Maari™ 5-Star Base Chair Seating

Environmental Product Declaration

EPD Registration Number: EPD-IES-0031518
Version Date: 2026-04-24
Validity Date: 2031-04-23

Product Category Rule

BIFMA PCR for Seating, UNCPC 3811, v4
Product Sub-Category: Side seat chair (freestanding) (single occupant)
In accordance with ISO 14025/14040/14044/21930

Program

Program: The International EPD System
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Program Operator: EPD International AB
Licensee: The North American EPD® System

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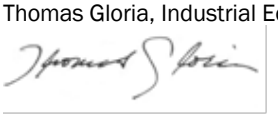
Functional Unit

1 Maari 5-Star Base chair seat with an aluminum base, maintained for a period of 10 years produced in Asia-Pacific.

An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com.

Program Operator	The International EPD® System EPD International AB Box 210 60 SE-100 31 Stockholm Sweden www.environdec.com support@environdec.com
Manufacturer Name and Address	Haworth, Inc. One Haworth Center Holland, MI 49423 www.haworth.com sustainability@haworth.com
Declaration Number	EPD-IES-0031518
Declared Product and Functional Unit	1 Maari 5-Star Base chair seat with an aluminum base, maintained for a 10-year period produced in Asia Pacific
Reference PCR and Version Number	BIFMA PCR for Seating: UNCPC 3811, Version 4
Product's intended Application and Use	Commercial Furniture
Product RSL	10 years
Markets of Applicability	Asia-Pacific
Date of Issue	April 24, 2026
Period of Validity	5 years from date of issue
EPD Type	Product Specific
Intended Audience	Business-to-Business
EPD Scope	Cradle to Gate with Options (A1-A3, A4-A5, B1, B4, C1-C4, D)
Year of reported manufacturer primary data	2024
LCA Software and Version Number	Sphera LCA FE (GaBi) 10.9
LCI Database and Version Number	Sphera MLC (GaBi) 2024.2
LCIA Methodology and Version Number	IPCC AR6, TRACI 2.1 + EN 15804+A2 (EF 3.1)
Overall Data Quality Assessment Score	2.6 In the absence of PCR-specific guidance, calculated as a GWP weighted average of all data points. Each data point's score is an average of all data quality indicators.
The PCR review was conducted by:	Thomas Gloria, PhD (chair) Jack Geibig, P.E. Michael Overcash, PhD
Independent, third party verification of the declaration and data, according to ISO 14040 (2006), ISO 14044 (2006), 14025 (2006), and ISO 21930:2017, which serves as the core PCR. ☒EPD verification by individual verifier	Thomas Gloria, Industrial Ecology Consultants  Approved by: The International EPD® System
This life cycle assessment was conducted in accordance with ISO 14044 and the reference PCR by:	WAP Sustainability Consulting (info@wapsustainability.com) (1701 Market St, Chattanooga, TN 37408) commissioned by Haworth
Procedure for follow-up of data during EPD validity involves third-party verifier	☐ Yes ☒ No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.
EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison.
The PCR this EPD was based on was written to determine the potential environmental impacts of a seating furniture product from cradle-to-gate with options. 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.
1 Not all requirements in the GPI are fulfilled, particularly the requirement, for construction products, to follow EN 15804 for certain aspects of the LCA method.
2 This study utilizes the BIFMA Seating PCR. This BIFMA PCR was used to meet market expectations such as Building Transparency EC3 comparisons, LEED and existing vendor procurement requirements, and product scoring programs. The EPD should not be used outside of this context.

Company Description

Haworth strives to be a sustainable corporation. We believe operating a sustainable corporation will allow us to help people do great things for generations to come. We are on a journey—one that promotes longevity and delivers value to the people, communities, and planet that we serve. At our core, we are a family—and we weather challenges together. Haworth is built upon a culture that empowers members and all stakeholders to make positive changes. We strengthen existing partnerships and build new ones, while empowering our members and leveraging our global reach, as we continue our drive toward making positive changes for the people and communities, we serve all over the world.

Product Description

The Maari family of seating brings interiors to life through simple specification for a range of applications. Maari is everywhere—its gentle and inviting design offers simplicity and warmth in an aesthetic that provides balance within a space. Maari 5-Star Base chairs support both focus and collaborative work modes, which are equally important for employee engagement, supporting various postures and height changes without the complication of multiple adjustments.

Maari 5-Star Base Chair is manufactured in Shanghai, China –an ISO 9001 and ISO 14001 certified manufacturing facility. This product can be easily disassembled at the end of its useful life. Components are identified with ISO recycling symbols and material information to assist in the recycling effort, where practical. Haworth offers circular service solutions for product take back, refurbishment, or recycling after the product's useful life.

Results were calculated for a single configuration of the seating product manufactured at a single facility. The chair configuration reviewed (SEMIG5) consists of fixed arms, a five star aluminum base, and is fully upholstered. This is considered to be a high selling, also known as “typical,” configuration of the Maari 5-Star Base chair products. Other styles of Maari chair that are represented by the assessed product have the same basic structure and material composition but can exclude certain components or consist of different materials that are believed to have impacts within 10% of this representative configuration. This product falls under UN CPC 3811.

The composition of the chair reviewed is provided below, with a total product weight of 12.4 kg and total packaging weight of 3.1 kg. Material composition is reported per unit of product.

Material	[kg]	[%]	Pre-Consumer Recycled Content [%]	Post-Consumer Recycled Content [%]	Biogenic Material [%]	Biogenic Material [kg C/product]
Product						
Steel	3.8	31%	4%	69%	0%	0
Nylon PA6	3.3	27%	9%	0%	0%	0
Aluminum	3.0	25%	0%	90%	0%	0
Acrylonitrile Butadiene Styrene	0.8	7%	0%	0%	0%	0
Polypropylene	0.5	4%	0%	0%	0%	0
Polyurethane	0.5	4%	0%	0%	0%	0
Other	0.4	3%	0%	0%	0%	0
TOTAL	**12.4**	**100%**	**4%**	**43%**	**0%**	**0**

Material	[kg]	[%]	Biogenic Material [kg C/product]
Packaging			
Cardboard	3.1	99%	1.3
LLDPE	0.04	1%	0.0

This product doesn’t contain any substances from the SVHC candidate list.

Additional Environmental Information

The product under review is manufactured at zero waste-to-landfill facility that are ISO 14001- and ISO 9001-certified. In addition, this product has the following certifications:

- Indoor Advantage Gold
- BIFMA Level 3 Certified

LCA Information

Functional Unit

The functional unit according to the PCR is one unit of seating to seat one individual, maintained for a 10-year period produced in Asia Pacific. The product under study has a 10-year service life under ANSI/BIFMA X5.1 and therefore does not require replacements to meet the functional unit.

LCA Stages

Production | Includes raw material extraction, pre-processing of materials, and transport to production. Includes component and final assembly manufacturing operations, both by Haworth and upstream suppliers, as well as intermediate transport and packaging requirements.

Construction | Includes an average distribution to customers. No additional storage is required.

Use | There are no impacts associated with use of the product.

End-of-Life | Includes transport to and disposal of product based on average US EOL rates.

Modules Declared and Data Variation

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	X	X	X	X	X	X	MND	MND	X	MND	MND	MND	X	X	X	X	X
Geography	GLO	GLO	GLO	AP	AP	AP	-	-	AP	-	-	-	AP	AP	AP	AP	AP
Specific data used	10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	n/a			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Allocation

General principles of allocation were based on ISO 14040/44. Where possible, allocation was avoided. At the part supplier production facilities, manufacturing inputs and outputs are allocated to co-products by mass because of the use of secondary datasets and no primary data available for part suppliers. At Haworth assembly facilities, manufacturing inputs and outputs are allocated to co-products based on economic value. This choice was deemed the most appropriate at Haworth facilities due to the availability of data on economic value. As a default, Sphera Managed LCA Content datasets use a physical mass basis for allocation.

Throughout the study recycled materials were accounted for via the cut-off method. Under this method, impacts and benefits associated with the previous life of a raw material from recycled stock are excluded from the system boundary and includes the impacts associated with reprocessing and preparation of recycled materials. Additionally, impacts and benefits associated with secondary functions of materials at end of life are also excluded.

Cut-Off Rules and Exclusions

Production of capital goods, infrastructure, and personnel-related activities are excluded, as required by the BIFMA PCR for seating.

Material and energy inputs greater than 1% (based on total mass of the final product for materials, based on total energy of manufacturing the final product for energy flows) were included within the scope of analysis. Material and energy inputs less than 1% were included if sufficient data was available to warrant inclusion and/or the material or energy input was thought to have significant environmental impact. Cumulative excluded material inputs and environmental impacts are less than 5% based on total weight of the functional unit. Cumulative excluded energy inputs and environmental impacts are less than 5% based on total energy required to manufacture 1 unit of product. Furthermore, neglected energy or mass flows do not make up more than 5% of energy or mass flows per module.

Data Quality

Process	Source Type	Source	Reference Year	Data Category	Share of Primary Data, of GWP-GHG Results for A1-A3
Generation of electricity and fuels used in manufacturing of product	Database	Sphera MLC 2024.2	2024	Primary data	8%
Other processes in manufacturing of the product, including processing of production waste	Database	Sphera MLC 2024.2	2024	Secondary data	0%
Transport of parts to assembly	Database	Sphera MLC 2024.2	2024	Primary data	2%
Raw material extraction and production	Database	Sphera MLC 2024.2	2024	Secondary Data	0%
Total share of primary data, of GWP-GHG results for A1-A3					**10%**

The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

LCA Results

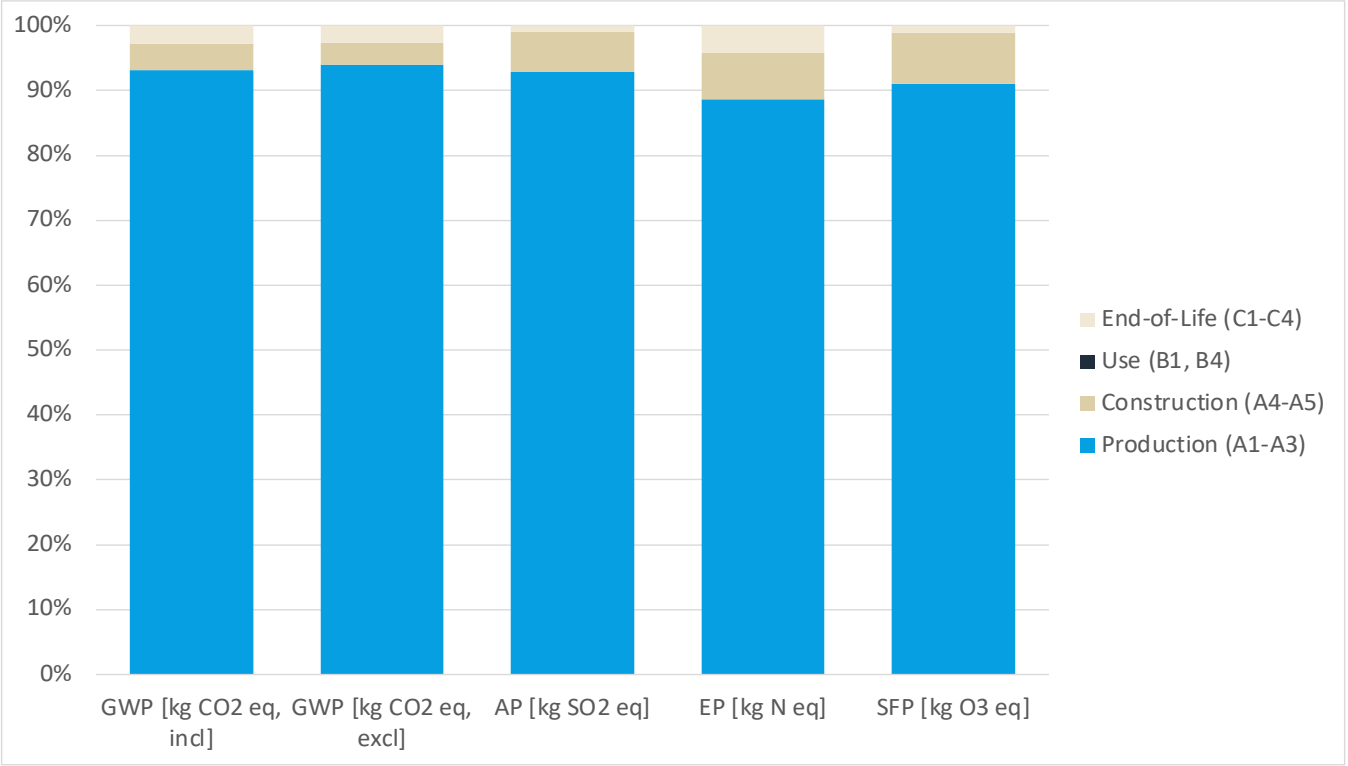
All results are given per functional unit, which is one unit of seating to seat one individual, maintained for a 10-year period. Results are reported separately by life cycle stage per the BIFMA PCR. The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3).

	Product Stage w/ Grid	Construction Stage		Use Stage			End of Life			Benefits and Loads Beyond the System Boundary
	A1-A3	*A4*	*A5*	*B1*	*B4*	*C1*	*C2*	*C3*	*C4*	*D*
IPCC AR6 LCIA Impacts										
Global Warming Potential, incl biogenic [kg CO_2 eq]	8.0E+01	2.1E+00	1.5E+00	0	0	0	3.4E-02	0	2.4E+00	-5.4E+00
Global Warming Potential, excl biogenic [kg CO_2 eq]	8.3E+01	2.0E+00	9.9E-01	0	0	0	3.3E-02	0	2.4E+00	-7.2E+00
TRACI 2.1 LCIA Impacts (North America)										
Acidification Potential [kg SO_2 eq]	2.7E-01	2.7E-02	3.5E-03	0	0	0	3.8E-04	0	2.3E-03	-3.0E-02
Eutrophication Potential [kg N eq]	1.7E-02	1.3E-03	4.0E-04	0	0	0	2.1E-05	0	8.1E-04	-2.1E-03
Ozone Depletion Potential [kg CFC 11 eq]	2.1E-07	2.8E-15	5.0E-14	0	0	0	4.2E-17	0	2.1E-14	-1.1E-07
Smog Formation Potential [kg O_3 eq]	4.1E+00	5.2E-01	3.4E-02	0	0	0	7.5E-03	0	3.6E-02	-3.6E-01
Resource Use Indicators										
Renewable primary resources used as an energy carrier [MJ]	1.3E+02	1.4E-01	1.6E+00	0	0	0	2.2E-03	0	7.1E-01	-6.8E+00
Renewable primary resources with energy content used as a material [MJ]	4.3E+01	0	0	0	0	0	0	0	0	0
Non-renewable primary resources used as an energy carrier [MJ]	1.0E+03	2.7E+01	5.7E+00	0	0	0	4.6E-01	0	6.1E+00	-1.0E+02
Non-renewable primary resources with energy content used as a material [MJ]	2.0E+02	0	0	0	0	0	0	0	0	0
Primary Energy Demand [MJ]	1.2E+03	2.7E+01	7.3E+00	0	0	0	4.6E-01	0	6.8E+00	-1.1E+02
Net fresh water usage [m^3]*	1.3E+00	2.4E-04	4.5E-03	0	0	0	3.9E-06	0	6.4E-03	-1.2E-01
Recovered Energy [MJ]	0	0	0	0	0	0	0	0	0	0
Carbon Emissions and Removals										
Biogenic Carbon Removal from Product [kg CO_2]	0	0	0	0	0	0	0	0	0	0
Biogenic Carbon Emission from Product [kg CO_2]	0	0	0	0	0	0	0	0	0	9.0E-01
Biogenic Carbon Removal from Packaging [kg CO_2]	4.9E+00	0	0	0	0	0	0	0	0	0
Biogenic Carbon Emission from Packaging [kg CO_2]	0	0	1.6E+00	0	0	0	0	0	0	3.3E+00
Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes [kg CO_2]	0	0	0	0	0	0	0	0	0	0

	Product Stage w/ Grid	Construction Stage		Use Stage				End of Life		Benefits and Loads Beyond the System Boundary
	A1-A3	*A4*	*A5*	*B1*	*B4*	*C1*	*C2*	*C3*	*C4*	*D*
Carbon Emissions from Combustion of Waste from Non-Renewable Sources used in Production Processes [kg CO_2]	0	0	0	0	0	0	0	0	0	0

* Water usage from electricity generation is included

The chart below presents the relative contribution of each life cycle stage to the TRACI 2.1 and IPCC environmental impact categories by life cycle stage per the BIFMA PCR.



Additionally, results have been calculated using LCIA methodologies for core environmental impact categories specified in EN 15804+A2, as well as LCI indicators required by EN15804+A2. This LCA and EPD uses EN 15804 as guidance for life cycle scope, impact indicators, carbon offsets, carbon storage, delayed emissions, additional information not derived from LCA, communication format, life cycle stages and information modules, calculation rules, system boundaries, criteria for exclusion of inputs and outputs, selection of data, data quality, product level scenarios, use of SI units, data collection, calculation procedures, allocation of input flows and output emissions, and information on biogenic carbon content. Additional results and scenarios are reported accordingly. Results are reported per functional unit. For this product, 1 unit of product is required to meet the functional unit. The results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins, or risks. The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3).

	Product Stage w/ Grid	Construction Stage		Use Stage				End of Life		Benefits and Loads Beyond the System Boundary
	A1-A3	*A4*	*A5*	*B1*	*B4*	*C1*	*C2*	*C3*	*C4*	*D*
GWP-GHG [kg CO_2 eq.]	8.3E+01	2.0E+00	1.0E+00	0	0	0	3.3E-02	0	2.4E+00	-7.2E+00
Climate Change - total [kg CO_2 eq.]	8.0E+01	2.0E+00	3.5E+00	0	0	0	3.3E-02	0	2.4E+00	-7.0E+00
Climate Change, fossil [kg CO_2 eq.]	8.3E+01	2.0E+00	5.4E-01	0	0	0	3.3E-02	0	2.4E+00	-7.0E+00
Climate Change, biogenic [kg CO_2 eq.]	-3.0E+00	0	3.0E+00	0	0	0	0	0	0	0
Climate Change, land use and land use change [kg CO_2 eq.]	4.2E-02	1.0E-04	5.0E-04	0	0	0	1.6E-06	0	2.7E-04	-2.8E-03
Ozone depletion [kg CFC-11 eq.]	1.6E-07	1.4E-13	2.5E-12	0	0	0	2.1E-15	0	1.1E-12	-8.0E-08
Acidification [Mole of H+ eq.]	3.1E-01	3.0E-02	3.4E-03	0	0	0	4.2E-04	0	2.2E-03	-3.5E-02
Eutrophication, freshwater [kg P eq.]	2.7E-04	2.8E-07	1.4E-05	0	0	0	4.2E-09	0	1.0E-04	-7.1E-05
Eutrophication, marine [kg N eq.]	7.5E-02	1.1E-02	7.3E-04	0	0	0	1.8E-04	0	6.4E-04	-6.0E-03
Eutrophication, terrestrial [Mole of N eq.]	7.9E-01	1.2E-01	1.1E-02	0	0	0	1.9E-03	0	7.1E-03	-6.1E-02
Photochemical ozone formation, human health [kg NMVOC eq.]	2.1E-01	2.3E-02	2.0E-03	0	0	0	3.4E-04	0	1.7E-03	-2.0E-02
Resource use, mineral and metals [kg Sb eq.]*	6.7E-05	5.2E-08	2.6E-08	0	0	0	5.2E-10	0	9.6E-09	-5.4E-06
Resource use, fossils [MJ]*	1.3E+03	2.7E+01	5.7E+00	0	0	0	4.6E-01	0	6.1E+00	-1.0E+02
Water use [m^3 world equiv.]*	2.3E+01	8.7E-03	1.9E-01	0	0	0	1.4E-04	0	2.7E-01	-1.2E+00
Use of renewable primary energy (PERE) [MJ]	1.3E+02	1.4E-01	1.6E+00	0	0	0	2.2E-03	0	7.1E-01	-6.8E+00

	Product Stage w/ Grid	Construction Stage		Use Stage				End of Life		Benefits and Loads Beyond the System Boundary
	A1-A3	*A4*	*A5*	*B1*	*B4*	*C1*	*C2*	*C3*	*C4*	*D*
Primary energy resources used as raw materials (PERM) [MJ]	4.3E+01	0	0	0	0	0	0	0	0	0
Total use of renewable primary energy resources (PERT) [MJ]	1.7E+02	1.4E-01	1.6E+00	0	0	0	2.2E-03	0	7.1E-01	-6.8E+00
Use of non-renewable primary energy (PENRE) [MJ]	1.0E+03	2.7E+01	5.7E+00	0	0	0	4.6E-01	0	6.1E+00	-1.0E+02
Non-renewable primary energy resources used as raw materials (PENRM) [MJ]	2.0E+02	0	0	0	0	0	0	0	0	0
Total use of non-renewable primary energy resources (PENRT) [MJ]	1.3E+03	2.7E+01	5.7E+00	0	0	0	4.6E-01	0	6.1E+00	-1.0E+02
Input of secondary material (SM) [kg]	8.9E+00	0	0	0	0	0	0	0	0	0
Use of renewable secondary fuels (RSF) [MJ]	0	0	0	0	0	0	0	0	0	0
Use of non renewable secondary fuels (NRSF) [MJ]	0	0	0	0	0	0	0	0	0	0
Use of net fresh water (FW) [m^3]	1.3E+00	2.4E-04	4.5E-03	0	0	0	3.9E-06	0	6.4E-03	-1.2E-01
Hazardous waste disposed (HWD) [kg]	4.4E-04	8.3E-10	3.4E-09	0	0	0	9.1E-12	0	1.5E-09	-2.1E-04
Non-hazardous waste disposed (NHWD) [kg]	4.4E+00	1.1E-03	6.6E-01	0	0	0	1.8E-05	0	9.3E+00	-2.1E-02
Radioactive waste disposed (RWD) [kg]	1.4E-02	1.7E-05	1.3E-04	0	0	0	1.8E-07	0	7.8E-05	-3.7E-04
High-level radioactive waste, conditioned, to final repository (HLRW) [kg]	1.7E-05	2.0E-08	1.6E-07	0	0	0	2.2E-10	0	9.0E-08	-5.9E-07
Intermediate- and low-level radioactive waste, conditioned, to final repository (ILLRW) [kg]	1.4E-02	1.7E-05	1.3E-04	0	0	0	1.8E-07	0	7.8E-05	-3.7E-04
Components for re-use (CRU) [kg]	0	0	0	0	0	0	0	0	0	0
Materials for Recycling (MFR) [kg]	1.4E+00	0	2.1E+00	0	0	0	0	1.6E+00	0	0
Material for Energy Recovery (MER) [kg]	0	0	0	0	0	0	0	0	0	0
Total recovered energy exported from the product system (EEE and EET) [MJ]	5.6E-01	0	8.7E-01	0	0	0	0	0	6.1E+00	0
Particulate matter [Disease incidences]	5.1E-06	3.3E-07	3.6E-08	0	0	0	3.9E-09	0	2.7E-08	-4.1E-07

	Product Stage w/ Grid	Construction Stage		Use Stage				End of Life		Benefits and Loads Beyond the System Boundary
	A1-A3	*A4*	*A5*	*B1*	*B4*	*C1*	*C2*	*C3*	*C4*	*D*
Ionizing radiation, human health [kBq U235 eq.]**	1.4E+00	1.3E-03	8.6E-03	0	0	0	1.3E-05	0	6.5E-03	-7.7E-03
Ecotoxicity, freshwater [CTUe]*	5.0E+02	3.1E+01	5.4E+00	0	0	0	5.4E-01	0	8.2E+00	-6.6E+01
Human toxicity, cancer [CTUh]*	2.8E-07	4.9E-10	1.5E-10	0	0	0	8.5E-12	0	1.2E-10	-2.7E-09
Human toxicity, non-cancer [CTUh]*	6.3E-07	9.6E-09	2.7E-09	0	0	0	1.6E-10	0	6.7E-09	-1.0E-07
Land Use [Pt]*	6.7E+01	7.5E-02	7.9E-01	0	0	0	1.1E-03	0	5.6E-01	-5.3E+00

The life cycle modules are defined by EN 15804 as follows: Product Stage – raw material supply, transport, and manufacturing; Construction Stage – distribution and installation; Use Stage – use of installed product, maintenance, repair, replacement, refurbishment, operational energy use, and operational water use; End of Life - deconstruction, transport of waste, waste processing, and disposal; Benefits and Loads Beyond the System Boundary - credits from energy and material capture.
*The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.
**This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

This EPD declares the energy source behind electricity used in the manufacturing process in A3 and its climate impact as kg CO_2 eq./kWh (using the GWP-GHG indicator).

A3 Electricity Climate Impact

Site	Energy Source	GWP-GHG	Unit
Pudong, China	Sub-national production mix and on-site generated solar	4.89E-01	kg CO_2 eq / kWh

Functional Unit

Parameter	Value
Declared unit	1 seat for 1 individual maintained for a 10-year period
Number of occupants	1
Reference service life required	10 years
Biogenic carbon in product	0 kg C
Biogenic carbon in packaging	1.3 kg C

A4: Transport to the building site

Parameter	Value per functional unit	Value per functional unit
Transportation type	Truck	Ship
Fuel consumption (l/km)	0.37 Diesel	130 Heavy Fuel Oil
Distance	830 km	3600 km
Capacity utilization	61%	53%
Capacity utilization volume factor	=1	=1
Weight of product (kg)	12.4	
Volume (m^3)	0.43	

A5: Installation in the building

Parameter	Value per functional unit
Ancillary materials	0 kg
Net freshwater consumption	0 m^3
Other resources	0 kg
Electricity consumption	0.625 kWh
Other energy carriers	0 MJ
Product loss	0 kg
Packaging waste produced	3.1 kg
Waste materials at the construction site before waste processing, generated by product installation	3.1 kg
Output materials resulting from on-site waste processing	0 kg
Direct emissions to ambient air, soil, and water	0 kg
VOC content	0 µg/m^3
Installation Assumptions	No product waste, Installed with hand tools.

B1: Use

Parameter	Value per functional unit
There are no emissions related to the expected use of this product.	

B4: Replacement

Parameter	Value per functional unit
Replacement cycle (#/RSL)	0
Energy input during replacement (kWh)	0
Exchange of worn parts during the products life cycle (kg)	0

C1-C4: End-of-life

Parameter	Value per functional unit
Weight of product collected	12.4 kg
Weight to recycling	2.3 kg
Weight to energy recovery	1.8 kg
Weight to landfill	8.4 kg
Distance to recycling	32 km
Distance to energy recovery	32 km
Distance to landfill	32 km

D: Benefits and Loads Beyond the System Boundary

Parameter	Value per functional unit
Includes all flows leaving the system not allocated as co-products and have passed the end-of-waste state. Includes loads from processing recycled materials. Credits are calculated based on the amount of useable material and energy sent to the next product system. Credits not applied to the portion of flows derived from secondary sources.	

Reference service life (RSL)

Parameter	Value per functional unit
Reference service life	10 years
Design application parameters	Use as indicated in product brochure and warranty
Declared product properties	Properties given in product description on page 3
Indoor environment	Typical office and home environment
Use conditions	Typical office and home use

Version History

2026-04-24: Original version

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