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Altos

Architectural Wall System

Environmental Product Declaration

Date of Issue: 11/27/2024
Date of Expiration: 11/27/2029

PRODUCT CATEGORY RULE
BIFMA PCR for Office Furniture Workspace Products, UNCPC 3814 v1 (2023)
Product Sub-Category: Panels for Division of Space

Certified Environmental Product Declaration
www.nsf.org

FUNCTIONAL UNIT
1 m^2 of physical floor space for a period of 10 years (0.108 units of Altos). This study covers a representative configuration based on the sales of variations and includes the fabric panels, glass panels, a glass door, and whiteboard. This product does not contain components that consume energy during use.

This EPD 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 form 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 source of the data used in the study, and the software tool used to conduct the study.

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Program Operator	NSF Certification, LLC 789 N. Dixboro, Ann Arbor, MI 48105 sustainability@nsf.org
Manufacturer Name and Address	Teknion 1150 Flint Rd, North York, ON M3J 2J5, Canada
Declaration Number	EPD10252
Declared Product and Functional Unit	1 m^2 of physical floor space for a period of 10 years (0.108 units of Altos)
Reference PCR and Version Number	BIFMA PCR for Office Furniture Workspace Products: UNCPC 3814 v1 (2023)
Product's intended Application and Use	Commercial Furniture
Product RSL	10 years
Markets of Applicability	North America
Date of Issue	11/27/2024
Period of Validity	5 years from date of issue
EPD Type	Product Specific
Range of Dataset Variability	N/A
EPD Scope	Cradle to Grave
Year of reported manufacturer primary data	2023
LCA Software and Version Number	Sphera LCA for Experts (fka GaBi) 10.8
LCI Database and Version Number	Managed Life Cycle Content Version 2024.1 (formerly GaBi)
LCIA Methodology and Version Number	TRACI 2.1, IPCC AR6 GWP100
The sub-category PCR review was conducted by:	Thomas Gloria, PhD (chair) Jack Geibig, P.E. Michael Overcash, PhD
This declaration was independently verified in accordance with ISO 14025: 2006. The BIFMA PCR for Office Furniture Workspace Products: UNCPC 3814 serves as the core PCR. **☐ Internal ☒ External**	 Jack Geibig jgeibig@ecoform.com
This life cycle assessment was conducted in accordance with ISO 14044 and the reference PCR by:	WAP Sustainability Consulting
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	 Jack Geibig jgeibig@ecoform.com

Limitations:

Environmental declarations from different programs (ISO 14025) may not be comparable.

Comparison of the environmental performance of 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 the 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.

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 source of the data used in the study, and the specifics of the product modeled.

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Company Description

Teknion Corporation designs, manufactures, and markets workplace interiors. Its products include panel systems, desking systems, private office systems/case goods, seating solutions, architectural products, tables and collaborative spaces, storage products, work better tech products (complements), and textiles. The company's products are used in various applications, including open, collaborative, private, meeting, lounge, learning, next culture, and work couture areas. Teknion Corporation was founded in 1981 and is based in Toronto, Canada.

Product Description

Altos is an innovative architectural wall system designed for maximum functionality while maintaining a clean aesthetic. Simple and efficient, Altos facilitates cost-effective reconfiguration or full relocation as required. Its unique universal framework allows changes in elevation, dimension, fascia function and finish to maximize the life of the product.

The workspace solution studied can contain panels and glass elements. The specific configuration modeled includes product codes FPGC (glass fascia), FDSGZL (glass hinged door leaf), FDSGZF (door jamb kit), FDHSS (door handle), FPM1 (laminate fascia full height), FPMW1 (laminate fascia working wall), FPW2 (whiteboard fascia working wall), FPATW2 (fabric fascia working wall), FKN (ceiling channel), FKC (base channel), FPKH (horizontal rails), and FKV (vertical post). Additional details of the product configuration used for this EPD is below, but other configurations are possible. This product is determined to be a representative product based on sales of the variations. While the exact configuration purchased may be slightly different, it is expected to have impacts within 10% of this representative configuration.

	Altos
Product Category	Panels for Division of Space
Number of Occupants	Varies
Floor Area	9.29 m^2
Components Included	Fabric panels, glass panels, tackable surface, whiteboard
Defining Features	Glass panels with external cladding and internal steel frame
Recycled Content	53.9% pre-consumer, 10.0% post-consumer

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Product Composition

Like many commercial furniture products, Altos is available in a multitude of configurations. For this particular study, a representative configuration was used. This composition of the configuration is provided in the table below. While the exact configuration purchased may be slightly different, it is expected to have impacts within 10% of this representative configuration.

The total product weight is 568 kg, with total product area of 9.29 m^2 and a reference service life of 10 years. To meet the functional unit, 0.108 units of Altos are required, with a reference flow of 61.1 kg.

Material	Mass %	Material	Mass %
Particle Board	41.2%	Denim Insulation	1.4%
Glass	32.6%	LPL	<1%
Steel	16.3%	Mineral Fiber Board	<1%
Aluminum	5.4%	Fabric	<1%
PP	2.6%	Powder Coat	<1%

Selection of Impact Parameters

Environmental Impacts were calculated using the LCA for Experts software platform. Impact results have been calculated using TRACI 2.1 and IPCC AR6 GWP100 characterization factors. Results presented in this report are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins, or risks.

Abbreviation	Parameter	Unit
AP	Acidification potential of soil and water	kg SO_2 eq
EP	Eutrophication potential	kg N eq
GWP incl bio c	Global warming potential, including biogenic carbon	kg CO_2 eq
GWP excl bio c	Global warming potential, excluding biogenic carbon	kg CO_2 eq
ODP	Depletion of stratospheric ozone layer	kg CFC 11 eq
SFP	Photochemical ozone creation potential	kg O_3 eq

In addition to the environmental parameters above, the following resource use and waste categories are also disclosed.

Abbreviation	Parameter	Unit
PED	Total use of renewable and non-renewable primary energy resources	MJ, net calorific value
FW	Net use of fresh water	kg
RPRE	Renewable primary resources used as an energy carrier	MJ, net calorific value
RPRM	Renewable primary resources used as a material	MJ, net calorific value
NRPRE	Non-renewable primary resources used as an energy carrier	MJ, net calorific value
NRPRM	Non-renewable primary resources used as a material	MJ, net calorific value
RE	Recovered energy from disposal of waste in previous systems	MJ, net calorific value

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LCA Results

All results are given per functional unit, which is 1 m^2 of physical floor space for a period of 10 years. Altos has an area of 9.29 m^2. The product meets testing criteria per ANSI/BIFMA X5.6 and has a reference service life of 10 years. To fulfil the functional unit, 0.108 units of product are required.

TRACI Results

Impact Category	Unit	Total	Material Acquisition	Production	Distribution, Storage, and Use	End-of-Life
AP	kg SO_2 eq	**7.67E-01**	5.63E-01	1.56E-01	2.94E-02	1.88E-02
EP	kg N eq	**7.04E-02**	4.70E-02	1.82E-02	2.62E-03	2.70E-03
GWP incl bio c	kg CO_2 eq	**9.66E+01**	6.45E+01	1.13E+01	6.34E+00	1.44E+01
GWP excl bio c	kg CO_2 eq	**1.51E+02**	9.78E+01	4.22E+01	6.35E+00	4.76E+00
ODP	kg CFC 11 eq	**1.02E-07**	1.02E-07	3.15E-12	1.87E-14	8.22E-14
SFP	kg O_3 eq	**1.03E+01**	6.71E+00	2.65E+00	6.77E-01	2.75E-01

LCI Indicators

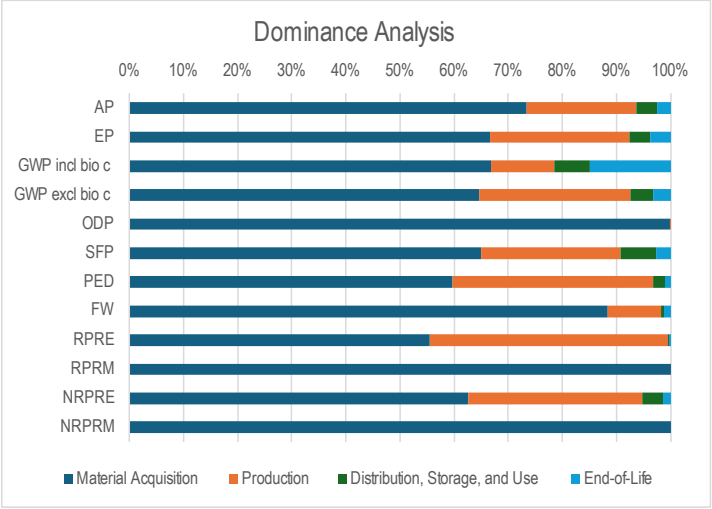
Impact Category	Unit	**Total**	Material Acquisition	Production	Distribution, Storage, and Use	End-of-Life
PED	MJ	**3.87E+03**	2.31E+03	1.44E+03	8.76E+01	3.69E+01
FW	kg	**2.94E+00**	2.60E+00	2.91E-01	1.23E-02	3.74E-02
RPRE	MJ	**1.62E+03**	8.97E+02	7.09E+02	3.71E+00	4.90E+00
RPRM	MJ	**3.47E+02**	3.47E+02	0.00E+00	0.00E+00	0.00E+00
NRPRE	MJ	**2.26E+03**	1.41E+03	7.28E+02	8.39E+01	3.20E+01
NRPRM	MJ	**9.61E+01**	9.61E+01	0.00E+00	0.00E+00	0.00E+00
RE	MJ	**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Interpretation

A dominance analysis was performed for the product show which of the life cycle stages contributes to the majority of the impacts. Results are shown for the 4 TRACI 2.1 impact categories and IPCC AR6 GWP100.

Overall, the dominance analysis shows the vast majority of the impacts are coming from the material acquisition and pre-processing stage. This tracks with the majority of durable goods similar to Altos architectural walls. RE is equal to zero and is excluded from the dominance analysis graph at the right.

An additional dominance analysis was performed to determine the relative impacts of the materials used in the production of Leverage. For most of the LCIA indicators, the top material impacts are glass, steel, and aluminum, depending on the indicator.



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Additional Environmental Information

Teknion is a supporter and/or a participant in the following environmental and sustainability related programs.

- The International Living Future Institute's Declare program. Products with Declare labels can be found at https://living-future.org/declare/
- ANSI/BIFMA e3-2019 Furniture Sustainability Standard program. Altos is certified to Level 3.
- Teknion products, including Altos, comply with SCS's Indoor Advantage Gold program. Altos's certification can be found at this link.
- Teknion has been a member of the USGBC since 2016.

Additionally, Teknion publishes an annual Impact Report which is publicly available at https://teknion-limited.shorthandstories.com/impact-report-3-0/index.html

References

Life Cycle Assessment of Teknion's Workspace and Table Products. WAP Sustainability. July 2024.

BIFMA PCR for Office Furniture Workspace Products, UNCPC 3814 v1. Extended July 2023.

Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press. IPCC. 2021.

ISO 14025:2006 Environmental labels and declarations – Type III environmental declarations – Principles and procedures.

ISO 14040:2006 Environmental management - Life cycle assessment – Principles and framework.

ISO 14044:2006 Environmental management - Life cycle assessment – Requirements and guidelines.