

ENVIRONMENTAL PRODUCT DECLARATION



In accordance with ISO 14040:2006/AMD 1:2020 and ISO 14044:2006+A1+A2:2020
for:

Symbio™ movable wall panels

1 m² of workspace, maintained for a 10-year period



Program Operator

NSF Certification, LLC
www.nsf.org

EPD Registration Number

EPD10738

Publication Date

2022-06-03

Valid Until

2027-06-03

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at http://info.nsf.org/Certified/Sustain/epd_search.asp

PROGRAM INFORMATION

PROGRAM OPERATOR

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The EPD owner, Environamics Incorporated, has the sole ownership, liability, and responsibility for the EPD.

DECLARATION HOLDER

Environamics, Inc.

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LCA CONSULTANT

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Item	Details
Declared product	Symbio™ movable wall panels produced at the Environamics production facilities in Charlotte, North Carolina and Farmers Branch, Texas from cradle to grave
Functional unit	1m ² of workspace (panels for division of space - no attached worksurface or storage) maintained for a 10-year period, including packaging materials used for the final assembled product.
Reference PCR	BIFMA PCR for Office Furniture Workspace Products UNCPC 3814
Product’s intended application and use	Commercial Furniture
Product RSL	10 years
Markets of applicability	North America
EPD type	Product Average (from 2 manufacturing plants)
Intended audience	Business-to-Business
EPD scope	Cradle to Grave
Year of reported manufacturer primary data	1 st August 2019 – 31 st July 2020
LCA software and LCI Database	SimaPro v9 using Ecoinvent 3.6 datasets
LCIA Methodology and version number	TRACI 2.1, IPCC 2013 V1.03
The PCR review was conducted by:	Review Panel Chaired by Dr. Thomas Gloria
This declaration was independently verified in accordance with ISO 14025:2006. The BIFMA PCR for Office Furniture Workspace Products: UNCP 3814 serves as the core PCR.	Jack Geibig jgeibig@ecofom.com 
<input type="checkbox"/> Internal <input checked="" type="checkbox"/> External	Tony Favilla afavilla@nsf.com
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	
<p>The PCR this EPD was based on was written to determine the potential environmental impacts of a furniture workspace product from cradle-to-grave. It was not written to support comparative assertions. EPDs based on different PCRs, or different calculation models, may not be comparable. When attempting to compare EPDs or life cycle impacts of products from different companies, the user should be aware of the uncertainty in the final results, due to and not limited to, the practitioner’s assumptions, the sources of the data used in the study and the specifics of the product modeled.</p>	

GENERAL INFORMATION

COMPANY INFORMATION

Environamics Incorporated (hereinafter referred to as 'Environamics') is an interior specialty contracting company that fabricates and installs a floor to ceiling movable wall system, Symbio™. Environamics was founded in 1980, with manufacturing facilities in Charlotte, North Carolina and Farmers Branch, Texas. Environamics is interested in better understanding the environmental profile and impacts of their products.

This cradle-to-grave environmental product declaration is for 1m² of workspace (panels for division of space - no attached worksurface or storage) maintained for a 10-year period, including packaging materials used for the final assembled product, produced from the locations fully owned and operated by Environamics Incorporated.

For further information see <https://www.environamics-inc.com>.

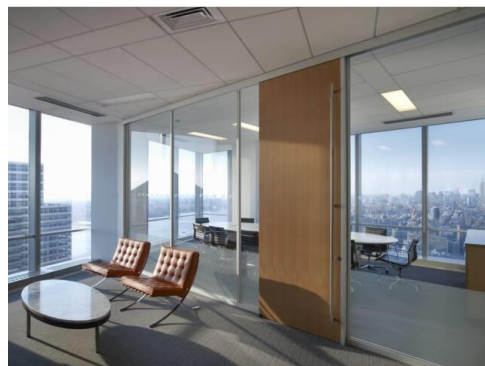


PRODUCT INFORMATION

The Symbio Movable Wall System consist of Top and Bottom Track mounted 2-1/4" (57mm) wide modular aluminum framed architectural panels with a nearly unlimited finish design potential. The panels can be 'hard surface', (painted MDF, wood veneer, etc.) or 'glass panel' (1/4", 3/8" or 1/2" clear tempered, laminated or patterned). Additionally, each individual panel can consist of multiple hard surface or glass 'sections' separated by mullions. A full range of Sliding and Swing Doors are also offered with the same finish potential as the panels. Environmental impacts are disclosed for three product combinations –

- a. Representative Product (average of product combination from facilities)
- b. Highest environment footprint product combination (MDF & Vinyl option)
- c. Lowest environment footprint product combination (Glass option)

All Environamics movable wall systems are manufactured, finished, and inspected for quality at the production sites in North Carolina and Texas.



PRODUCT COMPOSITION

The representative configuration that was selected for this study is the Symbio™ Moveable Wall system using 9ft. aluminum framed panels that are typically supplied to customers office configuration projects and match the approximate percentage of panel types that the factory outputs annually. The panels will enclose a 9.92 m² area and consist of 6 hard panel units for 3 walls, 2 glass panels and 1 door frame with aluminum/glass door for the office ‘front’, and 4 corner connectors.

The product composition for the representative walling system and associated packaging are provided in the Tables below. Additionally, the product composition is also disclosed for the highest & lowest environment footprint product combinations. The systems contain 0% bio-based material and does not contain any substances hazardous to health or the environment (in particular, carcinogenic, mutagenic, toxic to reproduction, allergic, PBT5 or vPvB6 substances). No substances that are listed in the “Candidate List of Substances of very high concern for authorization” are contained in the curtain wall systems.

The wall systems are not expected to create exposure conditions that exceed safe thresholds for health impacts to humans or flora/fauna under normal operating conditions.

PRODUCT COMPOSITION OF REPRESENTATIVE WALLING SYSTEM (MATERIALS REQUIRED TO ENCLOSE FLOOR AREA OF 9.92M²)

Material	Contribution (%)	Recycled content (%)
Aluminum	20.2%	33.9%
Steel	0.4%	25%
Wood (MDF)	58.4%	0%
Glass	19.5%	0%
Vinyl	1.5%	0%

PRODUCT COMPOSITION OF HIGHEST & LOWEST ENVIRONMENT FOOTPRINT PRODUCT COMBINATIONS

Material	Highest Environment Footprint option (MDF)	Lowest Environment Footprint option (MDF)
	Contribution (%)	Contribution (%)
Aluminum	19.5%	26.1%
Steel	0.4%	0.6%
Wood (MDF)	74.9%	0.0%
Glass	0.0%	73.3%
Vinyl	5.2%	0.0%

PACKAGING REQUIREMENTS FOR WALLING SYSTEM (MATERIALS REQUIRED TO ENCLOSE FLOOR AREA OF 9.92M²)

Material	Contribution (%)	Recycled content (%)
Packaging Film	1-3%	0%
Wood	29-30%	0%
OSB	25-32%	0%
Cardboard	5-9%	10%
Tape	0.1%	0%
Furniture Drape	31-34%	0%

LCA INFORMATION

LIFE CYCLE ASSESSMENT – PRODUCT SYSTEM AND MODELING

A cradle to grave analysis using life cycle assessment (LCA) techniques was conducted for this EPD. The analysis was done according to the NSF product category rule (PCR) for office furniture workspace products and followed LCA principles, requirements and guidelines laid out in the ISO 14040/12044 standards. EPDs are comparable only if they comply with NSF product category rule (PCR) for office furniture workspace products, use the same sub-category PCR where applicable, include all relevant information modules and are based on equivalent scenarios with respect to the context of construction works.

FUNCTIONAL UNIT

The functional unit for the EPD is 1m² of workspace (panels for division of space - no attached worksurface or storage) maintained for a 10-year period. The reference flow details used for the study are provided in the Table below.

Flow	Item	Value
Reference system	Floorspace enclosed by walling system	9.92m ²
	Total area of wall required to enclose floor area (9.92m ²)	37.16m ²
	Mass of materials required to enclose floor area (9.92m ²)	839kg
Normalized to functional unit	Workspace (floorspace)	1 m ²
	Total area of wall required to enclose workspace (1m ²)	3.75 m ²
	Mass of materials required to workspace (1m ²)	84.6 kg

The Symbio movable walling systems have a 12-year warranty period and therefore one reference unit is required to fulfil the functional unit. This product meets the BIFMA X5.5/5.6 test to justify the 10-year product life.

The system boundary for this EPD is cradle-to-grave. This includes material acquisition and pre-processing, including transport of materials to site, production of the walling system, including materials used in the packaging of the final product, transport of the product to its use location and disposal of packaging, and disposal of the walling system at end of life. No storage or use impacts have been included within this study as the walling system does not require energy or generate emissions during its storage or use.

ENVIRONMENTAL PERFORMANCE

The environmental performance of the assessed product is declared and reported using the parameters as specified in the PCR. These LCIA results and other environmental results are presented in the table below per declared unit to three significant figures. The results presented below are for the representative product manufacturing from the two production sites average based on output production.

ENVIRONMENTAL PERFORMANCE OF 1 M² OF WORKSPACE FOR A PERIOD OF 10 YEARS

ENVIRONMENTAL IMPACTS FOR REPRESENTATIVE PRODUCT COMBINATION:

Parameter	Unit	Material acquisition and pre-processing	Production	Distribution, storage and use	End-of-life	Total
Parameters describing environmental impacts						
Global warming potential (GWP) - total	kg CO ₂ equiv.	386.70	73.27	34.21	6.67	500.84
Ozone Depletion Potential (ODP)	kg CFC-11 equiv.	40.08	14.74	2.99	12.64	70.45
Acidification potential (AP)	kg SO ₂ equiv.	2.54E-05	7.30E-06	6.57E-06	9.36E-07	4.02E-05
Eutrophication potential (EP)	kg N equiv.	2.16	0.23	0.13	0.03	2.55
Photochemical ozone creation potential (PCOP) or 'Smog'	kg O ₃ equiv.	1.09	0.41	0.15	0.25	1.89
Inventory assessment categories						
Total use of renewable and non-renewable primary energy resources	MJ	5492.03	1351.52	474.84	65.26	7383.65
Net use of fresh water	m ³	2.96	0.40	0.05	0.04	3.44

Note that the LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks. Additionally environmental impacts are also disclosed for the highest & lowest environmental footprint product combinations in below tables –

ENVIRONMENTAL IMPACTS FOR HIGHEST ENVIRONMENT FOOTPRINT COMBINATION:

Parameter	Unit	Material acquisition and pre-processing	Production	Distribution, storage and use	End-of-life	Total
Parameters describing environmental impacts						
Global warming potential (GWP) - total	kg CO ₂ equiv.	398.95	73.27	34.21	8.71	515.13
Ozone Depletion Potential (ODP)	kg CFC-11 equiv.	52.34	14.74	2.99	16.79	86.86
Acidification potential (AP)	kg SO ₂ equiv.	3.01E-05	7.30E-06	6.57E-06	9.55E-07	4.49E-05
Eutrophication potential (EP)	kg N equiv.	2.15	0.23	0.13	0.03	2.55
Photochemical ozone creation potential (PCOP) or 'Smog'	kg O ₃ equiv.	1.14	0.41	0.15	0.35	2.05
Inventory assessment categories						
Total use of renewable and non-renewable primary energy resources	MJ	6089.23	1351.52	474.84	66.52	7982.11
Net use of fresh water	m ³	3.44	0.40	0.05	0.09	3.98

ENVIRONMENTAL IMPACTS FOR LOWEST ENVIRONMENT FOOTPRINT COMBINATION:

Parameter	Unit	Material acquisition and pre-processing	Production	Distribution, storage and use	End-of-life	Total
Parameters describing environmental impacts						
Global warming potential (GWP) - total	kg CO ₂ equiv.	366.70	73.27	34.21	3.56	477.74
Ozone Depletion Potential (ODP)	kg CFC-11 equiv.	3.43	14.74	2.99	0.30	21.47
Acidification potential (AP)	kg SO ₂ equiv.	2.12E-05	7.30E-06	6.57E-06	8.21E-07	3.59E-05
Eutrophication potential (EP)	kg N equiv.	2.15	0.23	0.13	0.02	2.54
Photochemical ozone creation potential (PCOP) or 'Smog'	kg O ₃ equiv.	1.00	0.41	0.15	0.00	1.56
Inventory assessment categories						
Total use of renewable and non-renewable primary energy resources	MJ	4236.07	1351.52	474.84	56.49	6118.92
Net use of fresh water	m ³	1.84	0.40	0.05	0.02	2.30

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