultants); Olivia Palmer, (Simpson Gumpertz & Heger).

UL Environment General Program Instructions v2.4, July 2018 (available upon request)

Download PDF SM Transparency Report/ EPD

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. They are designed to present information transparently to make the limitations of comparability more understandable. Environmental declarations of products that conform to the same PCR and include the same life cycle stages, but are made by different manufacturers, may not sufficiently align to support direct comparisons. They therefore cannot be used as comparative assertions unless the conditions as defined in ISO 14025 Section 6.7.2. 'Requirements for Comparability' are satisfied. In order to support comparative assertions, this EPD meets all comparability requirements stated in ISO 14025:2006. However, differences in certain assumptions, data quality, and variability between LCA data sets may still exist. Any EPD comparison must be carried out at the building level per ISO 21930 guidelines, use the same sub-category PCR where applicable, include all relevant information modules, be limited to EPDs applying a functional unit, and be based on equivalent scenarios with respect to the context of construction works. Some LCA impact categories and inventory items are still under development and can have high levels of uncertainty. To promote uniform guidance on the data collection, calculation, and reporting of results, the ACLCA methodology (ACLCA 2019) was used. Environmental declarations from different programs (ISO 14025) may not be comparable. Comparison of the environmental performance of Non-Metal Ceiling and Wall System Products 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 as instructed under this PCR. Full conformance with this PCR allows EPD comparability only when all stages of a life cycle have been considered. 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.

Rating systems

The intent is to reward project teams for selecting products from manufacturers who have verified improved life-cycle environmental performance.

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

Building product disclosure and optimization

Environmental product declarations

○ Industry-wide (generic) EPD	1 product
● Product-specific Type III EPD	1.5 products

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

Environmental Product Declarations (EPD)

○ Industry-average EPD	.5 points
○ Multi-product specific EPD	.75 points
● Product-specific EPD	1 point

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

VERIFICATION	LCA
3rd-party reviewed	●
	Transparency Report (EPD)
3rd-party verified	●

Validity: 01/28/26 – 01/28/31
SM-GAR – 01282026 – 001

MATERIAL HEALTH	Material evaluation
Self-declared	●

This environmental product declaration (EPD) was externally verified by Beth Cassese, LCACP, CLAR according to ISO 21930:2017; ISO 14025:2006; UL Part A; and UL Part B for Non-Metal Ceiling and Interior Wall Panels.

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

Horizon LCA Services
910-356-5720
admin@horizonlca.com

SUMMARY

Reference PCR
UL Part B: Non-Metal Ceiling and Interior Wall Panels v2.0

System boundary
Cradle to grave

Market of applicability: N. America

Declared unit: 0.093 m^2 (1 square foot)

LCIA methodology: IPCC 2013, IPCC 2021, TRACI 2.1

LCA software; LCI database
SimaPro Craft 10.2; ecoinvent v3.11, US-EI 2.2, and World Food LCA

Public LCA: LCA of Garden on the Wall® preserved wall gardens

EPD holder: Garden on the Wall®

Further explanatory materials may be obtained from: Sustainable Minds

Garden on the Wall®
30 Wychwood Road,
Livingston NJ, 07039
gardenonthewall.com
(973) 567-6800

© 2026 | The SM Transparency Report [EPD]™ Program is operated by Sustainable Minds® (www.sustainableminds.com) | Privacy policy

EPD additional content

Preserved Wall Gardens

LCA results & interpretation | EPD additional content | Material health

Data

Background This product-specific plant-specific declaration was created by collecting production data from the facility in Fairfield, NJ. Secondary data sources include those available in the ecoinvent v3.11, US-EI 2.2, and World Food LCA databases.

Allocation Annual facility resource consumption and the total area of preserved gardens and planter inserts produced were first collected and then scaled down to a per-unit level based on annual production quantities. Packaging and waste flows were allocated using the same approach. Garden on the Wall ®'s manufacturing facility in New Jersey serves multiple operational purposes and is not solely dedicated to preserved wall garden production. However, product-specific electricity use was provided for the CNC and table saw, so no additional energy allocation was needed. There are no co-products produced during their manufacturing processes. For recycled content and disposal at end of life, system boundaries were drawn consistent with the cut-off allocation approach. The system boundary was drawn to include reuse of the product at end-of-life but exclude any credits from material or energy recovery.

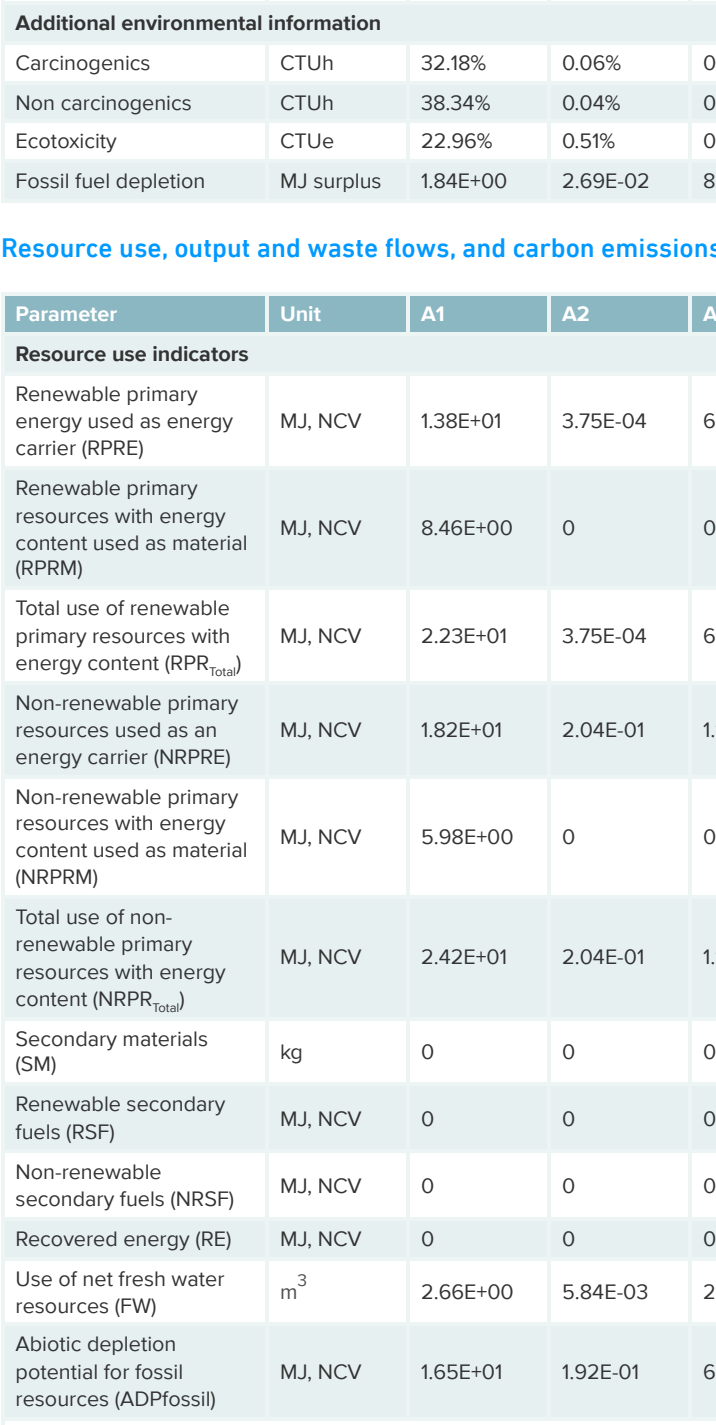
Cut-off criteria for the inclusion of mass and energy flows are 1% of renewable primary resource (energy) usage, 1% nonrenewable primary resource (energy) usage, 1% of the total mass input of that unit process, and 1% of environmental impacts. The total of neglected input flows per module does not exceed 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.

Energy consumption associated with the electric screwdriver and equipment used to remove the end-of-life product was omitted from this study, as it contributes less than 1% to the cumulative energy demand. The environmental impacts associated with the disposal of packaging materials for the final product were excluded due to multiple reuse cycles. Aside from this, no known flows are deliberately excluded from this declaration, and no substances required to be reported as hazardous are associated with the production of this product including upstream raw material supply and raw material manufacturing. Biogenic carbon is included in the reported results. Therefore, these criteria have been met.

Quality The precision and completeness of the data is considered high, as Garden on the Wall ® personnel provided detailed bills of materials and utility information. The temporal and technological representativeness of the data are considered to be high, as recent annual data was provided for the manufacturing process. Geographical representativeness is considered to be high since supplier addresses were known. All relevant process steps for the product system were considered. 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. Furthermore, the modeling assumptions were consistent throughout the model, with a preference for the ecoinvent v3.11 database.

LCIA impact factors required by the PCR are global warming (GWP 100, IPCC 2013), ozone depletion, acidification, eutrophication, smog, and Abiotic Resource Depletion Potential of Non-renewable (fossil) energy resources (ADP_{fossil}). These six impact categories are globally deemed mature enough to be included in Type III environmental declarations. Other categories are being developed and defined and LCA should continue making advances in their development. However, the EPD users shall not use additional measures for comparative purposes.

Flow diagram



Scenarios and additional technical information

Technical properties	
Surface burning characteristics	Compliance with ASTM E84 Class 1
VOC emissions	Compliance with VOC emissions standards (CDPH/01350 for Classroom and Office Scenarios)
100% Biobased content for preserved plants	ASTM 6866

ASTM C423, E1477, E1111, E1110, E413, E90, E1414, and E413 are not applicable. For more information about the product specifications, visit https://www.astm.org/ and https://www.cdph.ca.gov/.

Distribution (A4)

Name	Value	Unit
Fuel type	Diesel	
Vehicle type	Truck and trailer (3.5-7.5 metric ton)	
Liters of fuel	23	L/100 km
Transportation distance		
Average distance from manufacturing to installation site	429.15	km
Capacity utilization wt%, including empty backhaul	50	%
Gross density		
Weight of products transported	0.64	kg
Volume of products transported	0.0024	m^3

Installation (A5)

Name	Amount	Unit
Auxiliary materials: deck screws	0.01	kg
Product loss per functional unit	0.0064	kg
Waste materials at the construction site before waste processing, generated by product installation	0.0064	kg
Output materials resulting from on-site waste processing (specified by route; e.g. for recycling, energy recovery and/or disposal)	No on-site waste processing. All wastes are returned to the facility for composting.	
Mass of packaging waste specified by type – wood crate (Reuse)	0.73	kg
Biogenic carbon contained in packaging	1.34	kg CO2

End of life (C1-C4)

A conservative end-of-life pathway of 85% reuse, 10% recycling, and 5% landfill is assumed. For waste transportation, distances of 100 km for landfill disposal and 429.15 km for products sent for reuse or recycling under the Take-Back Program are assumed.

Name	Amount	Unit
Collection process – Collected separately	0.64	kg
Recovery – 85% Reuse	0.544	kg
Recovery – 10% Recycle	0.064	kg
Recovery – 5% Landfill	0.032	kg

Major system boundary exclusions

- Construction of major capital equipment
- Human labor and employee transport
- Building operational energy and water use for office work
- Energy consumption associated with the electric screwdriver and equipment used to remove the end-of-life product
- Disposal and material use of wood crate packaging for the final product due to multiple reuses

Major assumptions and limitations

- Variations in plant species choices are assumed to be negligible
- Generic data sets used for material inputs, transport, and waste processing are considered good quality, but actual impacts from material suppliers, transport carriers, and local waste processing may vary
- The impact assessment methodology categories do not represent all possible environmental impact categories
- Characterization factors used within the impact assessment methodology may contain varying levels of uncertainty
- LCA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks

LCIA results per functional unit per module

Impact category	Unit	A1	A2	A3	A4	A5	B4	C2	C4
$IPCC_{and\text{-}use\ change}$ (2021 GWP 100)	kg CO_2 eq	8.54E-04	6.52E-07	1.72E-04	5.42E-06	3.24E-05	1.61E-03	5.15E-06	1.50E-07
$IPCC_{fossil}$ (2013 GWP 100)	kg CO_2 eq	-2.07E-01	1.52E-02	5.75E-02	1.02E-01	4.27E-02	1.73E+00	9.67E-02	1.05E+00
$IPCC_{Biogenic}$ (2013 GWP 100)	kg CO_2 eq	-1.05E+00	0	0	0	0	0	0	1.05E+00
$IPCC_{Fossil}$ (2013 GWP 100)	kg CO_2 eq	8.40E-01	1.52E-02	5.75E-02	1.02E-01	4.27E-02	1.73E+00	9.67E-02	2.11E-03
Ozone depletion	kg CFC-11 eq	4.61E-09	2.24E-10	2.63E-09	1.43E-09	3.24E-10	1.59E-08	1.36E-09	8.83E-12
Acidification	kg SO_2 eq	4.67E-03	2.43E-04	4.04E-04	3.31E-04	1.57E-04	9.18E-03	3.14E-04	2.00E-06
Eutrophication	kg N eq	2.85E-03	9.37E-06	2.97E-05	2.38E-05	2.71E-05	4.45E-03	2.26E-05	7.12E-07
Human health damage									
Smog	kg O_3 eq	8.12E-02	4.72E-03	2.68E-03	8.77E-03	2.05E-03	1.62E-01	8.33E-03	5.50E-05
Respiratory effects	kg $PM_{2.5}$ eq	6.40E-04	1.45E-05	2.35E-05	2.66E-05	5.13E-05	1.17E-03	2.53E-05	3.01E-07
Additional environmental information									
Carcinogenics	CTUh	32.18%	0.06%	0.71%	0.43%	6.21%	60.00%	0.41%	0.00%
Non carcinogenics	CTUh	38.34%	0.04%	0.35%	0.48%	0.32%	60.00%	0.46%	0.00%
Ecotoxicity	CTUe	22.96%	0.51%	0.54%	7.15%	2.06%	60.00%	6.79%	0.01%
Fossil fuel depletion	MJ surplus	1.84E+00	2.69E-02	8.58E-02	1.80E-01	3.09E-02	3.50E+00	1.71E-01	9.85E-04

Resource use, output and waste flows, and carbon emissions & removals per functional unit

Parameter	Unit	A1	A2	A3	A4	A5	B4	C2	C4
Resource use indicators									
Renewable primary energy used as energy carrier (RPRE)	MJ, NCV	1.38E+01	3.75E-04	6.91E-02	2.67E-03	4.41E-02	2.09E+01	2.54E-03	6.05E-05
Renewable primary resources with energy content used as material (RPRM)	MJ, NCV	8.46E+00	0	0	0	0	1.27E+01	0	0
Total use of renewable primary resources with energy content (RPR_{tot})	MJ, NCV	2.23E+01	3.75E-04	6.91E-02	2.67E-03	4.41E-02	3.36E+01	2.54E-03	6.05E-05
Non-renewable primary resources used as an energy carrier (NRPRE)	MJ, NCV	1.82E+01	2.04E-01	1.19E+00	1.41E+00	4.87E-01	3.73E+01	1.34E+00	7.60E-03
Non-renewable primary resources with energy content used as material (NRPRM)	MJ, NCV	5.98E+00	0	0	0	0	8.96E+00	0	0
Total use of non-renewable primary resources with energy content ($NRPR_{total}$)	MJ, NCV	2.42E+01	2.04E-01	1.19E+00	1.41E+00	4.87E-01	4.63E+01	1.34E+00	7.60E-03
Secondary materials (SM)	kg	0	0	0	0	0	0	0	0
Renewable secondary fuels (RSF)	MJ, NCV	0	0	0	0	0	0	0	0
Non-renewable secondary fuels (NRSF)	MJ, NCV	0	0	0	0	0	0	0	0
Recovered energy (RE)	MJ, NCV	0	0	0	0	0	0	0	0
Use of net fresh water resources (FW)	m^3	2.66E+00	5.84E-03	2.30E-01	3.64E-02	2.63E-01	4.79E+00	3.46E-02	1.64E-03
Abiotic depletion potential for fossil resources (ADPfossil)	MJ, NCV	1.65E+01	1.92E-01	6.88E-01	1.32E+00	4.31E-01	3.34E+01	1.26E+00	7.08E-03
Output flows and waste category indicators									
Hazardous waste disposed (HWD)	kg	0	0	0	0	0	0	0	0
Non-hazardous waste disposed (NHWD)	kg	0	0	9.81E-02	0	6.40E-03	2.53E+00	0	1.58E+00
High-level radioactive waste, conditioned, to final repository (HLRW)	kg	1.40E-06	2.57E-09	1.31E-06	1.82E-08	1.29E-07	4.36E-06	1.73E-08	2.93E-10
Intermediate- and low-level radioactive waste, conditioned, to final repository (ILLRW)	kg	3.11E-06	5.43E-09	2.94E-06	3.82E-08	2.63E-07	9.67E-06	3.63E-08	7.23E-10
Components for re-use (CRU)	kg	0	0	0	0	0	0	0	5.39E-01
Materials for recycling (MR)	kg	0	0	0	0	0	0	0	5.62E-02
Materials for energy recovery (MER)	kg	0	0	0	0	0	0	0	0
Exported energy (EE)	MJ	0	0	0	0	0	0	0	0
Carbon emissions and removals									
Biogenic Carbon Removal from Product (BCRP)	kg CO_2	-1.04E+00	0	0	0	0	-1.56E+00	0	0
Biogenic Carbon Emission from Product (BCEP)	kg CO_2	0	0	1.70E-01	0	1.04E-02	1.56E+00	0	8.61E-01
Biogenic Carbon Removal from Packaging (BCRK)	kg CO_2	-6.23E-03	0	0	0	0	-9.35E-03	0	0
Biogenic Carbon Emission from Packaging (BCEK)	kg CO_2	0	0	6.23E-03	0	0	9.35E-03	0	0
Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes (CBCEW)	kg CO_2	0	0	0	0	0	0	0	0
Calcination Carbon Emissions (CCE)	kg CO_2	0	0	0	0	0	0	0	0
Carbonation Carbon Removals (CCR)	kg CO_2	0	0	0	0	0	0	0	0
Carbon Emissions from Combustion of Waste from Non-Renewable Sources used in Production Processes (CNWR)	kg CO_2	0	0	0	0	0	0	0	0

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

VERIFICATION LCA

3rd-party reviewed ✓
Transparency Report (EPD)

3rd-party verified ✓

Validity: 01/28/26 – 01/28/31
SM-GAR – 01282026 – 001

MATERIAL HEALTH Material evaluation

Self-declared ✓

This environmental product declaration (EPD) was externally verified by Beth Cassese, LCACP, CLA® according to ISO 21930:2017; ISO 14025:2006, UL Part A; and UL Part B for Non-Metal Ceiling and Interior Wall Panels.

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

Horizon LCA Services
910-356-5720
admin@horizonlca.com

Horizon LCA Services

SUMMARY

Reference PCR
UL Part B: Non-Metal Ceiling and Interior Wall Panels v2.0

System boundary
Cradle to grave

Market of applicability: N. America

Declared unit: 0.093 m^2 (1 square foot)

LCIA methodology: IPCC 2013, IPCC 2021, TRACI 2.1

LCA software: LCI database
SimaPro Craft 10.2; ecoinvent v3.11, US-EI 2.2, and World Food LCA

Public LCA: LCA of Garden on the Wall® preserved wall gardens

EPD holder: Garden on the Wall®

Further explanatory materials may be obtained from: Sustainable Minds

Garden on the Wall®
30 Wychwood Road,
Livingston NJ, 07039
www.gardenonthewall.com
(973) 567-6800

© 2026 | The SM Transparency Report (EPD)® Program is operated by Sustainable Minds® (www.sustainableminds.com) | Privacy policy

LCA & material health results & interpretation

Preserved Wall Gardens

LCA results & interpretation | EPD additional content | Material health

Evaluation programs

Declare

Declare labels are issued to products disclosing ingredient inventory, sourcing, and end of life options. Declare labels are based on the Manufacturers Guide to Declare, administered by the International Living Future Institute.

How it works

Material ingredients are inventoried and screened against the Living Building Challenge (LBC) Red List which represents the 'worst in class' materials, chemicals, and elements known to pose serious risks to human health and the greater ecosystem.

The Declare product database and label are used to select products that meet the Living Building Challenge's stringent materials requirements, streamlining the materials specification and certification process.

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

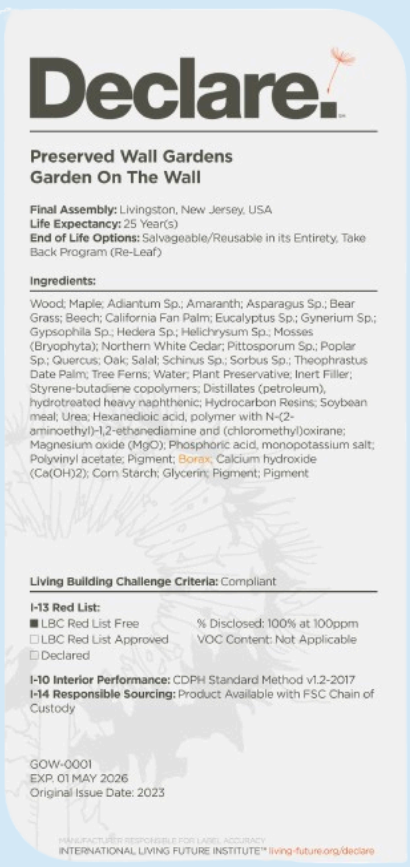
Declare™

Declare level:
The Declare product database and label are used to select products that meet the LBC's stringent materials requirements, streamlining the materials specification and certification process.

- LBC Red List Free
- LBC Red List Approved
- Declared

Click the label to see the full declaration.

Preserved Wall Gardens



Declare.

Preserved Wall Gardens
Garden On The Wall

Final Assembly: Livingston, New Jersey, USA
Life Expectancy: 25 Year(s)
End of Life Options: Salvageable/Reusable in its Entirety, Take Back Program (Re-Leaf)

Ingredients:

Wood; Maple; Adiantum Sp.; Amaranth; Asparagus Sp.; Bear Grass; Beech; California Fan Palm; Eucalyptus Sp.; Gynerium Sp.; Gypsophila Sp.; Hedera Sp.; Helichrysum Sp.; Mosses (Bryophyta); Northern White Cedar; Pittosporum Sp.; Poplar Sp.; Quercus; Oak; Salal; Schinus Sp.; Sorbus Sp.; Theophrastus Date Palm; Tree Ferns; Water; Plant Preservative; Inert Filler; Styrene-butadiene copolymers; Distillates (petroleum), hydrotreated heavy naphthenic; Hydrocarbon Resins; Soybean meal; Urea; Hexanedioic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane; Magnesium oxide (MgO); Phosphoric acid, monopotassium salt; Polyvinyl acetate; Pigment; Borax; Calcium hydroxide (Ca(OH)2); Corn Starch; Glycerin; Pigment; Pigment

Living Building Challenge Criteria: Compliant

I-13 Red List:
■ LBC Red List Free
□ LBC Red List Approved
□ Declared

% Disclosed: 100% at 100ppm
VOC Content: Not Applicable

I-10 Interior Performance: CDPH Standard Method v1.2-2017
I-14 Responsible Sourcing: Product Available with FSC Chain of Custody

GOW-0001
EXP. 01 MAY 2026
Original Issue Date: 2023

MANUFACTURER RESPONSIBLE FOR LABEL ACCURACY
INTERNATIONAL LIVING FUTURE INSTITUTE™ living-future.org/declare

Health Product Declaration®

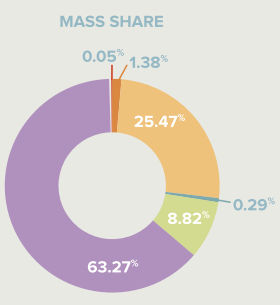
Preserved Wall Gardens

Inventory threshold: 100 ppm

Full disclosure known hazards: Yes

Based on the selected content inventory threshold:

◉ Characterized ◉ Screened ○ Identified



GreenScreen® List Translator Scores

- List Translator Likely Benchmark 1 / Benchmark 1
- List Translator Possible Benchmark 1
- List Translator Benchmark Unknown
- Benchmark 2
- Benchmark 3
- Benchmark 4
- No GS data available

Learn about the GreenScreen® List Translator

Total VOC Content

VOC Content data is not applicable for this product category.

What's in this product and why

Declare level

'Red List Free' is achieved when the product does not contain any ingredients listed on the Living Building Challenge Red List above the 100 ppm (0.01%) reporting threshold, demonstrating full compliance with material health requirements without the need for exceptions.

What's in the product and why

Preserved moss and plants are ideal for creating allergy-friendly environments, as they do not release pollen or other allergens that can trigger reactions in sensitive individuals. By opting for preserved greenery, you can enhance your interior space with the beauty of nature without compromising the health and comfort of those who use it. Unlike live plants, preserved moss and plants do not attract pests such as insects or rodents, creating a cleaner and more hygienic environment.

What's been done in the design and manufacture in consideration of the potential human health impacts in the use stage

- Energy: We operate using PSE&G, New Jersey's largest provider of carbon-free electricity (90% from nuclear, wind, and solar)
- Education: We offer three AIA/IDCEC/GBCI-accredited continuing education seminars on biophilic design, material health, and regenerative design
- Research Partnerships: We collaborate with the Penn Center for Neuroaesthetics to study the impact of preserved gardens on human well-being and to repurpose trade show gardens for healthcare settings
- Supply Chain Integrity: We source preserved moss and plants from sustainable, environmentally responsible growers and comply with the Buy American Act
- Continuous improvement is in our DNA. We maintain an active R&D program focused on extending garden longevity, improving color fastness, and advancing preservation techniques to further reduce environmental impact.

Our vision for the future

As we look ahead, our commitment deepens:

- Expanding our circular economy programs to serve more communities through donation and repurposing
- Partnering with research institutions to quantify the health and wellness impacts of biophilic design
- Advocating for industry-wide transparency standards to eliminate greenwashing and protect occupant health
- Supporting designers with the tools, education, and verified data they need to create truly sustainable spaces

How we're making it healthier

We are committed to leaving the world better than we found it. Every garden (or planter insert) we create, every material we source, every process we implement reflects this commitment. We will continue to lead with transparency, innovate with purpose, and operate with integrity - because the health of our planet, our communities, and future generations depends on it.

See how we make it greener

References

Declare
Preserved Wall Gardens

Manufacturer's Guide to Declare
A comprehensive guide providing information about the program, the assessment methodology, how to submit material data to obtain a Declare label and how they are used to meet the Health & Happiness and Materials Petals of the Living Building Challenge.

Health Product Declaration®
Preserved Wall Gardens

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

LEED BD+C: New Construction | v4 - LEED v4
Building product disclosure and optimization
Material Ingredients

Credit value options — 1 product each

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

LEED BD+C: New Construction | v4.1 - LEED v4.1
Materials and resources
Material Ingredients

Credit value options — 1 product each

◉ 1. Reporting ○ 2. Optimization ○ 3. Supply Chain Optimization

Living Building Challenge
Materials petals imperatives

◉ 10. Red List Free ○ 12. Responsible Industry ○ 13. Living Economy Sourcing

WELL Building Standard®
Air and Mind Features

◉ **X07** Materials Transparency

○ **X08** Materials Optimization

Collaborative for High Performance Schools National Criteria
EQ C7.1 Material Health Disclosures

○ Performance Approach — 2 points

○ Prescriptive Approach — 2 points

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

VERIFICATION	LCA
3rd-party reviewed	◉
	Transparency Report (EPD)
3rd-party verified	◉

Validity: 01/28/26 – 01/28/31
SM-GAR – 01282026 – 001

MATERIAL HEALTH	Material evaluation
Self-declared	◉

This environmental product declaration (EPD) was externally verified by Beth Cassese, LCACP, CLAR according to ISO 21930:2017; ISO 14025:2006; UL Part A; and UL Part B for Non-Metal Ceiling and Interior Wall Panels.

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

Horizon LCA Services
910-356-5720
admin@horizonlca.com

Horizon LCA Services

SUMMARY

Reference PCR
UL Part B: Non-Metal Ceiling and Interior Wall Panels v2.0

System boundary
Cradle to grave

Market of applicability: N. America

Declared unit: 0.093 m^2 (1 square foot)

LCIA methodology: IPCC 2013, IPCC 2021, TRACI 2.1

LCA software; LCI database
SimaPro Craft 10.2; ecoinvent v3.11, US-EI 2.2, and World Food LCA

Public LCA: LCA of Garden on the Wall® preserved wall gardens

EPD holder: Garden on the Wall®

Further explanatory materials may be obtained from: Sustainable Minds

Garden on the Wall®
30 Wychwood Road,
Livingston NJ, 07039
gardenonthewall.com
(973) 567-6800

© 2026 | The SM Transparency Report [EPD]™ Program is operated by Sustainable Minds® (www.sustainableminds.com) | Privacy policy

How we make it greener

Preserved Wall Gardens

Expand all

PRODUCTION

Our preservation process uses non-toxic, plant-based, biodegradable solutions that replace plant sap naturally, "freezing" plants in time without introducing harmful chemicals to indoor environments. This commitment protects both the craftspeople who fabricate our gardens and the occupants of spaces where our installations live.



CONSTRUCTION

Waste reduction in manufacturing:

- 100% utilization of plywood in garden panel and crate manufacturing
- Reuse of all shipping crates received from vendors
- Industrial composting of all plant clippings, unused moss, and lunch waste
- Recycling programs for all adhesive containers and packaging materials
- Compostable utensils and food service materials throughout our facility

Sustainable packaging: We build custom wooden crates from leftover plywood or repurposed vendor crates, ensuring minimal waste and maximum material efficiency in every shipment.



USE

Sustainability begins with creating products that last. Our preserved gardens deliver:

- 10-12 year baseline lifespan with no maintenance required
- 20+ year extended life cycle through our innovative rejuvenation program
- Zero water consumption - no irrigation systems, no water waste
- Zero energy requirements - no grow lights, no HVAC adjustments, no ongoing utilities
- Zero maintenance chemicals - no fertilizers, pesticides, or cleaning agents



END OF LIFE

We take responsibility for our products from creation through end of life. Our commitment to circular economy principles is embedded in every aspect of our operations.

Re-Leaf Take-Back Program: We are the first and only company in our industry to offer a comprehensive take-back program. At the end of a garden's lifecycle, we are committed to uninstall panels, and transport them back to our facility – if the clients do not want to keep these gardens in place. These panels are then:

- Repurposed into new garden installations
- Donated to healthcare institutions, educational facilities, and nonprofit organizations
- Composted in industrial facilities to return organic matter to the soil



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

VERIFICATION	LCA
3rd-party reviewed	✓
	Transparency Report (EPD)
3rd-party verified	✓

Validity: 01/28/26 – 01/28/31
SM-GAR – 01282026 – 001

MATERIAL HEALTH	Material evaluation
Self-declared	✓

This environmental product declaration (EPD) was externally verified by Beth Cassese, LCACP, CLAR according to ISO 21930:2017; ISO 14025:2006; UL Part A; and UL Part B for Non-Metal Ceiling and Interior Wall Panels.

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

Horizon LCA Services
910-356-5720
admin@horizonlca.com

Horizon LCA Services

SUMMARY

Reference PCR
UL Part B: Non-Metal Ceiling and Interior Wall Panels v2.0

System boundary
Cradle to grave

Market of applicability: N. America

Declared unit: 0.093 m^2 (1 square foot)

LCIA methodology: IPCC 2013, IPCC 2021, TRACI 2.1

LCA software; LCI database
SimaPro Craft 10.2; ecoinvent v3.11, US-EI 2.2, and World Food LCA

Public LCA: LCA of Garden on the Wall® preserved wall gardens

EPD holder: Garden on the Wall®

Further explanatory materials may be obtained from: Sustainable Minds

Garden on the Wall®
30 Wychwood Road,
Livingston NJ, 07039
gardenonthewall.com
(973) 567-6800

© 2026 | The SM Transparency Report [EPD]™ Program is operated by Sustainable Minds® (www.sustainableminds.com) | Privacy policy