

AENOR

EPD
INTERNATIONAL EPD SYSTEM

Environmental Product Declaration



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

Aluminium Honeycomb Panels for Architectural Envelopes

EPD of multiple products, based on the average results of the product group

larcore® A2 6mm; larcore® A2 8mm;
larcore® A2 10 mm; larcore® A2 14 mm

from

Alucoil® S.A.U



Programme:

Programme operator:

Type of EPD:

EPD registration number:

Registration code:

Version date:

Validity date:

The International EPD System, www.environdec.com

EPD International AB

EPD of multiple products from a company

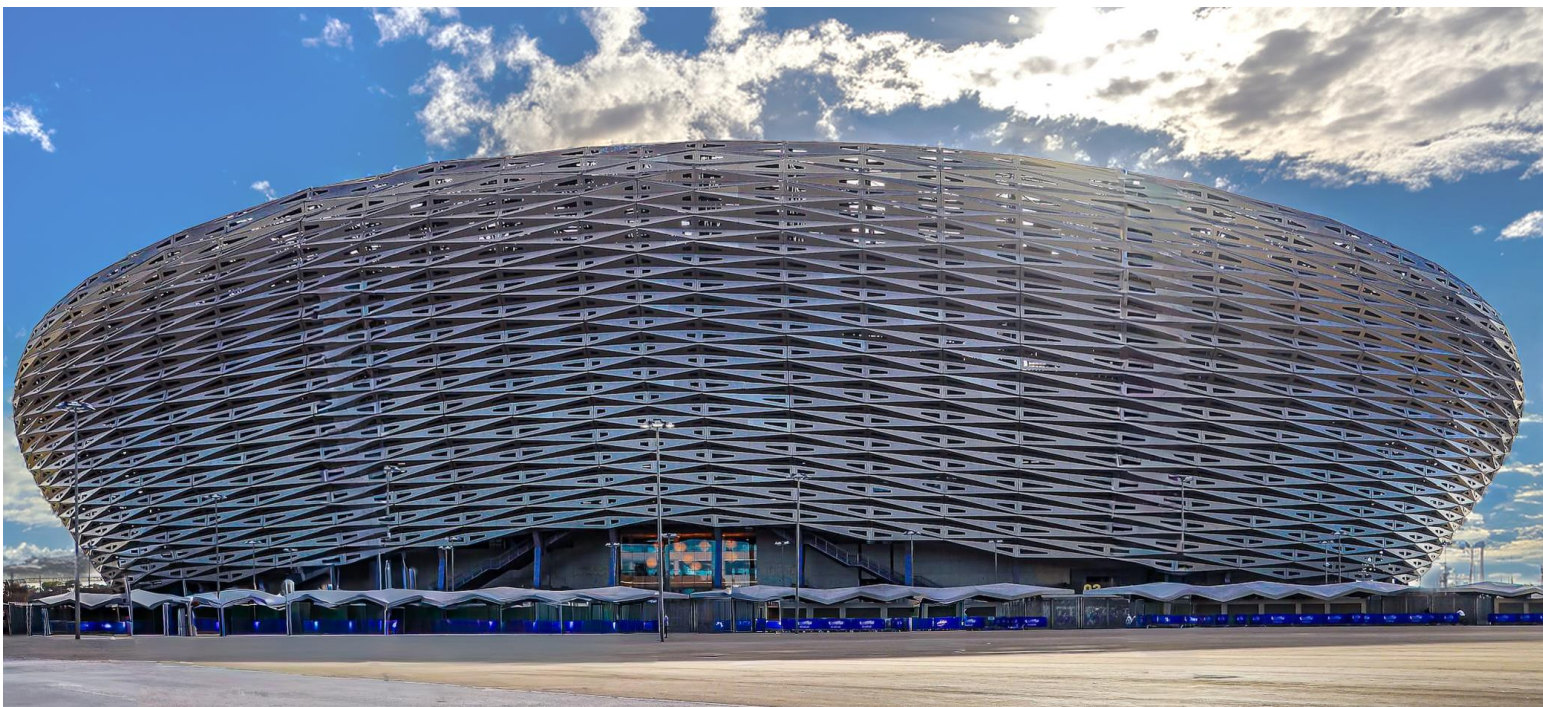
EPD-IES-002207:002

GlobalEPD B62.04-0003

2026-09-18

2031-09-18

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



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:	support@environdec.com
Product Category Rules (PCR)	
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)	
Product Category Rules (PCR): PCR Construction products 2019:14 v2.0.1	
PCR review was conducted by: Rouwette (chair), Noa Meron (co-chair)	
Third-party Verification	
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:	
☒ Individual EPD verification without a pre-verified LCA/EPD tool Third-party verifier: <i>Elisabet Amat Guasch, eamat@greenize.es</i> Approved by: <i>International EPD System</i>	
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ No	
[Procedure for follow-up the validity of the EPD is at minimum required once a year with the aim of confirming whether the information in the EPD remains valid or if the EPD needs to be updated during its validity period. The follow-up can be organized entirely by the EPD owner or together with the original verifier via an agreement between the two parties. In both approaches, the EPD owner is responsible for the procedure being carried out. If a change that requires an update is identified, the EPD shall be re-verified by a verifier]	

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. For further information about comparability, see EN 15804 and ISO 14025.

INFORMATION ABOUT EPD OWNER

Owner of the EPD: Alucoil® S.A.U

Address: Pol. Ind. de Bayas, C/ Ircio, Parc. R68-R74, 09200 Miranda de Ebro, Spain

Contact: Regina Cid Pereda, regina.cid@alucoil.com

Address and contact information of the LCA practitioner commissioned by the EPD owner, if applicable: Eva Martínez Herrero, evamtz@ctme.es

Description of the organisation: Alucoil® is a Spanish multinational company headquartered in Miranda de Ebro (Burgos), specializing in manufacturing technologically advanced materials for the construction, transportation, and industrial sectors. Since 1996, it has been manufacturing and transforming the most innovative aluminium solutions under its own globally recognized brands, becoming a benchmark in technology, innovation, and professionalism.

In addition to its operations in Spain, it has a factory in Morocco and serves and exports its products to more than 90 countries worldwide. Alucoil® manufactures products that offer high added value to its customers and is organized into three main production areas: composites, honeycomb, and concentrated solar power.



Product-related or management system-related certifications

EUROPE [EN 13501-1:2007] **A2-s1,d0**

AUSTRALIA [AS/NZS 1530.3-1999]-[AS/NZS 3837-1998]

USA [ASTM E84] - [NFPA285]



larcore® A2 14mm HideTech® PLUS / ETA 16-0274

larcore® A2 Metals Zinc 15mm HideTech® PLUS / ETA 16-0287

larcore® A2 14 mm HideTech® PRO - FIRE CLASS ARCHITECTURAL A2-s1,d0 (EN 13501-1)



Standard Test Method for Surface Burning Characteristics of Building Materials.

- Iarcore® A2 25 mm according to ASTM E84-15b.

Standard Test Method for Determining Ignition Temperature of Plastics.

- Iarcore® A2 14 mm according to ASTM D1929.

Standard test method for the determination of combustibility parameters of building materials using an oxygen consumption calorimeter (CONE CALORIMETER).

- Iarcore® A2 14 mm according to ASTM E84.

Standard test method for the determination of combustibility parameters of building materials using an oxygen consumption calorimeter (CONE CALORIMETER).

- Iarcore® A2 14 mm according to CANULC S135

Fire performance of external cladding systems. Test method for non-loadbearing external cladding systems fixed to and supported by a structural steel frame.

- Iarcore® A2 6 mm with Hidetech® LIGHT system has passed the BR 135 criteria, tested according to BS 8414-2.

Fire classification of construction products and building elements.

- Iarcore® A2 range, from 8 mm till 20 mm thickness, Hidetech® PRO system, A2-s1, d0 according to EN 13501-1.
- Iarcore® A2 6 mm Hidetech® LIGHT system, A2-s1, d0 according to EN 13501-1.

Full-scale fire test. Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components.

- Iarcore® A2 14 mm with Hidetech® PRO system. PASSED according to NFPA 285.

Standard Method of Fire Test of Exterior Wall Assemblies.

- Iarcore® A2 14 mm PASSED according to CANULC S134.

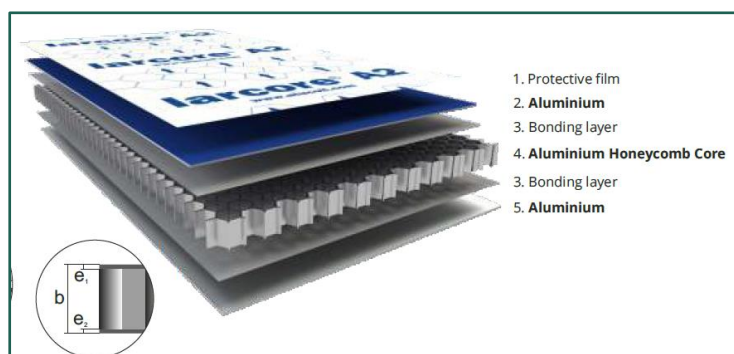
(Iarcore A2 14 mm 0.7/0.7) is ULC-S135 compliant to be used in noncombustible construction as defined by the National Building Code of Canada.

PRODUCT INFORMATION

Product name: Iarc core[®] A2, Aluminium Honeycomb Panels for Architectural Envelopes.

Product identification: Iarc core[®] A2 is a new generation of advanced materials based on aluminium honeycomb technology. It represents a balance between weight, flatness, rigidity, and fire rating. It is an ideal cladding panel for architectural projects that value rigidity, lightness, low heat output, non-toxicity, recyclability, natural ventilation, and energy efficiency. Iarc core[®] A2 is used as a suspended ventilated facade cladding.

Visual representation of the product:



UN CPC code: 4219, 4153

Product description: Iarc core[®] A2 aluminium honeycomb cladding panels are available with overall thicknesses of 6, 8, 10, and 14 mm and skin thicknesses of 0.7/0.5, 0.7/0.7, 0.7/0.7, 0.7/0.7, and 1.0/1.0 mm. Each product is available in widths of 1 000, 1 250, 1 500, and 2 000 mm and lengths between 2 000 and 14 000 mm.

	Iarc core [®] A2 6 mm	Iarc core [®] A2 8 mm	Iarc core [®] A2 10 mm	Iarc core [®] A2 14 mm	Iarc core [®] A2 14 mm 1.0 /1.0
Total thickness of panel "b"	6±0.2 [mm]	8±0.2 [mm]	10±0.2 [mm]	14±0.2 [mm]	14±0.2 [mm]
Metal thickness "e1"	0.7 [mm]	0.7 [mm]	0.7 [mm]	0.7 [mm]	1.0 [mm]
Metal thickness "e2"	0.5 [mm]	0.7 [mm]	0.7 [mm]	0.7 [mm]	1.0 [mm]
Theoretical average panel weight	4.19 [kg/m ²]	4.83 [kg/m ²]	4.94 [kg/m ²]	5.17 [kg/m ²]	6.75 [kg/m ²]
Alloy	5000 Series EN 573-3 3000 Series EN 573-3 5754 Series* EN 573-3				
Standard width	1 000 ^{+2/-0} / 1 250 ^{+2/-0} / 1 500 ^{+2/-0} / 2 000 ^{+2/-0} [mm]				
Min/max length	2 000 ^{+6/-0} - 14 000 ^{+6/-0} [mm]				
Rigidity (*) "EI"	2 825 [kNcm ² /m] DIN 53293	9 421 [kNcm ² /m] DIN 53293	24 458 [kNcm ² /m] DIN 53293	49 915 [kNcm ² /m] DIN 53293	68 198 [kNcm ² /m] DIN 53293
"RA" sound insulation	19.54 [dBA] ISO 10140-2	19.95 [dBA] ISO 10140-2	20.23 [dBA] ISO 10140-2	21 [dBA] ISO 10140-2	21.56 [dBA] ISO 10140-2
FINISHES					
Lacquered surface	PURPA, PE, HQPE, FEVE and PVDF finishes in two-layer, three-layer and four-layer coatings (depending on the finish and colour)				

larcore® panels are manufactured via a standardized continuous process on a dedicated production line. The sequence includes skin unwinding, aluminium honeycomb core expansion, and adhesive bonding, followed by curing and the application of a protective film. The final panels are shaped through automated cutting and palletized for shipping.

Name and location of production site(s): Pol. Ind. de Bayas, C/ Ircio, Parc. R68-R74, 09200 Miranda de Ebro, Burgos (Spain).

References to any relevant websites for more information: www.alucoil.com

CONTENT DECLARATION

This content declaration represents the average composition of the panels included in this EPD, weighted by production volume.

- The mass (weight) per declared unit: 5.83±32% kg/m²
- Content of the product in the form of a list of materials and substances, and their mass:

CONTENT OF THE PRODUCT

PRODUCT CONTENT	MATERIALS AND SUBSTANCES	Mass, kg/m ²	%	Post-consumer recycled material, mass-% of product	Biogenic material, kg C/declared unit
Protective film	PE & natural rubber	0.0744±0%	1%	0%	0
External face (metal)	Lacquered aluminium	2.47±23%	42%	26% [±40]%	0
Adhesive	Adhesive	0.360±0%	6%	0%	0
Core	Aluminium Foil	0.577±53%	10%	3% [±46]%	0
Inner face (metal)	Aluminium primer	2.35±42%	40%	16% [±42]%	0
THEORETICAL TOTAL		5.83±32%	100%	46% [±32]%	

PACKAGING

PACKAGING MATERIALS	MATERIALS AND SUBSTANCES	Mass, kg/m ²	Mass-% (versus the product)	Biogenic material, kg C/declared unit
Wood	Wood	0.94	20%	0.44
Agglomerate	Wood	0.12	2%	0.055
Plastic	PE	0.013	0.28%	0
Polystyrene	Expanded polystyrene	0.018	0.38%	0
Strapping	Plastic	0.0017	0.04%	0
TOTAL		1.09	23%	0.50

1 kg biogenic carbon in the product/packaging is equivalent to the uptake of 44/12 kg of CO₂.

- The mass and the content of distribution and/or consumer packaging: 1.09 kg/m²
- Information on the environmental and hazardous/toxic properties of substances contained in the product: No substances included in the Candidate List of Substances of Very High Concern (SVHC) for authorization under the REACH Regulation are present in the product in a concentration exceeding 0.1% by weight.

- **The declared share of biogenic/recycled materials:** The product contains 46% post-consumer recycled material. This share is based on the actual physical content of recycled material in the product, calculated as a weighted average over the reference one-year production period.

LCA INFORMATION

Declared unit: The declared unit is 1 m² of honeycomb panel element with a thickness of 6-14 mm, covering the following widths: 1 000/1 250/1 500/2 000 mm, and lengths between 2 000 and 14 000 mm.

Conversion factor to mass if mass is not used as functional/declared unit (not applicable for services): 5.83 kg/m².

Reference service life: The estimated lifespan of the panels is 50 years for their intended use in the building.

Time representativeness: 2024

Geographical scope: Europe (A1, A2), Spain (A3), Global (C1-C4), Global (D).

The geographical scope is global; the EPD represents products sold on the global market.

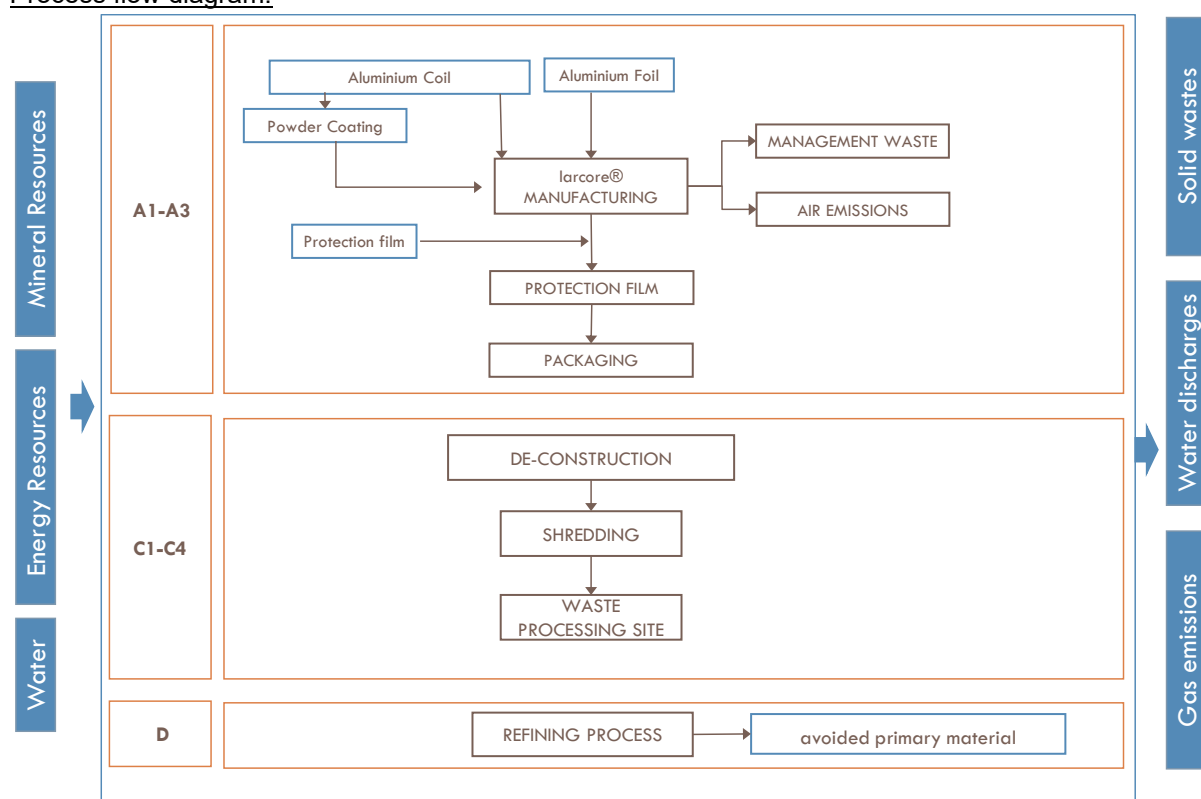
Database(s) and LCA software used: Environmental profile report for the European aluminium industry. Life Cycle Inventory (LCI) data for aluminium production and transformation processes in Europe; ecoinvent 3.11; PCR 2019:14 v2.0.1; Circular Footprint Formula, SimaPro 10.3.0.1

EPD/LCA Tool used: EPD Confidential; EPD-IES-012655:001; they comply as a data source.

Description of system boundaries:

- Cradle to gate with modules C1–C4 and module D (A1–A3 + C + D);

Process flow diagram:



More information:

Module A1 Upstream Stages, from Cradle to Gate. The acquisition, production, and pretreatment phase of the lacquered coil, the epoxy coil, and the inner core sheet. This includes the power supply and its infrastructure, as well as the necessary transport in the distribution chain to Alucoil®'s direct supplier.

The environmental impacts associated with the infrastructure of energy resources (construction of electricity and heat generation facilities) have been included within the system boundaries for Module A1. This inclusion is mandatory due to the high energy intensity of the aluminum supply chain. The energy infrastructure is a significant contributor to the environmental profile, accounting for 20% of the total results for the ADP-minerals&metals indicator within the product stage. These processes have been modelled using the ecoinvent v3.11 database.

Module A2 Includes direct transport to the factory door.

Module A3 Gate-to-gate stage corresponding to the production of Iarcore® A2 panels. It begins with the entry of the components into the Alucoil® facilities and ends when the panels leave those facilities. Module A3 includes auxiliary materials, such as adhesives, the manufacture of packaging materials, energy consumption and its infrastructure, atmospheric emissions, solid waste management, and transport to the waste management facilities.

The energy mix applied is 100% renewable, as specified by the energy supplier. Based on the Guarantee of Origin (GO), the renewable sources are 37% wind and 63% solar photovoltaic. The emission factor for this mix is 0.0335 kg CO_{2eq}.GHG/kWh, including grid losses as well as the plants and grid infrastructure, and 0.0243 kg CO_{2eq}.GHG/kWh excluding infrastructure.

The infrastructure of energy resources (construction of power plants and grid)) has been explicitly included in the electricity datasets for Module A3. It is a relevant contributor to the ADP-minerals&metals indicator, accounting for 37% of the impacts within the manufacturing stage (Module A3). Regarding the total aggregated results for the product stage (A1-A3), this infrastructure represents 9% of the total impact. These processes have been modelled using the ecoinvent v3.11 database following the requirement of GPI for the energy-intensive processes.

Modules C1-C4 End-of-life stage of the building, corresponding to the removal of the Iarcore® A2 panels. The non-destructive demolition of the panels, transport to the treatment site, loading and unloading of the waste at the treatment facility, treatment of the waste for recycling and disposal of the final fraction are studied.

COLLECTION PROCESS, SPECIFIED BY TYPE	100%	PANEL COLLECTED SEPARATELY
Recovery system, specified by type	100%	Panel recycling
Transport to the treatment plant	100%	80 km, transport from construction site to installation or collection point, Transport, freight, lorry, 16-32 metric ton, diesel, EURO 5 {RER} market for transport, freight, lorry, 16-32 metric ton, diesel, EURO 5 Cut -off, U
Treatment in plant	100%	Treatment in plant: 100% recycling (after recycling, 5% goes to final disposal)

Module D includes the potential for reuse, recovery, and/or recycling, expressed as net burdens and benefits. This module represents the environmental benefits or burdens generated by recycling the A3 waste and recycling the panel at the end of its useful life.

Allocation:

The selected physical property has been the m² of panel produced to allocate the input and output flows, as well as to calculate the mass yield based on production (88-91%).

Assumptions:

The concentrations of the substances contained in the chemical preparations used in module A3 have been modelled according to the ranges declared in the corresponding safety data sheets (SDS), adopting the maximum value of each interval as a conservative approach. In those cases where the preparations are not classified as hazardous and detailed information on their composition is not available, a concentration of 100% of the substance has also been assumed, again using a conservative approach.

Specific information regarding the end-of-life of the panels is not available. Due to their mechanical fastening system, Iarcore[®] A2 panels can be removed manually during a deconstruction process. A recycling infrastructure is established and available worldwide for this type of aluminium product, making non-destructive dismantling a technically and economically viable option.

Data quality:

The activity data for the core manufacturing processes (Module A3) have been collected directly from the production plant for the reference year 2024. These data are plant-specific and represent a one-year average of the operations.

Quality was assessed for “relevant data,” defined as those that collectively contribute at least 80% to the absolute impact of each declared environmental indicator. The schemes in Annex E (Table E.2) of EN 15804 were applied to quantify temporal, geographical, and technological representativeness on a scale of 1 (very good) to 5 (very poor).

Primary manufacturing processes and supplies with specific EPDs and sector data from the European aluminium industry show very good quality (DQR = 1.0), while inputs modelled with the ecoinvent 3.11 database are at quality levels between good and regular (DQR = 2.3-2.7).

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

	Product stage			Distribution/ installation stage		Use stage							End-of-life stage				Beyond product life cycle
	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	ND	ND	ND	ND	ND	ND	ND	ND	ND	x	x	x	x	x
Geography	EU	EU	ES	-	-	-	-	-	-	-	-	-	GLO	GLO	GLO	GLO	GLO
Share of primary data	11%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	26%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Manufacturing of product	Collected data	EPD owner	2024	Primary data	3%
Generation of electricity used in manufacturing of product	Database	Ecoinvent v3.11	2024	Primary data	0%
Production of aluminum coil	EPD	EPD Confidential	2024	Primary data, 10% Secondary data, 90%	7%
termolac®, high-quality powder coating	EPD	EPD-IES-0012655:001	2024	Primary data, 94% Secondary data, 6%	1%
Total share of primary data, of GWP-GHG results for A1-A3					11%

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.

ENVIRONMENTAL PERFORMANCE

LCA results of the product(s) - main environmental performance results

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 (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3).

Biogenic carbon leaving the product system in module A5 has already been balanced in modules A1-A3.

These potential impacts have been calculated using the PCR 2019:14 and EN 15804+A2 method (based on EF 3.1), included in the SimaPro 10.3.0.1 software. Long-term emissions have been excluded from the calculation.

The primary energy resources used as raw materials were calculated by multiplying the mass of each material of the product and packaging content with the lower calorific value (MJ/kg) of the material. Specifically, option B within Annex 3 of the PCR 2019:14 was utilized for these calculations, whereby the energy used as raw material is declared as an input to the module where it enters the product system and as an output from the product system if it exits the product system as useful energy.

Mandatory impact category indicators according to EN 15804

Results per functional or declared unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO ₂ eq.	4.49E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.26E-03	7.39E-02	1.21E-02	1.69E-04	-3.94E+01
GWP-fossil	kg CO ₂ eq.	4.46E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.26E-03	7.39E-02	1.20E-02	1.68E-04	-3.85E+01
GWP-biogenic	kg CO ₂ eq.	1.03E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.13E-07	2.56E-06	1.53E-05	1.81E-08	-1.47E-01
GWP-luluc	kg CO ₂ eq.	2.14E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.29E-08	1.17E-06	1.81E-05	1.13E-08	-6.91E-01
ODP	kg CFC 11 eq.	2.94E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.43E-11	1.68E-09	1.04E-10	2.59E-12	-4.56E-07
AP	mol H ⁺ eq.	2.30E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.08E-05	1.91E-04	7.48E-05	1.54E-06	-2.75E-01
EP-freshwater	kg P eq.	5.94E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.12E-09	4.56E-08	4.46E-07	2.08E-10	-1.62E-03
EP-marine	kg N eq.	3.95E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.83E-06	7.27E-05	2.35E-05	7.27E-07	-3.31E-02
EP-terrestrial	mol N eq.	4.23E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.08E-04	7.95E-04	2.58E-04	7.95E-06	-3.69E-01
POCP	kg NMVOC eq.	1.32E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.21E-05	3.16E-04	7.68E-05	2.38E-06	-1.41E-01
ADP-minerals&metals*	kg Sb eq.	8.59E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.91E-11	1.93E-09	3.77E-10	6.61E-12	-2.06E-06
ADP-fossil*	MJ	2.27E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.95E-02	9.82E-01	1.61E-01	2.23E-03	-4.81E+02
WDP*	m ³	6.83E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.21E-05	3.21E-04	1.14E-03	-4.74E-05	-8.02E+00
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															

* Disclaimer: 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.

Additional mandatory and voluntary impact category indicators

Results per functional or declared unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG ¹	kg CO ₂ eq.	4.47E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.26E-03	7.39E-02	1.20E-02	1.68E-04	-3.85E+01
PM	Disease incidence	2.99E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.01E-10	4.91E-09	1.35E-09	4.43E-11	-2.94E-06
IRP	kBq U235 eq	4.68E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.45E-06	9.43E-05	4.60E-04	2.21E-07	-1.65E+00
ETP	CTUe	3.25E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.46E-04	3.51E-02	1.81E-02	3.87E-02	-6.10E+01
HTP -c	CTUh	2.94E-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.21E-13	4.98E-12	8.95E-13	1.11E-14	-5.42E-08
HTP-nc	CTUh	2.87E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.22E-12	4.89E-10	4.31E-11	6.68E-13	-3.31E-07
SQP	Pt	2.31E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.01E-05	1.25E-03	1.01E-02	1.69E-04	-2.99E+01
Acronyms	GWP-GHG = Global warming potential, GHG; PM = Particulate matter; IRP = Ionizing radiation, human health; ETP = Ecotoxicity, freshwater; HTP -c= Human toxicity, cancer; HTP -nc = Human toxicity, non-cancer; SQP = Land use.															

Resource use indicators

Results per functional or declared unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	1.96E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.33E-05	2.41E-03	1.73E-02	6.04E-06	-1.75E+02
PERM	MJ	1.41E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	2.10E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.33E-05	2.41E-03	1.73E-02	6.04E-06	-1.75E+02
PENRE	MJ	6.22E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.95E-02	9.82E-01	1.61E-01	2.23E-03	-4.81E+02
PENRM	MJ	1.08E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	6.23E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.95E-02	9.82E-01	1.61E-01	2.23E-03	-4.81E+02
SM	kg	3.17E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E+00
RSF	MJ	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m ³	5.66E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.94E-07	1.90E-05	1.46E-06	-1.07E-06	-9.26E-01
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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															

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.

Waste indicators

Results per functional or declared unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2.37E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.02E-07	6.53E-06	3.31E-07	1.53E-08	1.79E-03
Non-hazardous waste disposed	kg	7.91E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.05E-06	3.30E-05	1.72E-06	3.03E-04	-5.31E-01
Radioactive waste disposed	kg	2.11E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.38E-09	5.92E-08	2.25E-09	1.27E-10	-1.24E-03

Output flow indicators

Results per functional or declared unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	0	0	0	0
Material for recycling	kg	4.16E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	0	5.83E+00	0	0
Materials for energy recovery	kg	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	0	0	0	0
Exported energy, electricity	MJ	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	0	0	0	0
Exported energy, thermal	MJ	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	0	0	0	0

Additional LCA results (other environmental performance results) of the product(s)

This document is an EPD of multiple products, based on the average results of the product group. Grouping these panels under a single declaration is considered appropriate as all products share identical raw materials, core manufacturing processes (Module A3), and intended applications.

The observed variations in environmental results are technically expected, as the panels are available in numerous designs tailored to project-specific requirements. Despite these differences, the products maintain a cohesive environmental profile.

The table below provides additional LCA results for the product range. It displays the minimum and maximum results found within the group for each environmental indicator. These values correspond to the lowest and highest environmental impacts among all included panels, along with their individual percentage variation relative to the declared weighted average.

LCA result of one declared unit product (A-C)	Unit	Min (%)	Max (%)
GWP-fossil	kg CO ₂ eq.	-26%	10%
GWP-biogenic	kg CO ₂ eq.	-22%	4%
GWP-luluc	kg CO ₂ eq.	-34%	-3%
GWP-total	kg CO ₂ eq.	-26%	10%
ODP	kg CFC 11 eq.	-20%	-1%
AP	mol H ⁺ eq.	-25%	9%
EP-freshwater	kg P eq.	-29%	-3%
EP- marine	kg N eq.	-27%	10%
EP-terrestrial	mol N eq.	-27%	10%
POCP	kg NMVOC eq.	-24%	8%
ADP-minerals&metals*	kg Sb eq.	-30%	12%
ADP-fossil*	MJ	-25%	-2%
WDP*	m ³	-20%	6%

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
EN	European Norm (Standard)
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
CEN	European Committee for Standardization
CLC	Co-location centre
CPC	Central product classification
GHS	Globally harmonized system of classification and labelling of chemicals
GRI	Global Reporting Initiative
SVHC	Substances of Very High Concern

REFERENCES

- a) GPI, General Program Instructions for the International EPD® System v5.0.1.
- b) PCR 2019:14, *Construction products v2.0.1*.
- c) ISO 14025:2006. *Environmental labels and declarations — Type III environmental declarations — Principles and procedures*.
- d) ISO 14040:2006. *Environmental management — Life cycle assessment — Principles and framework*.
- e) ISO 14044:2006. *Environmental management — Life cycle assessment — Requirements and guidelines*.
- f) European Commission. *Commission Recommendation (EU) 2021/2279 of 15 December 2021 on the use of environmental footprint methods to measure and communicate the environmental performance of products and organisations throughout their life cycle*. OJ L 471, 30.12.2021.
- g) EN 15804:2012+A2:2019/AC:2021, *Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products*.
- h) *Environmental Footprint methods, Recommendation (EU) 2021/2279, section 4.4.8.1 Circular Footprint Formula*.
- i) *Environmental Profile Report for the European Aluminium Industry. Life Cycle Inventory (LCI) data for aluminium production and transformation processes in Europe. Version 2.0. May 2025*.
- j) *Confidential EPD (2025)*.
- k) *EPD-IES-012655:001 thermolac®, high-quality powder coating (2024/04/29)*.
- l) Google, 2024. *Google Maps. Online geolocation and digital mapping tool*.
- m) Wernet, G., Bauer, C., Steubing, B., Reinhard, J., Moreno-Ruiz, E. and Weidema, B. (2016). *The ecoinvent database version 3 (part I): overview and methodology. The International Journal of Life Cycle Assessment, 21(9), pp. 1218-1230*.

VERSION HISTORY

EPD-IES-002207:001, 2020/10/26

- Original Version of the EPD

EPD-IES-002207:002, 2026-09-18

- Update of activity data for the manufacture of the Iarcore® panel, year 2024
- and electrical profile of your distributor.
- Update of secondary data, ecoinvent 3.11 and sector sources.
- Inclusion of two specific EPDs as sources.
- Inclusion of two products.
- Inclusion of electricity and natural gas supply infrastructure for modules A1 and A3.
- Unique results for product range.
- Update of the impact assessment method.
- End-of-life scenarios according to PCR 2019:14 v2.0.1.
- Contribution of primary data according to PCR 2019:14 v2.0.1.
- Variation between products according to GPI 5.0.1.

