Environmental Product Declaration

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

Kobert-In *interior wall cladding panel*

Multiple products EPD based on a representative product (Kobert-In PE and Kobert-In FR).

from

BARNIZADOS INDUSTRIALES, SA (BARINSA)

Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
Type of EPD:	EPD of multiple products from a company
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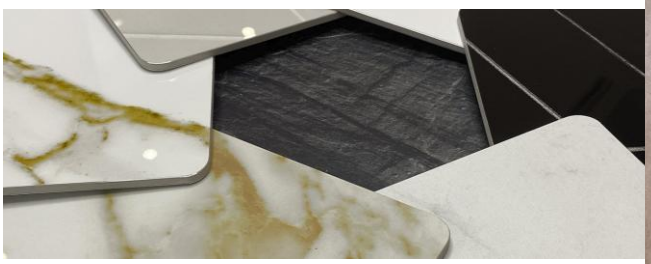
An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com



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 2019:14 Construction Products v 2.0.1* **CPC Code***:* 41534 - Plates, sheets and strip, of aluminium, of a thickness exceeding 0.2 mm
PCR review was conducted by: *The Technical Committee of the International EPD® System. Chairs: Rob Rouwette and Noa Meron.* *Contact via the programme operator: info@environdec.com (environdec.com)*
c-PCR, if applicable: *Not applicable*

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: *Elisabet Amat Guasch, GREENIZE Projects, eamat@greenize.es* Approved by: 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 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: BARNIZADOS INDUSTRIALES, SA

- **Address:** Cuartel Norte, 22, 43570 Santa Bàrbara, Tarragona
- **Contact:** Isaac Riba iriba@barinsa.es

LCA practitioner commissioned by the EPD owner: Zirkel

- **Address:** Calle Tarragona,157, 4rt (Torre NN), 08014 Barcelona, Spain
- **Contact:** Alana Sueiro Honrubia asueiro@zirkel.biz

Description of the organisation:

Barinsa is a company specialising in the manufacture of composite cladding and panels for architectural applications, aimed at interior design projects in the residential and commercial sectors. Among its solutions is the Kobert-In system, a large-format wall cladding designed to provide functionality and aesthetic quality in interior spaces. Barinsa supports designers and customers by providing technical advice, facilitating the correct selection and application of its products according to the specific requirements of each project.

Product-related or management system-related certifications:

- ISO 9001: 2015

All products are manufactured in accordance with the applicable requirements for CE marking.

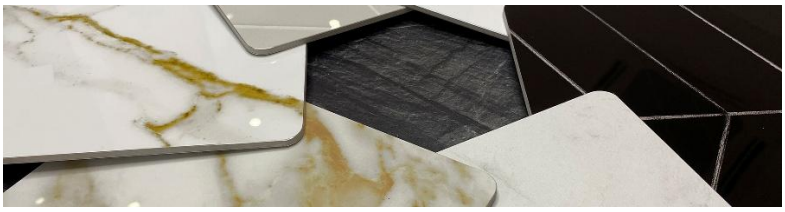
PRODUCT INFORMATION

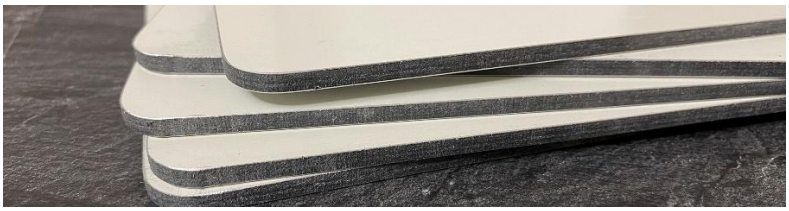
Product name:

Kobert-In

Product identification:

- **Manufacturer:** BARNIZADOS INDUSTRIALES, SA
- **Product type:** Large-format interior wall cladding panel for indoor applications.
- **Declared unit:** 1 m² with 4 mm thickness of Kobert-In product, including packaging, installed and used according to its intended application, with a reference service life (RSL) of 50 years.
- **EPD type:** EPD of multiple products, based on the results of the representative-case product.
- **Representative-case product:** Kobert-In PE Specchio (selected as the representative product of the Kobert-In family, as it is the most sold configuration within the product range).
- **CPC Code***:* 41534 - Plates, sheets and strip, of aluminium, of a thickness exceeding 0.2 mm





Product description:

Kobert-In is a family of interior wall cladding panels designed for indoor architectural applications. The product range is intended for permanent installation as part of building interior systems, including residential, commercial and tertiary buildings, such as dwellings, offices, retail spaces, hospitality areas and other interior environments.

The Kobert-In panel family has been developed to provide a versatile cladding solution capable of adapting to different interior design contexts while maintaining a consistent aesthetic and functional concept. The panels combine low weight, dimensional stability and surface durability, making them suitable for a wide range of interior architectural and design applications.

Product range and configurations covered by this EPD

The Kobert-In product family includes two main models, differentiated by the composition of the core material and fire performance: Kobert-In PE and Kobert-In FR. Both models fulfil the same intended function as interior wall cladding panels but differ in the formulation of the core, with the FR variant incorporating mineral particles to improve fire resistance.

Within each model, the panels are available with three different surface finishes, which provide alternative aesthetic appearances while maintaining the same dimensional characteristics and functional performance. The differences between finishes are limited to the type and quantity of surface coatings applied during the manufacturing process.

The present Environmental Product Declaration covers the full Kobert-In product family, including both models and all available finishes. In accordance with the applicable Product Category Rules, the environmental performance of the family is represented by a representative product, selected based on sales data as the most commonly marketed configuration.

Table 1 – Product range and main technical characteristics

Model		Weight (kg ±)
Kobert-In PE	Specchio (high-gloss finish)	5.315
	Ultramatt (ultra-matte finish)	5.315
	Sabbia (textured matte finish)	5.18
Kobert-In FR	Specchio (high-gloss finish)	6.515
	Ultramatt (ultra-matte finish)	6.515
	Sabbia (textured matte finish)	6.38

The values shown correspond to the range of available configurations for each model within the Kobert-In panel family. Weight values are indicative and may vary depending on the selected model and surface finish. Variations in weight may occur due to differences in the core composition (PE or FR) and the type and amount of surface coatings applied, which vary according to the selected finish.

Representative-case configuration
The representative configuration was identified based on a review of all available configurations within the Kobert-In product family, including both core types (PE and FR) and the different available surface finishes. For interior wall cladding panels, the product stage (modules A1–A3) is the dominant contributor to the life cycle environmental impacts, as no energy or water consumption occurs during the use phase (modules B1–B7).

The representative configuration was selected based on sales data, identifying the configuration with the highest sales volume within the Kobert-In range. This approach ensures that the declared environmental performance reflects the configuration most commonly supplied to the market.

Accordingly, the Kobert-In PE panel with high-gloss finish is used as the reference representative configuration for this EPD.

Technical performance and key functionalities

Kobert-In panels are composite interior wall cladding elements composed of aluminium facing layers and a polymer-based core, combined with surface treatments and decorative finishes. Their primary function is to provide a durable, stable and visually consistent interior wall finish, contributing to the protection of interior surfaces and the aesthetic quality of indoor spaces.

The multilayer structure of the panels is designed to ensure dimensional stability, low weight and resistance to moisture under normal indoor conditions, while maintaining surface durability throughout the reference service life. The different available finishes allow the panels to be adapted to a wide range of interior design requirements without altering their intended function or installation method.

Intended use and influence on the construction work

Kobert-In panels are intended for use as interior wall cladding elements in construction works. Once installed, they form part of the interior building envelope, providing a finished wall surface throughout their reference service life.

From an operational perspective, the product does not require energy or water during the use phase and does not generate emissions under normal conditions of use. Therefore, the influence of the Kobert-In panels on the environmental performance of the construction work is mainly related to the product stage (manufacturing), installation activities and end-of-life treatment, rather than to building operation.

No specific restrictions regarding the type of construction or building apply, provided that the panels are installed and used in accordance with the manufacturer's technical specifications and within the intended indoor application conditions.

Main materials and product composition (indicative)

Kobert-In panels are mainly composed of:

- Aluminium sheets, forming the external facing layers,
- A polymer-based core, consisting of low-density polyethylene (LDPE), with or without mineral fillers depending on the model (PE or FR),
- Surface treatment materials, including primer layers, printing inks and acrylic protective coatings.

The panels are supplied in finished form, ready for installation. Installation requires the use of neutral silicone adhesive, which is applied on site to fix the panels to the support. This installation material is not part of the product as delivered but is included in the assessment of the installation stage (module A5), in accordance with the applicable Product Category Rules.

Manufacturing process

The Kobert-In panels are manufactured using externally supplied raw materials and semi-finished components. The production process includes surface preparation of the composite panels, application of primer layers, digital printing, curing by UV light, and the application of protective and decorative

acrylic coatings. These operations are followed by cutting and edge finishing, quality control procedures, and final packaging prior to distribution.

Technical lifespan

Kobert-In panels are designed for long-term indoor use and are expected to operate over a reference service life of 50 years under normal operating conditions.

Name and location of production site

The assembly of the Kobert-In panel is carried out at the production facility of BARNIZADOS INDUSTRIALES, SA, located in Santa Bàrbara (Tarragona), Spain.

This facility is under the direct control of the EPD owner and is responsible for the final assembly operations, quality control and packaging of the product prior to distribution.

Manufacturer / EPD owner:
BARNIZADOS INDUSTRIALES, SA
Santa Bàrbara (Tarragona), Spain

References:
Further information about Kobert-In family and its technical specifications is available on the manufacturer's website: https://barinsa.es/productos/kobert-in/

CONTENT DECLARATION – Kobert-In (Representative-case Product)

Reference product for content declaration

For the content declaration, the reference product corresponds to the physical product placed on the market, namely 1 m² with a thickness of 4 mm of the representative Kobert-In panel configuration (Kobert-In PE with high-gloss finish), as delivered from the factory.

Total mass of the reference product (including packaging): 7.88 kg.

Product content declaration

The content declaration below refers exclusively to the representative-case product configuration used as reference for this EPD. The declared content covers 100% of the mass of the reference product.

Product content	Mass, kg	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material, kg C/product or declared unit
Aluminium sheets (external facing layers)	0.972	0%	0%	0
Polymer-based core (LDPE, incl. fillers where applicable)	4.13	0%	0%	0
Surface treatment materials (primers, inks, acrylic coatings)	0.215	0%	0%	0
TOTAL	5.315	-	0%	0

Packaging content declaration

The reference product is delivered with distribution packaging designed to ensure adequate protection of the Kobert-In panels during handling, transport and storage prior to installation.

The packaging content declared below corresponds to the packaging required for the delivery of 1 m² of Kobert-In PE panel, in the representative configuration, as supplied from the manufacturing facility.

Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C/product or declared unit
Paper and cardboard (Cardboard sheet and paper sticker)	0.84	15.78 %	0.38
Wood (pallet and MDF)	1.62	30.48 %	0.73
Plastic wrapping film	0.015	0.29 %	0
Staples	0.091	1.71 %	0
TOTAL	2.57	48.26 %	1.11

1 kg biogenic carbon in the product/packaging is equivalent to the uptake of 44/12 kg of CO_2.
The packaging content declaration covers 100% of the mass of the packaging materials associated with the declared product.

Hazardous substances and regulatory compliance

The product and its packaging comply with the European REACH Regulation (EC No 1907/2006).
No substances included in the Candidate List of Substances of Very High Concern (SVHC) are present in the product or packaging in concentrations equal to or greater than 0.1% (w/w).

LCA INFORMATION

Declared unit

The declared unit of this EPD is defined as 1 m^2 of Kobert-In PE panel, installed and used in accordance with its intended application over a reference service life of 50 years.

The declared unit represents the representative-case configuration (Kobert-In PE Specchio) within the Kobert-In family, as defined in this EPD.

Conversion factor to mass:

The declared unit corresponds to a total product mass of 7.88 (5.3148 + 2.566) kg, including the panel and its associated packaging.

The conversion factor to mass is therefore 7.88 kg per declared unit.

Reference service life (RSL):

A reference service life of 50 years is assumed.

This value is based on the expected technical durability of the panel and is consistent with the manufacturer's quality and performance specifications for interior wall cladding applications, when the product is installed and used in accordance with its intended indoor conditions.

Time representativeness:

The life cycle assessment is based on primary data collected at the manufacturer's production site in Santa Bàrbara (Tarragona, Spain), covering the manufacturing processes of the Kobert-In panels. The data refer to the reference year 2024 and are representative of the current production technology, operational practices and production volumes.

Secondary data were obtained from Ecoinvent v3.11, the latest version available at the time of modelling, and are considered representative of upstream and downstream supply chains and background processes during the validity period of the Environmental Product Declaration.

Geographical scope:

The geographical representativeness of the different life cycle stages is defined as follows:

- A1–A2 (Raw material supply and transport): European region (EU), reflecting that most raw and auxiliary materials are sourced from European markets.
- A3 (Manufacturing / assembly): Spain (ES), corresponding to the final assembly processes carried out at the manufacturer's facility.
- A4 (Transport to site): Global (GLO). Although the distribution scenario mainly reflects European transport routes, at least one part of the product has been distributed on a global scale.
- A5 (Installation): European region (EU), using a representative installation scenario.
- End-of-life stage (C modules): European region (EU), as waste treatment and disposal scenarios are modelled using average European waste management statistics.

Database and LCA software used:

- *Ecoinvent v3.11* (System model: Cut-off by classification).
- *SimaPro v.10.2.0.3* (PRé Consultants).

EPD/LCA Tool used

LCA model developed in SimaPro according to PCR 2019:14 v2.0.1 and EN 15804+A2:2019. No pre-verified tool was used.

Description of system boundaries

This EPD is a cradle to gate with options (A1–A3 + A4-A5 + B1-B7 + C1-C4 + D) in accordance with PCR 2019:14 Construction Products v2.0.1 and EN 15804 +A2:2019.
All modules are declared, no life-cycle stages have been omitted.

The life cycle steps analysed are described below:

Product stage (A1–A3)

The product stage (A1–A3) covers all processes from the extraction and production of raw materials to the manufacturing, finishing and packaging of the Kobert-In panels at the production site, including the supply of raw and auxiliary materials and energy, the transport of materials and packaging to the manufacturing facility, and all production operations required to obtain the finished product. Primary data for this stage are representative of the reference year 2024 and reflect the current production technology and operating conditions.

A1 – Raw material supply

This module includes the extraction, processing and production of all raw and auxiliary materials that make up the Kobert-In panels. Packaging materials are excluded from this module and reported separately.

The main material groups included are:

- Aluminium sheets used as external facing layers of the composite panel
- Polymer-based core material consisting of low-density polyethylene (LDPE), with the inclusion of mineral fillers in the FR variant
- Surface treatment materials including primer layers, printing inks and acrylic coatings applied to the panel surfaces

Upstream electricity generation associated with the production of raw materials and semi-finished products is included in this module in accordance with EN 15804 and the applicable Product Category Rules. Electricity supply is modelled using geographically representative datasets from Ecoinvent v3.11.

No recycled, biogenic or bio-based material content is declared for the product in this Environmental Product Declaration. All upstream processes are modelled using Ecoinvent v3.11 datasets, applying European, global or rest-of-world datasets as appropriate to reflect the geographical origin of the materials.

A2 – Transport

This module includes the upstream transport of all raw materials and auxiliary products required for the manufacture of the Kobert-In panels, as well as the transport of packaging materials, from suppliers to the Barinsa manufacturing facility.

Transport distances were modelled based on the estimated distances between suppliers and the production site in Santa Bàrbara (Tarragona, Spain). Transport of materials supplied from within Europe is mainly carried out by road freight (truck), while materials supplied from outside Europe are predominantly modelled using maritime transport, with limited use of air transport for specific auxiliary materials, in accordance with the assumptions documented in the LCA report.

A3 – Manufacturing

This module includes the manufacturing and finishing processes carried out at the Barinsa production facility to obtain the finished Kobert-In panels. These processes include surface preparation of the composite panels, application of primer layers, digital printing, UV curing, application of protective and decorative acrylic coatings, cutting and edge finishing, quality control and final packaging of the product for dispatch.
Electricity consumption associated with manufacturing operations is included in this module in accordance with EN 15804 and the applicable Product Category Rules. Electricity supply is modelled using a market-based approach. As no Guarantees of Origin (GoO) are in place, the residual supplier electricity mix from CNMC is applied, modelled by adapting the Ecoinvent v3.11 dataset. The associated climate impact under the GWP-GHG indicator is approximately 0.4 kg CO_2e per kWh. No renewable electricity with GoO or biogas is claimed.

The production of packaging materials for the delivered product is included in this module, as well as the transport and treatment of manufacturing waste generated on site through external waste management services in accordance with applicable regulations.

Auxiliary materials used during manufacturing include UV LED lamps, printing heads and abrasive materials (sandpaper) used for surface preparation and printing operations. These materials are consumed during the manufacturing process and included in this module. No water consumption is associated with the manufacturing processes included in this stage.

A4 – Transport to customer

This module includes the transport of the packaged Kobert-In panels from the Barinsa manufacturing facility to the construction site or customer location. The transport scenario is based on sales distribution data and is modelled using a weighted average approach reflecting the geographical distribution of the product.

Road transport by heavy-duty truck is used for national and intra-European deliveries, while maritime transport is applied for deliveries outside Europe, in accordance with the transport scenarios defined in the LCA report. Transport distances are based on representative distances for each destination region and weighted according to the relative share of deliveries. The resulting scenario represents an average distribution scenario dominated by European deliveries (RER) and is considered representative for the Kobert-In product family for the purpose of this Environmental Product Declaration.

Parameter	Unit	Value
Type and fuel consumption of the vehicle, vehicle type used for transport (e.g. long-distance lorry, ship, aircraft, etc.)	–	Land: Long-distance truck (16-32 tonnes) Sea: Container ship (heavy fuel oil)
Distance	km	Land: 649.75 Sea: 2324.46
Load capacity utilisation (including empty returns)	%	Assumed by ecoivent
Bulk density of transported goods	kg/m^3	253 kg / m^3 (including packaging
Capacity utilisation factor (1 < x < 1.2 for products with packaging)	-	Not applicable

A5 – Installation

This module covers the installation of the Kobert-In panels at the construction site. The panels are delivered as finished products and installed by a professional installer in accordance with the manufacturer's technical specifications. Installation requires the use of neutral silicone adhesive applied on site to fix the panels to the supporting substrate. No other auxiliary materials are required, and no energy or water consumption is associated with the installation process.

The waste generated during installation consists exclusively of packaging waste (cardboard, wood and plastic). The treatment of installation waste is modelled using market datasets from Ecoinvent, which include average transport and waste treatment processes; therefore, no explicit transport distance is separately assumed for packaging waste generated at the construction site. As the Kobert-In panels are marketed internationally and country-specific installation data are not available, average European waste management scenarios are applied for packaging waste.

Parameter	Unit (expressed declared unit)	Value
Auxiliary materials for installation (specify each material)	kg	Neutral silicone: 0.219 kg
Water use	m³	None
Use of other resources	kg	None
Quantitative description of energy type and consumption during installation	kWh	None
Wastage of materials in installation before waste treatment (specify type)	kg	Paper and cardboard: 0.839 kg; Plastic: 0.0154 kg; Wood: 1.62 kg
Output materials (specify type) resulting from waste treatment (recycling, energy recovery, landfill)	kg	**Cardboard:** • Landfill: 100% **Wood:** • Landfill: 79.62% • Incineration: 20.38% **Plastic:** • Landfill: 79.62% • Incineration: 20.38%
Direct emissions to air, soil and water	kg	None

Use stage (B1–B7)

The use stage of the Kobert-In panels is described in accordance with EN 15804 and covers modules B1 to B7. The declared reference service life (RSL) of the product is 50 years.

B1 – Use

During normal indoor use, the Kobert-In panels do not generate direct emissions to air, soil or water and do not require auxiliary materials. Accordingly, module B1 is declared with a value of 0.

B2 – Maintenance

The Kobert-In panels may require periodic surface cleaning during their service life. Maintenance is limited to cleaning with water and neutral soap to maintain the appearance of the surface. A cleaning frequency of two times per week over the 50-year reference service life is assumed. For each cleaning event, a consumption of 0.15 L of water is assumed, with neutral soap added at a concentration of 1.5%.

Material	Unit	Quantity per cleaning event	Quantity over RSL
Water	L/m^2	0.15	780
Neutral soap	L/m^2	2.25E-3	11.9

B3–B7 – Repair, replacement, refurbishment, operational energy use and operational water use

The Kobert-In panels are not designed to be repaired once installed; in case of damage, the product would be replaced. No replacement or refurbishment is assumed during the declared service life of 50 years when the product is used according to the manufacturer's specifications. The panels do not consume energy or water during use and do not influence the operational energy or water demand of the building. Accordingly, modules B3, B4, B5, B6 and B7 are declared with a value of 0.

End-of-life stage (C1–C4)

The end-of-life (EoL) stage describes the processes occurring after the Kobert-In panels reach their declared reference service life of 50 years. The scenario follows a conservative and technically feasible approach in accordance with EN 15804 and the applicable Product Category Rules.

At end of life, the panels are removed and transported to waste treatment facilities. Due to the composite structure of the product, consisting of aluminium layers bonded to a polymer-based core with surface coatings, material separation and recycling are considered technically unfeasible under current conditions. Therefore, the end-of-life scenario assumes disposal without material recovery, including dismantling, transport to waste treatment facilities and final disposal.

C1 – Deconstruction / dismantling

At end of life, Kobert-In panels are removed from interior surfaces. The energy demand for dismantling is modelled using the default value of 1.1 kWh of diesel per tonne of product, as specified in the applicable PCR for construction products, and implemented in the LCA model using an Ecoinvent dataset representing diesel combustion in construction machinery. No auxiliary materials or water consumption are required.

C2 – Transport to waste treatment

This module includes the transport of dismantled Kobert-In panels, including residual installation materials (neutral silicone), from the place of use to the waste treatment facility. An average transport distance of 80 km is assumed based on the life cycle assessment assumptions. Transport is modelled using diesel-powered heavy-duty lorry datasets from Ecoinvent, with payload utilisation and return trips implicitly included.

C3 – Waste processing

This module includes any pre-treatment of waste prior to final disposal. Due to the composite structure of the Kobert-In panels (bonded aluminium layers, polymer core and coatings), material separation is considered technically unfeasible under typical waste management conditions. Therefore, no recycling, reuse or material recovery is assumed. As a result, no recovery processes are modelled and module C3 is declared as 0.

C4 – Disposal

This module includes the final disposal of dismantled Kobert-In panels and residual installation materials. According to the declared end-of-life scenario, 100% of the product mass is disposed of in landfill. Landfill emissions are modelled using representative background datasets, and diesel consumption for

landfill operations follows PCR-consistent assumptions. No reuse, recycling or energy recovery is assumed.

Module D – Benefits and loads beyond the system boundary

Module D reports the potential benefits and loads beyond the system boundary associated with material recycling, reuse or energy recovery occurring after the life cycle stages A–C, in accordance with EN 15804+A2.

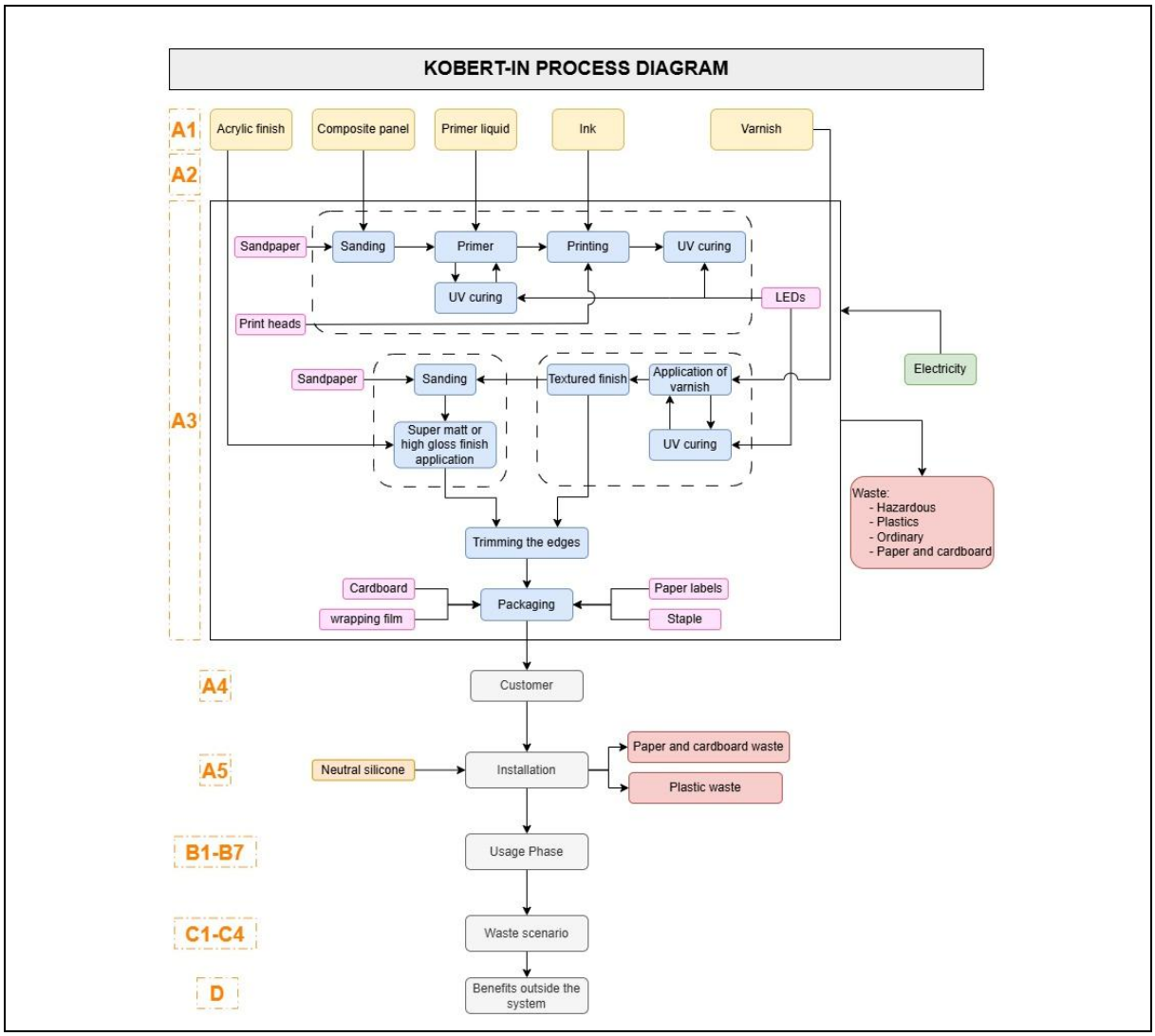
For the Kobert-In panels, no benefits or loads beyond the system boundary are declared. A conservative end-of-life scenario is applied in which no material recycling, reuse or energy recovery is assumed for the product or for the packaging waste generated during installation. Consequently, no avoided impacts related to the substitution of primary materials or energy are considered.

Accordingly:

- No benefits from recycling or energy recovery of packaging waste generated in module A5 are declared.
- No benefits from replacement activities (modules B1–B7) are declared.
- No benefits from material recovery of the product at end of life (modules C1–C4) are declared.

As a result, Module D is declared with a value of 0 for all indicators.

Process flow diagram



More information

Allocation procedures

Allocation has been carried out in accordance with PCR 2019:14 v2.0.1 and EN 15804+A2. No co-products are generated in the manufacturing process; therefore, all energy and material consumptions associated with manufacturing, finishing and packaging are fully allocated to the declared product, based on the production of 1 m² of Kobert-In panel.

No recycled materials are used as inputs to the product system, either in the product or in the packaging. Consequently, no allocation related to recycled material inputs or outputs is required. The cut-off approach prescribed by the PCR is applied consistently to all secondary datasets.

Data quality assessment

The data quality assessment has been performed in accordance with PCR 2019:14 v2.0.1, EN 15804+A2, and EN 15941.

- **Temporal representativeness**: All primary data correspond to the reference year 2024.
- **Geographical representativeness**:
  - Manufacturing processes (A3) are representative of production in Spain.

  - Electricity consumption is modelled using Spain-specific residual electricity mix.
  - Upstream materials, transport, packaging and waste treatment are modelled using European or global datasets, as appropriate, due to the international supply chain of purchased components.
- **Technological representativeness**: The selected datasets adequately reflect the current technologies used for the manufacture, finishing and installation of composite interior wall cladding panels, as well as for the upstream supply of materials and waste treatment processes.

Overall data quality is considered appropriate and compliant for the purpose of this EPD.

Data sources and primary data share

Primary data include:

- Electricity consumption during manufacturing and finishing operations at the Barinsa production facility (module A3),
- Waste generation and on-site waste management associated with the manufacturing processes.

All upstream processes related to purchased raw materials, auxiliary materials and packaging materials are modelled using secondary data.

The share of primary data contributing to the GWP-GHG results of modules A1–A3 is 6.82%, as reported in the life cycle assessment results. This reflects that the Kobert-In panels are largely composed of externally supplied raw and semi-finished materials, while in-house processes mainly involve finishing, printing and coating operations. Background processes are modelled using Ecoinvent v3.11 datasets implemented in SimaPro.

Infrastructure and capital goods

Infrastructure and capital goods (buildings, machinery and production equipment) are excluded from the system boundaries in accordance with PCR 2019:14 v2.0.1, as their contribution to total life cycle impacts is expected to be below 1%.

Characterisation methods

All environmental impact results are calculated using the Environmental Footprint (EF) 3.1 characterisation factors within the EN 15804+A2 reference package, as implemented in the LCA software.

Scenario modelling

Downstream life cycle stages (A4–C4) are modelled using realistic and conservative scenarios, as described in the respective module descriptions and documented in the life cycle assessment. These scenarios reflect typical transport distances, installation practices and end-of-life treatment routes for composite interior wall cladding panels.

For the Kobert-In panels, no benefits or loads beyond the system boundary are declared for the product itself. Due to the composite nature of the product and the limited feasibility of material separation under typical waste management conditions, no recycling, reuse or energy recovery is assumed for the product at end of life. However, part of the packaging waste generated during installation (module A5) is assumed to be treated by incineration with energy recovery. Nevertheless, in line with the conservative modelling approach applied in this study, the potential benefits associated with energy recovery are not accounted for in Module D.

This modelling approach is applied consistently in accordance with EN 15804+A2 and the PCR, following a conservative scenario-based methodology.

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	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	EU	EU	ES	GLO	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU
Share of primary data	6.82%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	6.50%[1]			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

[1] The percentage difference between the declared GWP-GHG result and the extremes of the analysed products is -2.64%/+6.50%, based on the best case (model: Kobert-In PE Sabbia) and worst case (model: Kobert-In FR Specchio).

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Raw materials	Data Base	Ecoinvent v3.11	2024	Secondary data	0.00%
Electricity	Database	Ecoinvent v3.11	2024	Primary data	1.92%
Transport of raw materials to manufacturing site	Database + Collected data	Ecoinvent v3.11	2024	Primary data	4.49%
Manufacturing of the product	Database + Collected data	Ecoinvent v3.11	2024	Primary data, secondary data	0.41%
Total share of primary data, of GWP-GHG results for A1-A3					6.82%

ENVIRONMENTAL PERFORMANCE

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

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.	1,82E+01	1,18E+00	1,19E+00	0	1,51E+01	0	0	0	0	0	1,99E-03	5,19E-02	0	3,01E-02	0
GWP-fossil	kg CO_2 eq.	2,08E+01	1,18E+00	1,17E+00	0	1,23E+01	0	0	0	0	0	1,99E-03	5,19E-02	0	2,97E-02	0
GWP-biogenic	kg CO_2 eq.	-3,17E+00	4,18E-05	3,27E+00	0	1,82E-01	0	0	0	0	0	1,04E-07	2,97E-06	0	1,44E-04	0
GWP- luluc	kg CO_2 eq.	1,92E-01	2,17E-05	6,52E-04	0	3,20E+01	0	0	0	0	0	8,21E-08	8,13E-07	0	1,16E-05	0
ODP	kg CFC 11 eq.	7,23E-07	2,50E-08	1,59E-05	0	2,65E-07	0	0	0	0	0	3,03E-11	1,17E-09	0	3,89E-10	0
AP	mol H^+ eq.	9,60E-02	7,93E-03	3,89E-03	0	1,86E-01	0	0	0	0	0	1,84E-05	1,29E-04	0	2,47E-04	0
EP-freshwater	kg P eq.	7,67E-04	7,53E-07	2,53E-05	0	3,35E-03	0	0	0	0	0	1,88E-09	3,18E-08	0	3,27E-07	0
EP- marine	kg N eq.	1,57E-02	2,29E-03	9,00E-04	0	2,58E-01	0	0	0	0	0	8,68E-06	4,86E-05	0	1,07E-04	0
EP-terrestrial	mol N eq.	1,67E-01	2,53E-02	9,96E-03	0	7,47E-01	0	0	0	0	0	9,51E-05	5,32E-04	0	1,17E-03	0
POCP	kg NMVOC eq.	1,03E-01	8,16E-03	3,45E-03	0	1,01E-01	0	0	0	0	0	2,84E-05	2,14E-04	0	3,54E-04	0
ADP-minerals&metals*	kg Sb eq.	1,37E-05	2,73E-08	3,56E-06	0	2,44E-05	0	0	0	0	0	6,98E-11	1,34E-09	0	9,85E-10	0
ADP-fossil*	MJ	5,25E+02	1,53E+01	1,39E+01	0	1,11E+02	0	0	0	0	0	2,61E-02	6,84E-01	0	3,84E-01	0
WDP*	m^3	1,03E+01	5,06E-03	9,94E-01	0	8,33E+01	0	0	0	0	0	1,95E-05	2,24E-04	0	9,09E-04	0
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 experienced with the indicator.*

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. As this EPD covers the end-of-life stage, the results of the end-of-life modules (C1–C4) should be considered together with the results of the product stage (modules A1–A3) in order to ensure a correct interpretation of the overall life cycle performance of the product.

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.	2,10E+01	1,18E+00	1,17E+00	0	4,43E+01	0	0	0	0	0	1,99E-03	5,19E-02	0	2,98E-02	0
Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017																

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	1,13E+02	3,69E-02	1,35E+00	0	9,68E+02	0	0	0	0	0	5,68E-05	1,71E-03	0	1,02E-02	0
PERM	MJ	1,08E+01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	1,23E+02	3,69E-02	1,35E+00	0	9,68E+02	0	0	0	0	0	5,68E-05	1,71E-03	0	1,02E-02	0
PENRE	MJ	5,58E+02	1,63E+01	1,47E+01	0	1,58E+02	0	0	0	0	0	2,77E-02	7,27E-01	0	4,08E-01	0
PENRM	MJ	6,57E-01	0	2,72E-01	0	0	0	0	0	0	0	0	0	0	0	0
PENRT	MJ	5,59E+02	1,63E+01	1,49E+01	0	1,58E+02	0	0	0	0	0	2,77E-02	7,27E-01	0	4,08E-01	0
SM	kg	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
NRSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FW	m^3	1,00E+01	4,95E-03	9,55E-01	0	7,84E+01	0	0	0	0	0	1,95E-05	2,19E-04	0	9,24E-04	0
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 CO_2 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	1,20E-02	9,81E-05	1,11E-04	0	1,63E-03	0	0	0	0	0	1,79E-07	4,55E-06	0	2,29E-06	0
Non-hazardous waste disposed	kg	6,59E-01	4,74E-04	1,73E+00	0	1,15E-01	0	0	0	0	0	9,14E-07	2,26E-05	0	5,32E+00	0
Radioactive waste disposed	kg	1,42E-03	8,83E-07	1,88E-05	0	1,04E-04	0	0	0	0	0	1,22E-09	4,13E-08	0	2,02E-07	0

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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Material for recycling	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Materials for energy recovery	kg	6,65E-02	0	3,34E-01	0	0	0	0	0	0	0	0	0	0	0	0
Exported energy, electricity	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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
SVHC	Substances of Very High Concern
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
LDPE	Low-Density Polyethylene
EPD	Environmental Product Declaration
LCA	Life Cycle Assessment
PCR	Product Category Rules
LED	Light Emitting Diode
EF 3.1	Environmental Footprint reference package version 3.1 (per EN 15804 +A2:2019)
RSL	Reference Service Life
VOC	Volatile Organic Compounds
GLO	Global (geographical dataset code in Ecoinvent)
EU	Europe Union
ES	Spain

REFERENCES

a) General Programme Instructions of International EPD System. Version 5.0.1, dated 2025.02.27.
b) PCR 2019:14 – Construction Products, Version 2.0.1, dated 2025-06-05.
c) EN 15804+A2:2019 – Sustainability of Construction Works – Environmental Product Declarations – Core Rules for the Product Category of Construction Products.
d) ISO 14040:2006 / ISO 14044:2006 – Environmental Management – Life Cycle Assessment – Principles and Framework / Requirements and Guidelines.
e) ISO 14025:2006 – Environmental Labels and Declarations – Type III Environmental Declarations – Principles and Procedures.
f) Life Cycle Assessment Report: Kobert-In from Barinsa, ZIRKEL, March 2026 (v1).

VERSION HISTORY

Original Version of the EPD, 2026-03-12

EPD
INTERNATIONAL EPD SYSTEM
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