viccarbe

Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

Aleta chair, stool & lounge chair with four metal legs

from Viccarbe Habitat S.L.

Programme:
The International EPD® System, www.environdec.com

Programme operator:
EPD International AB

EPD registration number: S-P-18765

Publication date: 2025-06-02

Valid until: 2030-06-02

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

EPD of multiple products, based on a representative product. The list of products covered by this EPD is included in the product information section.

ECO PLATFORM EPD VERIFIED

EPD®
THE INTERNATIONAL EPD® SYSTEM

General information

Programme information

Programme	The International EPD® System
Address	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website	www.environdec.com
E-mail	info@environdec.com

Accountabilities for PCR, LCA and independent, third-party verification

Product Category Rules (PCR)

CEN standard EN 15804 serves as the Core Product Category Rules (PCR).

Product Category Rules (PCR): PCR 2019:14 Construction products, version 1.3.4 and c-PCR-021 Furniture (c-PCR to PCR 2019:14) (adopted from NPCR 026:2024 Part B for Furniture of EPD Norway).

PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact.

C-PCR review was conducted by: The Technical Committee of EPD International acting as PCR Review Panel for the adoption process. Review chair was Diogo Aparecido Lopes Silva, Universidade Federal de São Carlos.

Life Cycle Assessment (LCA)

LCA accountability: Jill Whelan, Viccarbe Habitat, S.L.

Third-party verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006 via:

☒ EPD verification by EPD Process Certification*

Internal auditor: María Mellado, Viccarbe Habitat, S.L.

Third-party verification: CERTINALIA, S.L.U. is an approved certification body accountable for third-party verification.

Third-party verifier is accredited by: ENAC, accreditation Nº 125 / C-PR283.

*EPD Process Certification involves an accredited certification body certifying and periodically auditing the EPD process and conducting external and independent verification of EPDs that are regularly published. More information can be found in the General Programme Instructions on www.environdec.com. International EPD System.

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 registered in different EPD programmes, or not compliant with EN 15804:2012+A2:2019/AC:2021, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same 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 equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterization factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Company information

Owner of the EPD
Viccarbe Habitat, S.L.

Camí del Racó, 23. P.I. Norte.
46469 Beniparrell, Valencia
- Spain

Contact
Silvia Rodrigo
(srodrigo@viccarbe.com)

Product-related or management system-related certifications:

– ISO 9001:2015
Quality management systems

– ISO 14001:2015
Environmental management systems

– EPD Process

Name and location of production site(s):

Camí del Racó, 23. P.I. Norte.
46469 Beniparrell, Valencia - Spain

More information:

www.viccarbe.com

Description of the organization

Founded in 2000 in Valencia, Viccarbe has established itself as an international reference in the design and manufacture of collaborative furniture for unique spaces, including corporate, hospitality, educational, and residential environments. With a vision focused on creating environments that encourage interaction, creativity, and well-being, Viccarbe has captured the essence of Mediterranean style, blending elegance, functionality, and warmth into each of its collections.

The brand collaborates with some of the world's most renowned designers, such as Patricia Urquiola, John Pawson, Piero Lissoni, Jaime Hayon, and Vincent Van Duysen, among others, who bring timeless and versatile collections to life that reflect excellence in design and attention to detail.

In addition, Viccarbe has been part of the Steelcase Group since 2021, further strengthening its leadership in creating collaborative spaces on a global scale. With a strong commitment to quality, innovation, and durability, the company holds international certifications such as ISO 9001 and ISO 14001, as well as UNE and ANSI/BIFMA strength, durability and safety standards for furniture, ensuring the highest standards of safety and performance.

Product information

Product name:

Aleta chair with four metal legs (representative product)

Product identification:

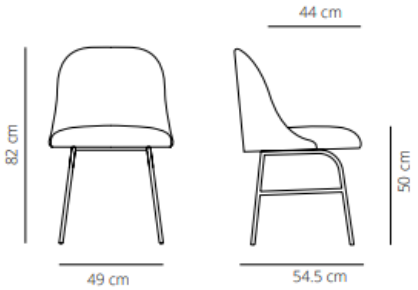
ALSIME (representative product)

Product description:

All seats included in the EPD are comprised of a moulded plywood seat and backrest, covered with expanding polyurethane foam, wadding and fabric. The metal bases are made from calibrated steel and can be either powder coated or with a brass finish. They can be used in both public and residential, indoor spaces.

UN CPC code:

3811: Seats.



TECHNICAL SPECIFICATIONS		
Representative product		**Other product ranges**
Width	49 cm	41 - 59 cm
Height	82 cm	82 - 112 cm
Depth	54,5 cm	51 - 72,5 cm
Height of seat	50 cm	43 - 78,5 cm
Depth of seat	44 cm	36 - 54 cm
Weight	6,99 kg	6,98 - 11,11 kg

Geographical scope:

The products are sold worldwide. Materials and processes within modules A1 – A3, A5 and all modules in B originate from Europe. The distribution of products to the Americas region has been included in A4 in addition to Europe. The end-of-life of the products has been modelled to represent Europe.

List of products covered by this EPD:

20 products are included in the EPD, all of which are composed of the same materials and are manufactured in the same manner. They differ in the quantity of material used and the finish applied to the metal bases. Each of the products (chairs, stools and lounge chairs) can be made with or without armrests. The stools can have high or low backrests and are available in two heights (bar or counter). The products include:

Product information

	PRODUCT LIST		
	Type	**Product code**	**Finish**
1	Chair	ALSIME (representative product)	Powder coating
2	Chair	ALSIME	Brass finish
3	Chair with armrest	ALSIMEBR	Brass finish
4	Chair with armrest	ALSIMEBR	Powder coating
5	Lounge chair	ALBUME	Brass finish
6	Lounge chair	ALBUME	Powder coating
7	Lounge chair with armrest	ALBUMEBR	Brass finish
8	Lounge chair with armrest	ALBUMEBR	Powder coating
9	Bar stool with low backrest	ALTA	Brass finish
10	Bar stool with low backrest	ALTA	Powder coating
11	Bar stool with high backrest	ALTAH	Brass finish
12	Bar stool with high backrest	ALTAH	Powder coating
13	Bar stool with armrest	ALTAHBR	Brass finish
14	Bar stool with armrest	ALTAHBR	Powder coating
15	Counter stool with low backrest	ALTAFC	Brass finish
16	Counter stool with low backrest	ALTAFC	Powder coating
17	Counter stool with high backrest	ALTAFCH	Brass finish
18	Counter stool with high backrest	ALTAFCH	Powder coating
19	Counter stool with armrest	ALTAFCHBR	Brass finish
20	Counter stool with armrest	ALTAFCHBR	Powder coating

CHAIRS

ALSIME

ALSIMEBR

LOUNGE CHAIRS

ALBUME

ALBUMEBR

BAR STOOLS

ALTA

ALTAH

ALTAHBR

COUNTER STOOLS

ALTAFC

ALTAFCH

ALTAFCHBR

LCA information

Functional unit: The production of one Aleta seat with four metal legs properly maintained during a reference service life of 15 years.

Mass (weight):

	CONVERSION FACTOR TO WEIGHT			
	Product code	**Type**	**Finish**	**Mass (kg)**
1	ALSIME	Chair	Powder coating	6,99
2	ALSIME	Chair	Brass finish	6,98
3	ALSIMEBR	Chair with armrest	Brass finish	8,36
4	ALSIMEBR	Chair with armrest	Powder coating	8,37
5	ALBUME	Lounge chair	Brass finish	10,54
6	ALBUME	Lounge chair	Powder coating	10,55
7	ALBUMEBR	Lounge chair with armrest	Brass finish	11,09
8	ALBUMEBR	Lounge chair with armrest	Powder coating	11,11
9	ALTA	Bar stool with low backrest	Brass finish	7,59
10	ALTA	Bar stool with low backrest	Powder coating	7,60
11	ALTAH	Bar stool with high backrest	Brass finish	8,05
12	ALTAH	Bar stool with high backrest	Powder coating	8,06
13	ALTAHBR	Bar stool with armrest	Brass finish	9,43
14	ALTAHBR	Bar stool with armrest	Powder coating	9,44
15	ALTAFC	Counter stool with low backrest	Brass finish	7,29
16	ALTAFC	Counter stool with low backrest	Powder coating	7,30
17	ALTAFCH	Counter stool with high backrest	Brass finish	7,75
18	ALTAFCH	Counter stool with high backrest	Powder coating	7,75
19	ALTAFCHBR	Counter stool with armrest	Brass finish	9,13
20	ALTAFCHBR	Counter stool with armrest	Powder coating	9,14

Reference service life: 15 years.

Technical lifespan: 15 years. Aleta four metal legs seats comply with ANSI/BIFMA X5.4-2012 and UNE-EN 16139:2013vc2015 standards for strength, durability and safety.

Time representativeness: the primary data has been collected during the year 2024. The process data and data corresponding to electricity are from 2023.

Database(s) and LCA software used: SimaPro 9.6.0.1 with Ecoinvent Database 3.10 (November 2023) – Allocation, cut-off by classification.

Description of system boundaries: Cradle to grave and module D (A + B + C + D).

LCA information

Electricity mix: the energy source behind the electricity use in the manufacturing process in A3 is from our electricity suppliers in 2023 and resulted in 0,103 kg CO_2 eq / kWh. Electricity modelling follows a market based approach and has considered low voltage electricity generated by the residual electricity production mix of specific suppliers for the year 2023 (source: CNMC Spain).

Cut-off criteria: life cycle inventory data for a minimum of 99% of total material and energy input flows have been included in the life cycle analysis. All modules have been included, however, modules B1, B3, B4, B5, B6, B7 and C1 are not applicable for this product (see justification).

Excluded processes and assumptions:

Scenarios are utilized for the use and end-of-life stages, taking into account geographical factors (such as the electricity mix) and specific applications (including waste treatment practices).

The following processes have been excluded:

— Manufacture of equipment used in production, buildings or any other capital goods

— The transportation of personnel to, from and within the plant

— Research and development activities

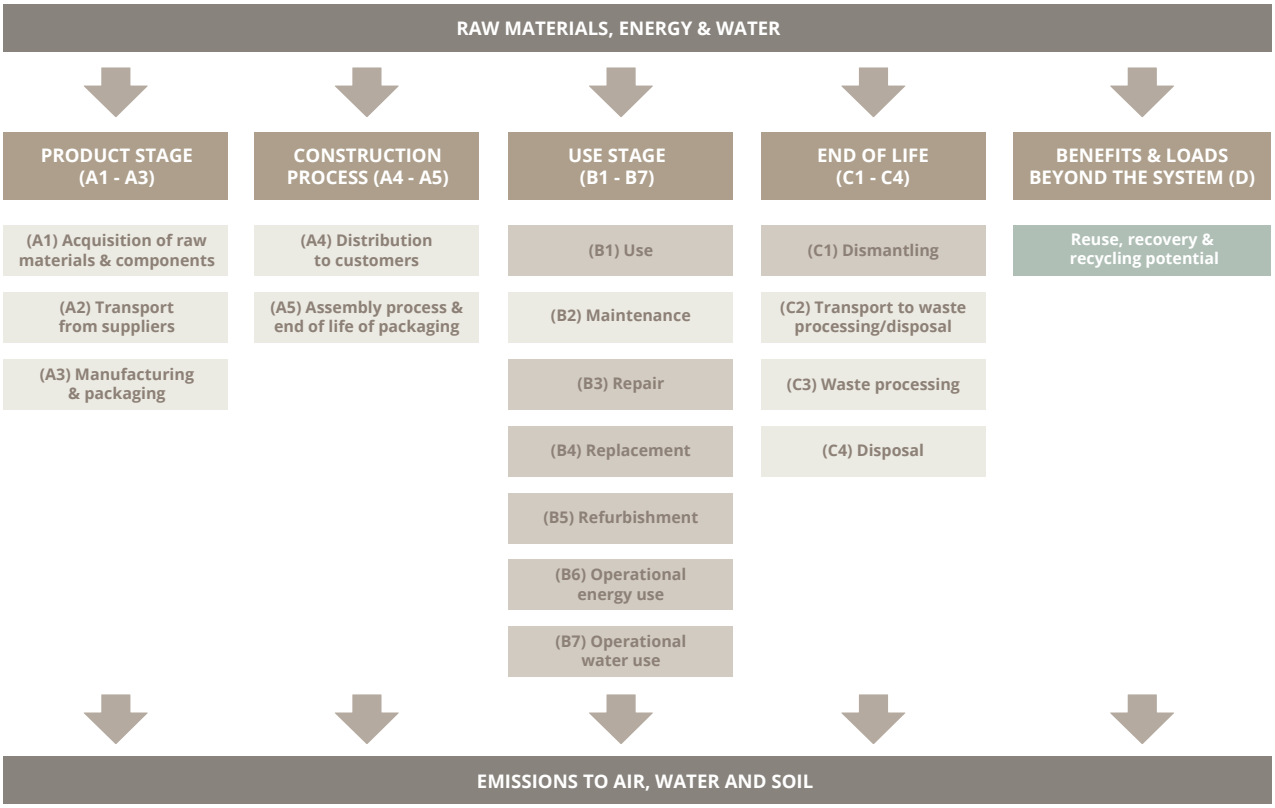
Labels, glides, staples, tape and thread have been excluded from the LCA as their weights and corresponding percentages are inferior to 1% of the total product weight.

Allocation criteria:

— Manufacturing data has been allocated based on annual production (units).

— End-of-life allocation procedures: the polluter pays criteria has been applied for materials and products end-of-life. In this approach the environmental burdens and benefits of recycled / reused materials are given to the product system consuming them, rather than the system providing them. This is known as the cut-off, recycled content approach.

LCA information



LEGEND

With impact

Without impact

More information

Modules A1 – A3:

The products and packaging materials are manufactured using raw materials from various suppliers within Europe. The textiles, wadding and black foam are cut internally at Viccarbe factory. The product is also assembled onsite.

The data used to complete this LCA was acquired with the help of suppliers, technical product manuals developed in Viccarbe and product experts in Viccarbe. In cases where primary data were unavailable or unattainable, calculations, estimations and / or information from internationally recognized databases were used in its place. The fabric analysed was based on a mix of the highest selling fabrics in 2023.

Module A2 represents the transport of the raw materials and components from the suppliers and / or manufacturers until the logistics centre for distribution of the final product using the transport types as notified by the suppliers. When this information was not available, the most conservative option was utilized.

Electricity consumption in A3 was based on actual data from 2023 invoices. Module A3 considers waste, consumables and chemical products in the plant involved in manufacturing. Losses attributed to manufacturing the products in our plant are included in this module. The losses are incurred from cutting textiles; 73% of losses are attributed to fabric, 24% from wadding and 3% from foam.

LCA information

Module A4:

Module A4 involves the distribution of the products (including packaging) to clients in 2023 by road and / or by container ship. Two scenarios were considered which were both weighted according to sales in both regions in 2023. Other scenarios were excluded as the destination and transport could not be accurately determined.

DISTRIBUTION TO CLIENTS			
Region	**EMEA**	**AMERICA**	
Type of transport	Lorry, EURO 5	Lorry, EURO 5	Container ship
Fuel consumption	Diesel, 0,33 l/km		Heavy fuel oil, 113,27 l/km
Distance (km)	2365,63	1362,00	6863,00
Capacity utilisation (including empty return)	50%		
Mass, product + packaging (kg)	10,03		
Volume (m^3)	0,28		
Usable capacity factor	Not applicable		

Module A5:

Module A5 includes the assembly of the seats and treatment of packaging waste material. The seats are delivered already assembled and no installation is required by the client.

PRODUCT INSTALLATION	
Auxiliary materials	Not applicable
Water use	
Other resource use	
Type of energy & use	
Waste materials generated	Polyethylene, 0,07 kg | Cardboard, 2,50 kg | Wood, 0,46 kg
Waste destinations	Recycled, 2,77 kg | Incinerated, 0,26 kg | Landfill, 0,01 kg
Direct emissions to air, water, soil	0 kg

LCA information

Modules B1 – B7:

Module B2 considers the following:

USE STAGE	
Maintenance process	Vacuuming with a 680W domestic appliance
Maintenance cycle	1 min, 24 times a year for 15 years (RSL)
Auxiliary materials required	Not applicable
Waste generated	
Water consumed	
Energy input, type of energy, quantity	Vacuum cleaning, Electricity, 0,272 kWh / year

The remaining modules are not applicable to the product with normal use and no water or energy are required for its use.

Modules C1 – C4:

The disassembly of the seats is performed manually, therefore, does not consume energy in module C1.

Module C2 includes the transport of the seats to their final destination for waste treatment.

Module C3 involves the materials incorporated into the seats that are recycled or processed for energy recovery whereas module C4 considers the materials that are destined for landfill. In both cases, data from EUROSTAT (on waste treatment and management operations in 2020) was incorporated.

END OF LIFE STAGE	
Collection process	6,99 kg collected separately
	0 kg collected with mixed waste construction
Recovery system, specified by type	0,46 kg reutilised
	4,31 kg recycled
	1,81 kg for energy recovery
Disposal, specified by type	0,88 kg for landfill
Distance to recycling facility	50 km
Distance to energy recovery facility	
Distance to landfill facility	

Module D:

The benefits and loads from waste treatments are included in module D. Energy recovery and recycled materials from both packaging and the product have been considered.

LCA information

Data quality assessment

The Life Cycle Assessment (LCA) study is based on specific data and represents the production of one Aleta seat with four metal legs. Since components are sourced from external suppliers, the manufacturing processes have been modeled using "Market for" materials and processes from Ecoinvent database in SimaPro, selecting the most suitable geographical conditions and applications for accurate representation.

In accordance with the criteria outlined in the "UN Environmental Global Guidance on LCA Database Development," as specified in EN 15804+A2, the data quality for all three representativeness categories - geographical, technical, temporal - can be described as good.

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

	PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				RESOURCE RECOVERY STAGE
	Raw material supply	Transport	Manufacturing	Distribution	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction / demolition / deinstallation	Transport to waste processing	Waste processing - reuse / recovery / recycling	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	x	x	x	x	x	x	x	x	x	x	x
Geography	EU	EU	ES	EMEA / America	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU
Specific data used	27%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - products	-2,89% / 73,47%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acronyms	ES = Spain, EU = European Union, EMEA = Europe, Middle East & Africa																

The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that does not capture all relevant aspects of data quality. The indicator is not comparable across product categories.

The percentage difference in variation in modules A - C represents the variation between the representative product and the other 19 declared products due to the following:

— Stools are manufactured using more metal for their bar base than the representative product.With a larger surface area, an increased quantity of coating powder or varnish is required contributing to the overall impact.

— The lounge chairs require more plywood as raw material for a larger and wider seat structure than the representative product. In addition to the plywood, more adhesive, textiles and foam are required, adding to the total impact of the lounge chairs.

These differences account for the percentage variation throughout all stages of the life-cycle of the products.

Content information

PRODUCT COMPONENTS	MASS, kg REPRESENTATIVE PRODUCT	MASS, kg OTHER DECLARED PRODUCTS	BIOGENIC MATERIAL, MASS - % OF PRODUCT	BIOGENIC MATERIAL, kg C / FUNCTIONAL UNIT
Plywood	3,20	3,00 - 5,34	45,45%	1,45
Steel	2,49	2,49 - 3,59	0,00%	0,00
Polyester	0,15	0,15 - 0,29	0,00%	0,00
Polyurethane	0,46	0,28 - 1,32	0,00%	0,00
Textiles	0,40	0,31 - 0,74	0,00%	0,00
Adhesive	0,25	0,25 - 0,37	0,00%	0,00
Paint	0,03	0,03 - 0,05	0,00%	1,00
Plastic	0,01	0,01	0,00%	0,00
TOTAL	6,99	6,98 - 11,11	20,82%	1,45

PACKAGING MATERIALS	MASS, kg REPRESENTATIVE PRODUCT	MASS, kg OTHER DECLARED PRODUCTS	MASS - % (VS THE PRODUCT)	BIOGENIC MATERIAL, kg C / FUNCTIONAL UNIT
Polyethylene	0,07	0,07 - 0,15	1,03%	0,00
Cardboard	2,50	2,50 - 3,67	35,78%	1,25
Pallet	0,46	0,46 - 0,96	6,56%	0,21
Labels	0,01	0,01	0,07%	0,00
TOTAL	3,04	3,04 - 4,21	43,45%	1,46

The % of post-consumer recycled content in product and packaging is <5%.

The products do not contain a concentration higher than 0,1% (1000 ppm) of substances of very high concern (SVHC) on the REACH Candidate List published by the European Chemicals Agency.

Results of the environmental performance indicators

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

The results of the end-of-life stage (module C) should be considered when using the results of the production stage (modules A1-A3).

Mandatory impact category indicators according to EN 15804 reference package based on EF 3.1

RESULTS PER FUNCTIONAL UNIT																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**	**% Variation A - C**
GWP-fossil	kg CO_2 eq.	2,28E+01	3,31E+00	2,59E-01	0	1,34E+00	0	0	0	0	0	0	1,99E-01	1,52E-01	3,09E-01	-4,76E+00	-2,36% / 68,88%
GWP-biogenic	kg CO_2 eq.	-1,05E+01	5,45E-04	5,36E+00	0	2,96E-03	0	0	0	0	0	0	3,92E-05	5,32E+00	2,06E-02	5,12E-02	-4,40% / 46,15%
GWP-luluc	kg CO_2 eq.	7,76E-02	1,15E-03	2,69E-05	0	4,07E-03	0	0	0	0	0	0	7,63E-05	4,13E-05	8,81E-06	-3,79E-03	0,00% / 103,72%
GWP-total	kg CO_2 eq.	1,23E+01	3,31E+00	5,61E+00	0	1,34E+00	0	0	0	0	0	0	1,99E-01	5,47E+00	3,29E-01	-4,71E+00	-2,32% / 68,61%
ODP	kg CFC 11 eq.	4,34E-06	6,51E-08	3,36E-09	0	2,46E-08	0	0	0	0	0	0	3,93E-09	8,87E-10	5,49E-10	-9,02E-08	-19,38% / 86,69%
AP	mol H^+ eq.	1,29E-01	1,53E-02	1,18E-03	0	7,85E-03	0	0	0	0	0	0	5,84E-04	7,18E-04	5,69E-04	-1,68E-02	-1,45% / 71,58%
EP-freshwater	kg P eq.	7,02E-03	2,20E-04	7,13E-06	0	1,24E-03	0	0	0	0	0	0	1,59E-05	2,26E-05	4,66E-06	-1,67E-03	-1,95% / 49,66%
EP-marine	kg N eq.	4,02E-02	4,66E-03	5,24E-04	0	1,23E-03	0	0	0	0	0	0	1,84E-04	4,46E-04	7,85E-03	-4,50E-03	-6,49% / 86,03%
EP-terrestrial	mol N eq.	3,31E-01	5,10E-02	5,62E-03	0	1,10E-02	0	0	0	0	0	0	2,00E-03	3,43E-03	3,03E-03	-4,93E-02	-0,87% / 69,46%
POCP	kg NMVOC eq.	1,10E-01	1,97E-02	2,20E-03	0	3,64E-03	0	0	0	0	0	0	8,88E-04	8,57E-04	7,87E-04	-1,68E-02	-1,35% / 69,98%
ADP-minerals & metals*	kg Sb eq.	1,78E-04	9,75E-06	1,51E-07	0	1,79E-05	0	0	0	0	0	0	8,63E-07	1,06E-07	5,77E-08	8,79E-07	-3,32% / 60,84%
ADP-fossil*	MJ	3,44E+02	4,67E+01	2,84E+00	0	3,11E+01	0	0	0	0	0	0	2,77E+00	7,07E-01	3,98E-01	-5,71E+01	-2,69% / 65,74%
WDP*	m^3	1,06E+01	2,02E-01	6,83E-03	0	3,85E-01	0	0	0	0	0	0	1,18E-02	2,09E-02	-4,02E-02	-3,54E-01	-1,24% / 61,88%
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption																

** The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

Results of the environmental performance indicators

Additional mandatory and voluntary impact category indicators

RESULTS PER FUNCTIONAL UNIT																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**	**% Variation A - C**
GWP-GHG[1]	kg CO_2 eq.	2,28E+01	3,31E+00	2,59E-01	0	1,34E+00	0	0	0	0	0	0	1,99E-01	1,52E-01	3,09E-01	-4,76E+00	-2,34% / 68,97%

[1] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO2 is set to zero.

RESULTS PER FUNCTIONAL UNIT																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**	**% Variation A - C**
Human toxicity, cancer	CTUh	6,87E-07	2,15E-08	4,16E-10	0	3,13E-09	0	0	0	0	0	0	1,53E-09	6,55E-10	3,34E-10	-1,13E-06	-0,36% / 39,75%
Human toxicity, non-cancer	CTUh	3,65E-07	2,86E-08	1,16E-09	0	2,17E-08	0	0	0	0	0	0	1,66E-09	3,42E-09	1,94E-09	-1,53E-08	-0,69% / 61,42%
Ecotoxicity, freshwater	CTUe	4,13E+02	1,19E+01	5,52E-01	0	5,55E+00	0	0	0	0	0	0	9,14E-01	5,07E-01	2,11E+00	-3,02E+02	-0,94% / 83,39%
Land use	Pt	6,92E+02	3,45E+01	3,38E-01	0	6,91E+00	0	0	0	0	0	0	1,16E+00	1,37E-01	4,68E-01	-5,26E+02	-0,16% / 55,03%
Particulate matter	disease inc.	1,54E-06	2,74E-07	2,81E-08	0	2,80E-08	0	0	0	0	0	0	1,15E-08	4,70E-09	2,89E-09	-3,06E-07	-0,71% / 62,52%
Ionising radiation	kBq U-235 eq	2,42E+00	5,95E-02	1,87E-03	0	8,59E-01	0	0	0	0	0	0	5,21E-03	7,09E-03	4,96E-04	-2,11E-01	-2,66% / 19,54%
Eutrophication	kg PO_4 eq.	4,41E-02	2,50E-03	3,08E-04	0	4,46E-03	0	0	0	0	0	0	1,26E-04	4,25E-04	9,04E-03	-7,32E-03	-1,39% / 80,15%

Results of the environmental performance indicators

Resource use indicators

RESULTS PER FUNCTIONAL UNIT																	
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**	**% Variation A - C**
PERE	MJ	1,12E+02	7,55E-01	2,06E-02	0	8,37E+00	0	0	0	0	0	0	6,41E-02	6,37E-02	7,44E-03	-7,71E+01	-0,65% / 42,81%
PERM	MJ	1,04E+02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58,12%
PERT	MJ	2,16E+02	7,55E+01	2,06E-02	0	8,37E+00	0	0	0	0	0	0	6,41E-02	6,37E-02	7,44E-03	-7,71E+01	-0,35% / 49,89%
PENRE	MJ	3,35E+02	4,64E+01	2,83E+00	0	2,71E+01	0	0	0	0	0	0	2,74E+00	6,73E-01	3,94E-01	-5,67E+01	-2,66% / 66,74%
PENRM	MJ	3,61E+01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-19,80% / 111,24%
PENRT	MJ	3,71E+02	4,64E+01	2,83E+00	0	2,71E+01	0	0	0	0	0	0	2,74E+00	6,73E-01	3,94E-01	-5,67E+01	-3,04% / 70,30%
SM	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
RSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
NRSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
FW	m^3	1,26E+00	6,62E-03	2,53E-04	0	2,69E-02	0	0	0	0	0	0	4,46E-04	7,55E-04	-7,90E-04	-1,67E-02	-15,64% / 77,11%
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water																

Waste indicators

RESULTS PER FUNCTIONAL UNIT																	
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**	**% Variation A - C**
Hazardous waste disposed	kg	4,56E-03	3,08E-04	1,96E-05	0	6,67E-05	0	0	0	0	0	0	1,88E-05	3,68E-06	2,67E-06	-5,05E-04	-15,90% / 90,24%
Non-hazardous waste disposed	kg	3,20E+00	2,84E+00	2,51E-02	0	1,02E-01	0	0	0	0	0	0	8,51E-02	4,00E-02	6,48E-01	-2,34E-01	-0,82% / 61,60%
Radioactive waste disposed	kg	1,17E-03	1,48E-05	4,68E-07	0	2,21E-04	0	0	0	0	0	0	1,31E-06	1,82E-06	1,23E-07	-5,23E-05	-9,57% / 46,04%

Results of the environmental performance indicators

Output flow indicators

RESULTS PER FUNCTIONAL UNIT																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**	**% Variation A - C**
Components for re-use	kg	0	0	4,60E-01	0	0	0	0	0	0	0	0	0	0	0	0	100,00%
Material for recycling	kg	3,38E-01	0	2,73E+00	0	0	0	0	0	0	0	0	0	4,31E+00	0	0	40,39%
Materials for energy recovery	kg	1,66E-03	0	2,90E-01	0	0	0	0	0	0	0	0	0	1,81E+00	0	0	-5,71% / 71,37%
Exported energy, electricity	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3,68E+00	0%
Exported energy, thermal	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-7,40E+00	0%

Additional environmental information

The product is assembled in Viccarbe's factory in Beniparrell, Spain. Viccarbe is accredited to the environmental standard ISO 14001.

At Viccarbe we try to design products with easily interchangeable parts, making it easier to recycle the various components at the end of their life cycle. Instructions for proper maintenance to guarantee an adequate life cycle of the product are specified in the Maintenance Indoor & Outdoor manual, available on www.viccarbe.com.

The polyurethane foam is CertiPUR and Oeko-TEX certified.

We use powder coating obtained from polyester resins without TGIC on our metallic structures. It offers hard weather resistance, maintaining its gloss and resistance to the UV rays, and complies with international specifications of QUALICOAT. No solvents are present in polyester powder coatings; therefore, they are free of volatile organic compounds (VOCs). Powder coatings neither contain heavy metals such as cadmium and lead.

We carefully analyse the packaging of our product, using the quantity of cardboard, plastic, or foam strictly necessary to avoid the product being damaged in any way during transport.

We take environmental impact into account when selecting raw materials. 98% of our suppliers are European, allowing us to minimize the environmental impact caused by transport. The remaining 2% come from the USA.

For the distribution of our products, we use groupage transport companies, ensuring that the trucks are full.

VOC emissions

This product is in scope of Indoor Advantage Gold certification number SCS-IAQ-11049 issued by SCS Global Services, and therefore conforms to the ANSI/BIFMA Furniture Emissions Standard (M7.1/X7.1-2011 R2021) and ANSI/BIFMA e.3-2019 (Credits 7.6.1, 7.6.2, 7.6.3) for seating parameters. [1] Also, conforms to the CDPH/EHLB Standard Method (CA 01350) v1.2-2017 for seating[1] and school classroom[2] parameters.

[1]Modeled as Office Seating
[2]Modeled as Pupil Seating

The plywood used in the manufacturing process of the product complies with TSCA Title VI + CARB ACTM 93120.

Additional environmental information

Conversion factors

For specific GWP - GHG results for each of the declared products, it is necessary to multiply the results of A1 – A3 GWP – GHG of the representative product (2,28E+01 kg CO_2 eq) by the A1 – A3 conversion factor value in the table below.

	GWP - GHG			
	Product code	**Finish**	**Mass (kg)**	**A1 - A3 Conversion factor**
1	ALSIME	Powder coating	6,99	1,00
2	ALSIME	Brass finish	6,98	0,97
3	ALSIMEBR	Brass finish	8,36	1,09
4	ALSIMEBR	Powder coating	8,37	1,11
5	ALBUME	Brass finish	10,54	1,60
6	ALBUME	Powder coating	10,55	1,63
7	ALBUMEBR	Brass finish	11,09	1,70
8	ALBUMEBR	Powder coating	11,11	1,73
9	ALTA	Brass finish	7,59	1,04
10	ALTA	Powder coating	7,60	1,08
11	ALTAH	Brass finish	8,05	1,11
12	ALTAH	Powder coating	8,06	1,15
13	ALTAHBR	Brass finish	9,43	1,21
14	ALTAHBR	Powder coating	9,44	1,26
15	ALTAFC	Brass finish	7,29	1,01
16	ALTAFC	Powder coating	7,30	1,05
17	ALTAFCH	Brass finish	7,75	1,07
18	ALTAFCH	Powder coating	7,75	1,11
19	ALTAFCHBR	Brass finish	9,13	1,18
20	ALTAFCHBR	Powder coating	9,14	1,22

Differences versus previous versions

Version	Version date	Description of the differences versus the previously published version
Original version of the EPD	--	--

This is the original version of the EPD.

Abbreviations

— CEN - European Committee for Standardization
— CPC - Central product classification
— c-PCR - Complementary product category rules
— ENAC - Spanish National Accreditation Body
— EPD - Environmental product declaration
— EU - European Union
— FAQ - Frequently asked questions
— GHG - Greenhouse gas
— GPI - General programme instructions
— GWP - Global warming potential
— IAQ - Indoor Air Quality
— ISO - International Organization for Standardization
— LCA - Life cycle assessment
— LCI - Life cycle inventory
— LCIA - Life cycle impact assessment
— PCR - Product category rules
— PEF - Product environmental footprint
— PPM - Parts per million
— REACH - Restriction of chemicals
— RSL - Reference service life
— SVHC - Substance of very high concern
— USA - United States of America

References

— Central Product Classification (CPC) Version 2.1. United Nations, New York 2015.

— ECOINVENT. Ecoinvent Centre, www.ECO-invent.org

— EN 15804:2012+A2:2019/AC:2021, Sustainability in construction works – Environmental product declarations – Core rules for the product category of construction products.

— EPD International (2024) General Programme Instructions for the International EPD System. Version 4.0.0. www.environdec.com.

— EPD International PCR 2019:14 V1.3.4 for construction products.

— EUROSTAT (2020). Recycling rates of packaging waste for monitoring compliance with policy targets, by type of packaging.

— Instituto de Estudios de la Seguridad (2010). Búsqueda y validación de parámetros de la carga de fuego en establecimientos industriales.

— ISO 14040:2006/A1:2021. Environmental management – Life cycle assessment. Principles and framework.

— ISO 14044:2006 /A1:2018 + A2:2021. Environmental management – Life cycle assessment. Requirements and guidelines.

— ISO 14025:2006. Environmental declarations and labels.

— PCR 2019:14-c-PCR-021 (adopted from NPCR 026:2024 Part B for Furniture of EPD Norway)

— Phyllis2 database for the physico-chemical composition of (treated) lignocellulosic biomass, micro- and macroalgae, various feedstocks for biogas production and biochar. Link: https://phyllis.nl/

— SimaPro LCA Software. https://simapro.com/

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