ENVIRONMENTAL PRODUCT DECLARATION

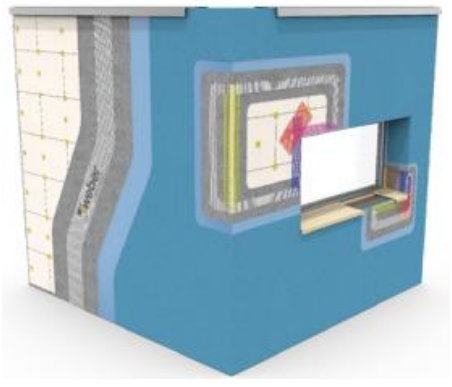
In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

Webertherm ETICS System

EPD of multiple products, based on a representative product (see the list of products covered in section *Product information*)

Version 1
Version date: 2025/12/23
Validity: 5 years
Validity date: 2030/12/22

The International EPD® System
Programme operator: EPD International AB
Type of EPD: EPD of multiple products from a company
Registration number: EPD-IES-0027710:001



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.

Weber, Saint-Gobain

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
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PCR information

Product Category rules (PCR)

CEN standard EN 15804:2012+A2:2019/AC:2021 as the Core Product Category Rules (PCR)

Product category rules (PCR): PCR 2019:14 Construction Products, version 2.0.1.

PCR review was conducted by: The Technical Committee of the International EPD® System
See www.environdec.com for a list of members.
C-PCR: 2019:14-c-PCR-005 Thermal insulation products (EN 16783) (c-PCR to PCR 2019:14) (1.0.0)

Chairs of the PCR review: Rob Rouwette (chair), Noa Meron (co-chair).

Verification

External and independent ('third-party') verification of the declaration and data, according to ISO 14025:2006, via
EPD verification through:
☒ Individual EPD verification without a pre-verified LCA/EPD tool
☐ Individual EPD verification with a pre-verified LCA/EPD tool
☐ EPD process certification* without a pre-verified LCA/EPD tool
☐ EPD process certification* with a pre-verified LCA/EPD tool
☐ Fully pre-verified EPD tool

Independent third-party verification of the declaration and data, according to ISO 14025:2006:
☒ EPD verification by individual verifier
Third party verifier: Marcel Gómez;
Marcel Gómez Consultoría Ambiental S.L.
(www.marcelgomez.com)
Tlf 0034 630 64 35 93
Email: info@marcelgomez.com
Approved by: The International EPD© System

Procedure for follow-up of data during EPD validity involves third part verifier: ☐ Yes ☒ No

Ownership and limitation on use of EPD

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 characterization factors); and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Information about EPD Owner

Address and contact information about the EPD owner:
SG WEBER CEMARKSA, S.A. Crta. C-17 km.2 08110 Montcada i Reixac (Barcelona)

Description of the organization of the EPD owner:
At Weber, we believe that the most important aspect of the construction industry is caring for people and their environment. Weber develops, produces, and sells solutions based on industrial mortars and construction chemicals for building and renovation projects.

Weber is made up of 10,000 people across 64 countries, supported by nearly 200 production units. Weber's services and solutions are designed to help customers save time, feel safe and comfortable, succeed in their work, and grow their business.

Our brand promises:

- **Well-being:** We care about everyone's safety and benefit. Making life easier, more convenient, and more comfortable.
- **Empathy:** We care about people. Listening to what matters to them and considering their needs. Helping everyone grow. Responding to the many challenges of today's world and adapting to the diversity of the lives within it.
- **Sustainability over time:** We care about the present, but also about the future. Taking responsibility to lead change and build a tomorrow that is in harmony with its environment.

Weber, a Saint-Gobain brand:
Saint-Gobain designs, manufactures, and distributes materials and solutions that are key ingredients for the well-being of each of us and the future of all. They are found everywhere we live and in our daily lives: in buildings, transportation, infrastructure, and many industrial applications, providing comfort, performance, and safety.

Management system-related certification:

The three plants have the following management system-related certification:

- Quality Management System: ISO 9001:2015 Certificate No.: ES12/11567
- Environmental Management System: ISO 14001:2015 Certificate No.: ES12/11566

LCA practitioner:

Jaime de Luis Rullán (jaime.deluis@saint-gobain.com Saint-Gobain Weber Cemarksa, S.A.)

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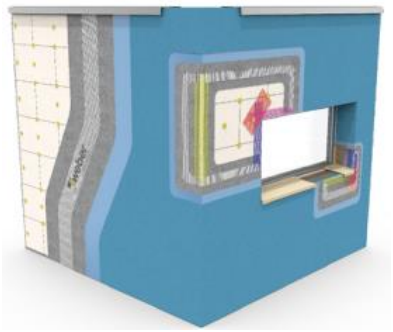
Anna Beatriz Suppelsa (AnnaBeatriz.Suppelsa@saint-gobain.com Saint-Gobain Central LCA Team)

Communication: The intended use of this EPD is for B2B communication.

Product information

Product name: Webertherm etics system



Visual representation of the product:

UN CPC CODE: 37510 Non-refractory mortars and concretes

List of products included in this EPD:
Thin layer finish and organic finish — all part of the Webertherm etics system.
This system comprises 16 distinct product combinations, resulting from the pairing of 8 different insulation thicknesses (EPS 20,40, 60, 80, 100, 120, 140 and 160 mm) with the 2 available finish types. Each combination represents a unique product.

Manufacturing site(s):
MONTCADA: Crta. C-17 km.2 08110 Montcada i Reixac (Barcelona)
PINTO: Área Empresarial Andalucía Sector 1 - C. de las Marismas, 11, 28320 Pinto (Madrid)
ALCOVER: Ctra. C-14, km. 23 - C/ Tramuntana, s/n - Pol. Roques Roges nº III, 43460 Alcover (Tarragona)
Only the Webertherm BASEGEL is manufactured in the three sites, and all three factories contribute to the final product.

Product description

The Webertherm ETICS System is an External Thermal Insulation Composite System (ETICS) designed for façade applications, compliant with EN 15804+A2:2019 and the Construction Products Regulation (CPR). It holds European Technical Assessment ETA 14/0365, based on EAD 040083-00-0404 for ETICS kits using EPS insulation and continuous coating.

It is based on **webertherm placa EPS**, a stabilized expanded polystyrene insulation board with excellent thermal performance (thermal conductivity, λ = 0,037 W/m·K). The system is designed to improve the thermal efficiency of the building envelope, while providing a solid and durable base to be coated with any of the following proposals: thin layer mineral (webercal ESTUCO), and organic (webertene range).

- Supply and application of webertherm placa EPS insulation boards, installed horizontally in successive rows with staggered joints. Boards are adhered using webertherm base adhesive mortar, applied either by perimeter bead and central dabs or by full surface troweling, ensuring a minimum adhesion surface of 40%. Use as reference 100 mm.
- Mechanical fixing of insulation boards using webertherm espiga anchors of steel and plastic, with a minimum of 6 fixings/m², reinforced in wind-exposed areas. Anchor type must be selected according to substrate characteristics.
- Surface reinforcement with webertherm malla 160, an alkali-resistant fiberglass mesh with a mesh opening of 3,5 x 3,8 mm, weight 160 g/m², thickness 0,52 mm, and elongation resistance of 3,8 / 3,8, embedded between two layers of webertherm base mortar (2–3 mm per layer).

All figures in this EPD refers to **Webertherm Etics System** with the organic finish and 100mm of EPS board**.**

Description	Value	Unit
Webertherm etics	**1**	**m^2**
Lifespan	**50**	**Years**

Technical data/physical characteristics:

Parameter	Value / Description	
Reaction to fire	BS1D0	ETA 14/0365
Installation information (kg/m²)	13,5 Kg/m^2	
Adhesion of adhesive to substrate	≥ 0,25 Mpa	
Adhesion of adhesive to insulation board	≥ 0,08 Mpa	
Water absorption (24h)	< 0,5 kg/m^2	
Water vapor permeability, Sd	≤ 1	
Thermal conductivity	Webertherm placa EPS 0,037 W/mK	

Content declaration

Description of the main components and/or materials for 1m^2 of 13,5kg:

Product components	Weight (%)	Post-consumer recycled material weight (%)	Biogenic material, weight- %	Biogenic material, kg C/DU
Insulating material	5 - 15 %	0 %	0,00 %	0,000 kg C /DU
Binder	5 - 20 %	0%	0,00 %	0,000 kg C /DU
Minerals	60 - 70 %	0%	0,00 %	0,000 kg C / DU
Additives	5 - 15 %	0%	0,21 %	0,028 kg C / DU
Fasteners and profiles	0 - 5 %	0%	0,45 %	0,060 kg C / DU
Fiberglass mesh	0 - 2 %	0%	0,02 %	0,002 kg C / DU
Sum	**100 %**	**0%**	**0,67 %**	**0,090 kg of C/DU**
Packaging materials	**Weight (kg)**	**Weight versus the product (%)**	**Recycled weight in packaging (%)**	**Biogenic material, kg C/DU**
Cardboard	0,024	0,177 %	0,0 %	0,010
Composite bag (85% paper +15% LDPE)	0,029	0,213 %	0,0 %	0,011
Polyethylene film (LDPE)	0,104	0,767 %	4,4 %	0,000
Polypropylene (parts and straps)	0,098	0,722 %	55,2 %	0,000
Steel straps	0,006	0,042 %	0,0 %	0,000
Wooden pallet	0,332	2,455 %	0,0 %	0,136

Hazardous substances

At the date of issue of this declaration, there is no “Substance of Very High Concern” (SVHC) in concentration above 0,1% by weight, and neither do their packaging, following the European REACH regulation (Registration, Evaluation, Authorization and Restriction of Chemicals).

LCA information

TYPE OF EPD	Cradle-to-grave and module D
DECLARED UNIT	1 m^2 of webertherm etics system, installed. The mass per square meter is 13,5 kg/m^2
SYSTEM BOUNDARIES	Cradle-to-grave and module D
REFERENCE SERVICE LIFE (RSL)	The Reference Service Life (RSL) of the mortar product is 50 years. This 50-year value is the amount of time that we recommend our products last for without refurbishment and corresponds to standard building design life.
CUT-OFF RULES	In the case that there is not enough information, the process energy and materials representing less than 1% of the whole energy and mass used can be excluded (if they do not cause significant impacts). The addition of all the inputs and outputs excluded cannot be bigger than the 5% of the whole mass and energy used, as well of the emissions to environment occurred. Flows related to human activities such as employee transport are excluded. The construction of plants, production of machines and transportation systems are excluded since the related flows are supposed to be negligible compared to the production of the building product when compared at these systems lifetime level.
ALLOCATIONS	Allocation has been avoided when possible and when not possible a mass allocation has been applied. The polluter pays and the modularity principles as well have been followed.
DATA QUALITY ASSESSMENT	Data quality of primary and secondary data had been judged by its precision (measured, calculated, or estimated), completeness (e.g., unreported emissions), consistency (degree of uniformity of the methodology applied), and representativeness (geographical, technological, and temporal).
GEOGRAPHICAL COVERAGE AND TIME PERIOD	Scope: Global Data is collected from 3 production sites Montcada, Pinto and Alcover located in Spain Data collected for the year 2024
BACKGROUND DATA SOURCE	The databases Sphera CUP2024.2 and ecoinvent v.3.10 EF Package 3.1
SOFTWARE	Sphera LCA for experts (GaBi) 10

Data quality declaration

Sources of data

To ensure reliable results, this study is based on a combination of first-hand industry data and background LCA data. Data used to model the processes is Primary data coming from up-to-date internal records of the manufacturing site and reporting documents, this data is double-checked with internal industry experts.

Data used to model the background processes such as raw materials production, energy production, transport, waste treatment is generic LCA data coming mainly from Sphera CUP2024.2 or ecoinvent v3.10 databases.

Datasets in LCA for Experts and ecoinvent databases are based on primary data collection from companies, associations, and public bodies. During the development of these datasets, they are cross-checked with other databases and values from industry and science, they are considered reliable sources.

Data quality assessment

This LCA study follows the data quality rules set by EN 15804:2012+A2:2019/AC:2021 and EN 15941 as required in the PCR.

Data quality of primary data is judged by its precision, geographical and temporal representativity. For the other criteria:
- Completeness: no flow has been excluded else than those specified in the cut-off section
- Consistency: thanks to Saint-Gobain internal reporting tools, consistency is considered very good among this project and other projects of the company.
- Technological: Data is specific to the company, processes and materials studied

LIFE CYCLE STAGE	YEAR	PRECISION	SOURCES
A1-A3			
Recipe	2024	Calculated	Saint-Gobain Weber
Distance and mean of transport of RM	2024	Calculated	Saint-Gobain Weber
Packaging	2024	Measured	Saint-Gobain Weber
Electricity	2024	Measured	Saint-Gobain Weber
Thermal energy	2024	Measured	Saint-Gobain Weber
Water	2024	Measured	Saint-Gobain Weber
Waste	2024	Measured	Saint-Gobain Weber
A4-A5			
Distance and mean of transport to customer	2024	Estimated	Saint-Gobain Weber
Installation losses	2024	Estimated	LCA and construction product waste management Expert
Product EoL	2024	Estimated	LCA and construction product waste management Expert
Packaging EoL	2024	Estimated	LCA and construction product waste management Expert
B1-B7			
Carbonation during use	-	Calculated	EN16757
C1-C4			
Product EoL demolition	-	Estimated	PCR 2019:14 Version 2.0.1
Product EoL transport	-	Estimated	LCA and construction product waste management Expert
Product EoL treatment	-	Estimated	LCA and construction product waste management Expert

Data quality of secondary data is judged by its reliability (measured, calculated, or estimated), completeness (e.g., unreported emissions), consistency (degree of uniformity of the methodology applied), and representativeness (geographical, technological, and temporal).

The overall assessment indicates that the data quality is good.

Quality level	1 = Very Good	2 = Good	3 = Fair	4 = Poor	5 = Very poor
Reliability		×			
Completeness		×			
Consistency		×			
Geographical representation		×			
Technical representativeness		×			
Temporal representativeness		×			

Share of primary data

Process	Source type	Source	Reference year	Data category	A1-A3 GWP-GHG [kg CO2 eq.]
Manufacturing process					
Energy specific	Database	Sphera 2024.2	<5 years old	Primary data	0,03%
Transportation (only if specific data collected)					
A2_Transport_Specific	Database	Sphera 2024.2 /ecoinvent 3.10	<5 years old	Primary data	1,74%
RMs from EPD					
KNAUF THERM ETIX	EPD	EPD-IES-0015781	2024	Primary data	14,1%
Background datasets in A1-A3					
Other processes	Database	Sphera 2024.2 /ecoinvent 3.10	<5 years old	Secondary data	84%
A1-A3 GWP-GHG Total share of primary data					**16%**

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.

Description of system boundaries

System boundaries (X=included. MND=module not declared)

	PRODUCT STAGE			CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY
	Raw material supply	Transport	Manufacturing	Transport	Construction-Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-recovery
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	ES			GLO		GLO							GLO				GLO
Share of primary data	16%			-		-							-				-
Variation – products	66%			-		-							-				-
Variation – sites	5,02%*			-		-							-				-

* This value originates from BASEGEL, the only component manufactured across all three production sites.

Life cycle stages

A1-A3. Product stage

The product stage of External Thermal Insulation Composite System (ETICS) is subdivided into 3 modules A1, A2 and A3 respectively “raw material supply”, “transport to manufacturer” and “manufacturing”.

A1. Raw materials supply

This module includes the extraction and transformation of raw materials.

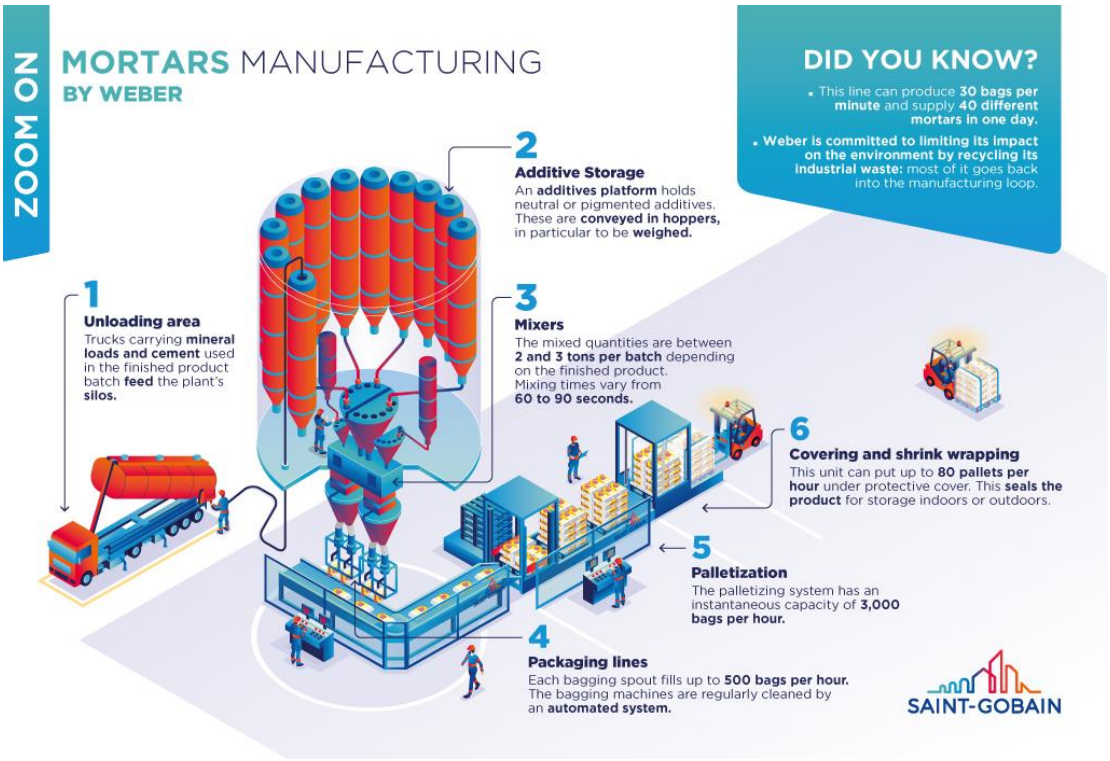
A2. Transport to the manufacturer

This module includes the transportation of raw materials to the manufacturing site. The modelling includes road, boat and/or train transportations.

A3. Manufacturing

This module includes the manufacture of products and the manufacture of packaging. The production and transport of packaging material is considered at this stage. The processing of any waste arising from this stage is also included.

Mortar manufacturing process flow diagram



The manufacturing activities include grinding, drying, storing, mixing, packing and internal transportation. Packaging-related flows in the production process and all upstream packaging are included in the manufacturing module, i.e., wooden pallets, bags, and LDPE film.
The manufacturing information of the EPS board can be found in the corresponding EPD: EPD-IES-0015781.

A4-A5. Construction process stage

The construction process is divided into 2 modules: A4, Transport to the building site and A5, Installation in the building.

A4. Transport to the building site

This module includes transport from the production gate to the building site. Transport is calculated based on a scenario with the parameters described in the following table.

PARAMETER	VALUE
Fuel type and consumption of vehicle or vehicle type used for transport e.g. long-distance truck, boat, etc.	Freight truck trailer 24 t payload, diesel consumption 38 liters for 100 km
Distance	500 km
Capacity utilisation (including empty returns)	100% of the capacity in mass 30% of empty returns
Bulk density of transported products*	161 kg / m³ ± 0,05
Volume capacity utilisation factor	1 (by default)

A5. Installation in the building

This module includes: the installation of the product, the surplus and transport of raw materials and packaging (cradle to gate) to compensate for the loss of product during the installation, the transport and management of packaging and product waste.

In this module was taken into consideration:

- Energy used in the equipment to prepare the product.

Not taken into consideration:

- Additional accessories for installation
- Energy used to install the product (manual tools are used instead).

PARAMETER	VALUE / DESCRIPTION
Ancillary materials for installation (specified by materials)	None
Water use	2,16 l / m^2 of product
Other resource use	None
Quantitative description of energy type (regional mix) and consumption during the installation process	0,0625 MJ/m^2 of product
Wastage of materials on the building site before waste processing, generated by the product's installation (specified by type)	<5% losses during installation
Output materials (specified by type) as results of waste processing at the building site e.g. of collection for recycling, for energy recovering, disposal	Product waste: Mortar 0,61 kg (66% to recycling, 34% landfill) Packaging waste: Cardboard 0,024 kg (70% to recycling, 30% landfill) Composite bag (85% paper +15% LDPE) 0,029 kg (70% to recycling, 30% landfill) Polyethylene film (LDPE) 0,104 kg (70% to recycling, 30% landfill) Polypropylene (parts and straps) 0,098 kg (70% to recycling, 30% landfill) Steel straps 0,006 kg (70% to recycling, 30% landfill) Wooden pallet 0,332 kg (67% reused, 33% landfill)
Direct emissions to ambient air, soil, and water	None

B1-B7. Use stage (excluding potential savings)

The use stage is divided into the following modules:

- **B1:** Use
- **B2:** Maintenance
- **B3:** Repair
- **B4:** Replacement
- **B5:** Refurbishment
- **B6:** Operational energy use
- **B7:** Operational water use

The product has a reference service life of 50 years. This assumes that the product will last in situ with no requirements for maintenance, repair, replacement, or refurbishment throughout this period. Therefore, it has no impact at this stage.

C1-C4. End of Life Stage

This stage includes the next modules:

- **C1: Deconstruction, demolition.** The de-construction and/or dismantling of the product take part of the demolition of the entire building. The energy considered for demolition is 0,018 MJ/kg.
- **C2: Transport to waste processing,** 80 km to recycling and landfill.
- **C3: Waste processing for reuse, recovery and/or recycling,** including physical pre-treatment and site management. The 70% of the waste goes to recycling, except EPS.
- **C4: Waste disposal:** landfilling, which is considered the EPS and the remaining 30% of the waste.

Description of the scenarios and additional technical information for the end of life:

PARAMETER	VALUE/DESCRIPTION
Collection process specified by type	13,5 kg is collected with mixed deconstruction and demolition waste
Recovery system specified by type	Mixed deconstruction and demolition waste: 8,2 kg to recycling
Disposal specified by type	Mixed deconstruction and demolition waste: 5,3 kg is sent to landfill
Assumptions for scenario development (e.g. transportation)	Average truck trailer with 24t payload, diesel consumption 38L/100km; 80km distance to recycling, 80km distance to landfill

D. Reuse/recovery/recycling potential

In the module D are declared the environmental benefits and loads from reusable products, recyclable materials, or energy recovery. Module D considers:

- Inputs of secondary materials: recycled raw materials for product and packaging (pre- and post-consumer),
- Outputs of secondary materials: product and/or packaging sent to recycling,
- Exported energy (electric or thermal): product and/or packaging sent to incineration with energy recovery.

Environmental performance

As specified in EN 15804:2012+A2:2019/AC:2021 and the Product-Category Rules, the environmental impacts are declared and reported using the baseline characterization factors based on EF 3.1. Raw materials and energy consumption, as well as transport distances have been taken directly from the manufacturing plant.

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.
The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3)

Disclaimer 1: 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 following indicators:

- Resource use, mineral and metals [kg Sb eq.]
- Resource use, energy carriers [MJ]
- Water deprivation potential [m^3 world equiv.]

Disclaimer 2: The impact category Ionizing radiation, human health [kBq U235 eq.] deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction material is also not measured by this indicator.

Disclaimer 3: The assumptions for the modules are in accordance with the project report (LCA study).

The following non-mandatory additional environmental indicators are not declared:

- Ecotoxicity freshwater [CTUe]
- Particulate Matter emissions [Disease incidence]
- Cancer human health effects [CTUh]
- Ionizing radiation - human health [kBq U235 eq.]
- Non-cancer human health effects [CTUh]
- Land Use [Pt].

Results refer to a declared unit of 1m^2 of product.
The following results corresponds to a single product manufactured in three plants. The reference product is Webertherm ETICS system with the organic finish and 100mm of EPS board.

Environmental Impacts

Environmental indicators	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE LIFE CYCLE
	A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
Climate Change [kg CO2 eq.]	1,16E+01	6,94E-01	1,06E+00	0	0	0	0	0	0	0	2,31E-02	1,35E-01	2,51E-02	2,04E+00	-1,04E+00
Climate Change (fossil) [kg CO2 eq.]	1,25E+01	6,83E-01	4,77E-01	0	0	0	0	0	0	0	2,31E-02	1,33E-01	2,47E-02	1,71E+00	-1,04E+00
Climate Change (biogenic) [kg CO2 eq.]	-9,07E-01	0	5,75E-01	0	0	0	0	0	0	0	0	0	0	3,32E-01	0
Climate Change (land use change) [kg CO2 eq.]	4,82E-02	1,09E-02	2,76E-03	0	0	0	0	0	0	0	2,15E-05	1,98E-03	3,29E-04	6,83E-04	-1,77E-04
Ozone depletion [kg CFC-11 eq.]	7,79E-05	7,56E-14	3,89E-06	0	0	0	0	0	0	0	1,75E-15	1,51E-14	4,37E-14	5,80E-13	-1,85E-09
Acidification terrestrial and freshwater [Mole of H+ eq.]	4,44E-02	8,81E-04	1,85E-03	0	0	0	0	0	0	0	6,00E-05	1,80E-04	1,26E-04	7,93E-04	-1,19E-03
Eutrophication freshwater [kg P eq.]	1,94E-04	2,95E-06	9,45E-06	0	0	0	0	0	0	0	1,17E-08	6,51E-07	9,56E-08	1,46E-05	-2,76E-07
Eutrophication marine [kg N eq.]	8,32E-03	3,14E-04	3,44E-04	0	0	0	0	0	0	0	2,51E-05	6,53E-05	5,83E-05	2,04E-04	-3,19E-04
Eutrophication terrestrial [Mole of N eq.]	8,53E-02	3,76E-03	3,28E-03	0	0	0	0	0	0	0	2,76E-04	7,75E-04	6,44E-04	2,56E-03	-3,45E-03
Photochemical ozone formation - human health [kg NMVOC eq.]	1,04E-01	8,37E-04	1,15E-03	0	0	0	0	0	0	0	6,83E-05	1,71E-04	1,62E-04	6,15E-04	-1,27E-03
Resource use, mineral and metals [kg Sb eq.][1]	5,04E-05	5,71E-08	1,34E-06	0	0	0	0	0	0	0	7,02E-10	1,13E-08	2,60E-08	1,02E-08	-4,12E-06
Resource use, energy carriers [MJ][1]	2,78E+02	8,77E+00	6,25E+00	0	0	0	0	0	0	0	3,00E-01	1,73E+00	4,63E-01	2,12E+00	-1,85E+01
Water deprivation potential [m³ world equiv.][1]	2,60E+00	9,92E-03	2,26E-01	0	0	0	0	0	0	0	8,08E-05	1,88E-03	4,73E-03	1,63E-01	-1,34E-01

[1] 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

Resources Use

	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE LIFE CYCLE
Resources Use indicators[2]	A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
Use of renewable primary energy (PERE) [MJ] [3]	1,75E+01	7,36E-01	9,82E-01	0	0	0	0	0	0	0	3,30E-03	1,40E-01	4,90E-02	4,00E-01	-1,69E-01
Primary energy resources used as raw materials (PERM) [MJ] [2]	7,33E+00	0	-7,33E+00	0	0	0	0	0	0	0	0	0	0	0	0
Total use of renewable primary energy resources (PERT) [MJ] [2]	2,48E+01	7,36E-01	-6,35E+00	0	0	0	0	0	0	0	3,30E-03	1,40E-01	4,90E-02	4,00E-01	-1,69E-01
Use of non-renewable primary energy (PENRE) [MJ] [2]	1,89E+02	8,78E+00	5,58E+00	0	0	0	0	0	0	0	3,00E-01	1,73E+00	2,54E+00	2,12E+00	-1,83E+01
Non-renewable primary energy resources used as raw materials (PENRM) [MJ] [2]	3,61E+01	0	-3,83E+00	0	0	0	0	0	0	0	0	0	-8,04E-01	-3,14E+01	0
Total use of non-renewable primary energy resources (PENRT) [MJ] [2]	2,25E+02	8,78E+00	1,74E+00	0	0	0	0	0	0	0	3,00E-01	1,73E+00	1,74E+00	-2,93E+01	-1,83E+01
Use of secondary material (SM) [kg]	5,85E-02	0	2,92E-03	0	0	0	0	0	0	0	0	0	0	0	0
Use of renewable secondary fuels (RSF) [MJ]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Use of non-renewable secondary fuels (NRSF) [MJ]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Use of net fresh water (FW) [m3]	7,17E-02	8,24E-04	5,48E-03	0	0	0	0	0	0	0	4,30E-06	1,57E-04	1,38E-04	3,95E-03	-2,04E-03

[3] From EPD International Construction Product PCR 2.0.1 (Annex 3). The option B was reatined to calculate the primary energy use indicators.

Waste Category & Output flows

	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE LIFE CYCLE
Waste Category & Output Flows	A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational	B7 Operational water	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
Hazardous waste disposed (HWD) [kg]	6,91E-01	2,86E-10	3,63E-02	0	0	0	0	0	0	0	1,60E-09	8,32E-10	8,32E-10	1,25E-08	-6,85E-05
Non-hazardous waste disposed (NHWD) [kg]	3,90E+00	1,38E-03	6,05E-01	0	0	0	0	0	0	0	6,13E-05	2,73E-04	8,93E-01	5,53E+00	-3,31E-01
Radioactive waste disposed (RWD) [kg]	2,84E-03	1,27E-05	5,66E-05	0	0	0	0	0	0	0	3,63E-07	2,65E-06	3,50E-05	9,66E-06	-1,25E-03
Components for re-use (CRU) [kg]	0	0	2,21E-01	0	0	0	0	0	0	0	0	0	0	0	0
Materials for Recycling (MFR) [kg]	7,95E-02	0	5,96E-01	0	0	0	0	0	0	0	0	0	8,25E+00	0	0
Material for Energy Recovery (MER) [kg]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported electrical energy (EEE) [MJ]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported thermal energy (EET) [MJ]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Additional voluntary indicators from EN 15804

		PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE LIFE CYCLE
Environmental indicators		A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
	GWP-GHG [kg CO2 eq.][4]	1,25E+01	6,88E-01	5,25E-01	0	0	0	0	0	0	0	2,29E-02	1,34E-01	2,49E-02	1,71E+00	-7,54E+01

[4] The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Information on biogenic carbon content

Biogenic Carbon Content in kg C		PRODUCT STAGE A1 / A2 / A3
	Biogenic carbon content in product [kg]	9,04E-02
	Biogenic carbon content in packaging [kg]	1,57E-01

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO2.

Declaration of variation

Variation between products

According to PCR 2.0.1, since this EPD is multi-product, the variation of impact between products shall be declared. The products listed as “maximum” and “minimum” are selected based on GWP-GHG; however, they do not represent the highest or lowest values across all impact categories.

- Minimum: organic with minimum thickness (EPS 20 mm)
- Reference: organic with reference thickness (EPS 100 mm)
- Maximum: thin layer with maximum thickness (EPS 160 mm)

The following table provides this variation of impact between

- reference and minimum (if the minimum is not the reference product).
- reference and the maximum (if the maximum is not the reference product).
- minimum and the maximum.

These percentage variations are calculated according to the method described in GPI 5.0.1, which states:

*The variation, in percentage, between two values is calculated by dividing the absolute difference between the values by their average, and then multiplying the result by 100. For example, if the variation between the values 9 and 10 is calculated, the following calculation shall be made: 1/9,5*100 = 10,526…% ≈ 11% (with two decimals).*

DEVIATION	BETWEEN REFERENCE AND MINIMUM	BETWEEN REFERENCE AND MAXIMUM	BETWEEN MINIMUM AND MAXIMUM
GWP-GHG	43,76%	23,90%	65,93%
Climate Change	43,86%	24,04%	66,16%
Climate Change (land use change)	131,52%	45,69%	154,07%
Ozone depletion *	65,28%	0,00%	65,28%
Acidification terrestrial and freshwater *	31,38%	15,09%	31,38%
Eutrophication freshwater *	15,99%	0,00%	15,99%
Eutrophication marine *	22,82%	0,00%	22,82%
Eutrophication terrestrial	24,65%	3,80%	28,38%
Photochemical ozone formation - human health	90,50%	36,41%	117,25%
Resource use, energy carriers	53,39%	21,32%	72,64%
Water deprivation potential *	21,32%	0,00%	21,32%

* Do not correspond to the product listed as having the maximum or minimum impact.

Additional environmental information:

Variation between product thickness

The following table provides the multiplication factors to be applied to the declared impacts of the reference product (EPS) for each thickness. These factors allow the estimation of impacts corresponding to other thicknesses. This information is included as EPS is the principal component of the system.

EPS (mm)	20	40	60	80	100	120	140	160
GWP-GHG	0,641	0,731	0,820	0,910	1,000	1,090	1,180	1,269
Climate Change	0,640	0,730	0,820	0,910	1,000	1,090	1,180	1,270
Climate Change (fossil)	0,999	0,999	1,000	1,000	1,000	1,000	1,000	1,001
Climate Change (biogenic)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Climate Change (land use change)	0,207	0,405	0,603	0,802	1,000	1,198	1,397	1,595
Ozone depletion	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Acidification terrestrial and freshwater	0,860	0,895	0,930	0,965	1,000	1,035	1,070	1,105
Eutrophication freshwater	0,892	0,919	0,946	0,973	1,000	1,027	1,054	1,081
Eutrophication marine	0,795	0,846	0,898	0,949	1,000	1,051	1,102	1,154
Eutrophication terrestrial	0,781	0,835	0,890	0,945	1,000	1,055	1,110	1,165
Photochemical ozone formation - human health	0,377	0,533	0,688	0,844	1,000	1,156	1,312	1,467
Resource use, mineral and metals	0,986	0,990	0,993	0,997	1,000	1,003	1,007	1,010
Resource use, energy carriers	0,579	0,684	0,789	0,895	1,000	1,105	1,211	1,316
Water deprivation potential	0,807	0,856	0,904	0,952	1,000	1,048	1,096	1,144

Electricity information

The factories located in Montcada, Pinto and Alcover use the following electricity description.

Parameter	Information
Location	Representative of Electricity residual market in Spain 2024
Geographical & technical representativeness	Share of energy sources Hard coal: 8,17% HFO: 2,87% Natural gas: 48,03% Nuclear: 37,51% Photovoltaics: 1,89% Wind: 1,51% **2% transmission losses**
Type of dataset/ dataset versions	Sphera CUP2024.2 ecoinvent 3.10 (medium voltage)
Source of electricity mix	AIB report 2024
GWP-GHG CO_2 eq.	0,433 kg of CO_2 eq./kWh

The Montcada factory based in Spain uses electricity with Guarantee of Origin certificate (GO). Hence, the electricity mix considered for the manufacturing of the studied product is modelled according to the electricity mix described in the Guarantee of Origin certificate. The amount of electricity purchased with GO covers 99% of the electricity consumption on the manufacturing site.

Parameter	VALUE / DESCRIPTION
Location	Representative of the Guarantee of Origin purchased by Saint-Gobain for Montcada
Share of electricity covered by Guarantee of Origin	99% of the energy consumption is covered by the GO
Energy sources for electricity	Share of energy sources Solar thermal 56,3% Wind 43,7% **2% transmission losses**
Dataset version	Sphera CUP2024.2 ecoinvent 3.10
Source	Guarantee of Origin certificate: CNMC
GWP-GHG CO_2 eq.	1,244E-2 kg of CO_2 eq./kWh

The Pinto factory based in Spain uses electricity with Guarantee of Origin certificate (GO). Hence, the electricity mix considered for the manufacturing of the studied product is modelled according to the electricity mix described in the Guarantee of Origin certificate. The amount of electricity purchased with GO covers 95% of the electricity consumption on the manufacturing site.

Parameter	VALUE / DESCRIPTION
Location	Representative of the Guarantee of Origin purchased by Saint-Gobain for Pinto
Share of electricity covered by Guarantee of Origin	95% of the energy consumption is covered by the GO
Energy sources for electricity	Share of energy sources Solar thermal 56,1% Wind 43,9% **2% transmission losses**
Dataset version	Sphera CUP2024.2 ecoinvent 3.10
Source	Guarantee of Origin certificate: CNMC
GWP-GHG CO_2 eq.	1,244E-2 kg of CO_2 eq./kWh

The Alcover factory based in Spain uses electricity with Guarantee of Origin certificate (GO). Hence, the electricity mix considered for the manufacturing of the studied product is modelled according to the electricity mix described in the Guarantee of Origin certificate. The amount of electricity purchased with GO covers 98% of the electricity consumption on the manufacturing site.

Parameter	VALUE / DESCRIPTION
Location	Representative of the Guarantee of Origin purchased by Saint-Gobain for Alcover
Share of electricity covered by Guarantee of Origin	98% of the energy consumption is covered by the GO
Energy sources for electricity	Share of energy sources Solar thermal 53,3% Wind 46,7% **2% transmission losses**
Dataset version	Sphera CUP2024.2 ecoinvent 3.10
Source	Guarantee of Origin certificate: CNMC
GWP-GHG CO_2 eq.	1,244E-2 kg of CO_2 eq./kWh

An EPD is valid for 5 years. Therefore, the GO will be prolonged continuously to be valid for the whole validity of the EPD. If not prolonged, the EPD will be updated.

End of life scenarios

Environmental indicators		100% landfill					100% recycling				
		END OF LIFE STAGE				REUSE, RECOVERY, RECYCLING	END OF LIFE STAGE				REUSE, RECOVERY, RECYCLING
		C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
	Climate Change (total) [kg CO_2 eq.][(a)]	2,65E-02	8,72E-02	0	5,50E-01	-1,26E+00	2,65E-02	8,70E-02	3,80E-01	0	-5,63E-02
	Climate Change (fossil) [kg CO_2 eq.]	2,65E-02	8,57E-02	0	2,17E-01	-1,27E+00	2,65E-02	8,56E-02	4,80E-02	0	-5,97E-02
	Climate Change (biogenic) [kg CO_2 eq.]	0	0	0	3,32E-01	1,87E-02	0	0	3,32E-01	0	3,57E-03
	Climate Change (land use change) [kg CO_2 eq.]	1,27E-06	1,42E-03	0	1,40E-03	-7,09E-04	1,27E-06	1,42E-03	6,16E-04	0	-2,13E-04
	Ozone depletion [kg CFC-11 eq.]	9,20E-11	1,21E-14	0	5,61E-13	-7,05E-08	9,20E-11	8,49E-15	1,66E-13	0	-2,03E-09
	Acidification terrestrial and freshwater [Mole of H+ eq.]	1,01E-04	1,12E-04	0	1,48E-03	-4,01E-03	1,01E-04	9,62E-05	1,90E-04	0	-1,97E-04
	Eutrophication freshwater [kg P eq.]	2,51E-08	3,62E-07	0	5,11E-07	-2,97E-05	2,51E-08	3,60E-07	1,91E-07	0	-3,18E-07
	Eutrophication marine [kg N eq.]	4,41E-05	4,00E-05	0	3,83E-04	-6,84E-04	4,41E-05	3,20E-05	8,44E-05	0	-5,57E-05
	Eutrophication terrestrial [Mole of N eq.]	4,83E-04	4,78E-04	0	4,22E-03	-7,43E-03	4,83E-04	3,89E-04	9,36E-04	0	-6,26E-04
	Photochemical ozone formation - human health [kg NMVOC eq.]	1,38E-04	1,10E-04	0	1,17E-03	-9,44E-03	1,38E-04	8,99E-05	2,34E-04	0	-3,46E-04
	Resource use, mineral and metals [kg Sb eq.][5]	2,64E-09	7,37E-09	0	1,42E-08	-1,21E-05	2,64E-09	7,18E-09	3,75E-08	0	-3,32E-07
	Resource use, energy carriers [MJ][1]	3,44E-01	1,12E+00	0	2,86E+00	-4,90E+01	3,44E-01	1,10E+00	8,55E-01	0	-1,73E+00
	Water deprivation potential [m^3 world equiv.][1]	2,97E-04	1,31E-03	0	2,39E-02	-5,91E-01	2,97E-04	1,26E-03	7,94E-03	0	-1,36E-02

[5] Disclaimer 2: 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
[(a)] The total global warming potential (GWP-total) is the sum of GWP fossil. GWP biogenic and GWP land use change

Resources Use indicators

		100% landfill					100% recycling				
		END OF LIFE STAGE				REUSE, RECOVERY, RECYCLING	END OF LIFE STAGE				REUSE, RECOVERY, RECYCLING
		C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
	Use of renewable primary energy (PERE) [MJ]	1,81E-03	1,35E-01	0	4,88E-01	-1,11E+00	1,81E-03	1,35E-01	1,48E-01	0	-1,45E-01
	Primary energy resources used as raw materials (PERM) [MJ]	0	1,33E-01	0	0	0	0	1,33E-01	0	0	0
	Total use of renewable primary energy resources (PERT) [MJ]	1,81E-03	0	0	4,88E-01	-1,11E+00	1,81E-03	0	1,48E-01	0	-1,45E-01
	Use of non-renewable primary energy (PENRE) [MJ]	3,44E-01	1,98E-03	0	2,86E+00	-4,90E+01	3,44E-01	1,98E-03	8,55E-01	0	-1,54E+00
	Non-renewable primary energy resources used as raw materials (PENRM) [MJ]	0	1,51E-14	0	-3,22E+01	0	0	1,51E-14	-3,22E+01	0	0
	Total use of non-renewable primary energy resources (PENRT) [MJ]	3,44E-01	1,80E-04	0	-2,94E+01	-4,90E+01	3,44E-01	1,80E-04	-3,14E+01	0	-1,54E+00
	Input of secondary material (SM) [kg]	0	6,51E-07	0	0	0	0	6,51E-07	0	0	0
	Use of renewable secondary fuels (RSF) [MJ]	0	6,53E-05	0	0	0	0	6,53E-05	0	0	0
	Use of non-renewable secondary fuels (NRSF) [MJ]	0	7,75E-04	0	0	0	0	7,75E-04	0	0	0
	Use of net fresh water (FW) [m^3]	7,62E-06	1,71E-04	0	7,37E-04	-1,38E-02	7,62E-06	1,71E-04	2,55E-04	0	-3,20E-04

Waste Category & Output Flows		100% landfill					100% recycling				
		END OF LIFE STAGE				REUSE, RECOVERY, RECYCLING	END OF LIFE STAGE				REUSE, RECOVERY, RECYCLING
		C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
	Hazardous waste disposed (HWD) [kg]	6,81E-05	3,56E-11	0	6,86E-10	-2,44E-02	6,81E-05	3,56E-11	2,35E-10	0	-6,83E-05
	Non-hazardous waste disposed (NHWD) [kg]	5,81E-04	1,71E-04	0	1,39E+01	-2,90E-01	5,81E-04	1,71E-04	2,74E-04	0	-5,19E-01
	Radioactive waste disposed (RWD) [kg]	3,09E-07	1,42E-06	0	2,89E-05	-3,11E-05	3,09E-07	1,42E-06	2,35E-05	0	-2,51E-05
	Components for re-use (CRU) [kg]	0	0	0	0	0	0	0	0	0	0
	Materials for Recycling (MFR) [kg]	0	0	0	0	0	0	0	1,35E+01	0	0
	Material for Energy Recovery (MER) [kg]	0	0	0	0	0	0	0	0	0	0
	Exported electrical energy (EEE) [MJ]	0	0	0	0	0	0	0	0	0	0
	Exported thermal energy (EET) [MJ]	0	0	0	0	0	0	0	0	0	0

Other additional environmental information

No additional information displayed

Additional social and economic information

No additional information displayed

Version history

Original Version of the EPD, 2025-12-23

ABBREVIATIONS

ETICS	External Thermal Insulation Composite System
DU	Declared Unit
EPD	Environmental Product Declaration
eq.	Equivalents
FU	Functional Unit
g	Gram
GJ	Giga Joules (as Net Calorific Value)
kg	Kilogram
kWh	Kilowatt-hour
L	Liter
LCA	Life Cycle Assessment
LCI	Life Cycle Inventory Analysis
LCIA	Life Cycle Impact Assessment
MJ	Mega Joules (as Net Calorific Value)
PCR	Product Category Rules
RSL	Reference Service Life (in years)
ton	Metric ton
GWP	Global Warming Potential
GO	Guarantees of Origin
EN	European Norm
ISO	International Organization for Standardization
EoL	End of Life
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals
CPR	Construction Products Regulation
GHG	Greenhouse Gas
PERE	Renewable Primary Energy
PERM	Non-renewable Primary Energy
SM	Secondary Material
RSF	Renewable Secondary Fuels
NRSF	Non-renewable Secondary Fuels
FW	Freshwater Use
HWD	Hazardous Waste Disposed
NHWD	Non-Hazardous Waste Disposed
RWD	Radioactive Waste Disposed
CRU	Components for Reuse
MFR	Materials for Recycling
MER	Materials for Energy Recovery
SVHC	Substance of Very High Concern
LDPE	Low density polyethylene

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