

ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 and
EN 15804:2012+A2:2019 for:

WEBER WATER- BASED PRODUCTS

Version 1

Date of publication: 2023/05/30

Validity: 5 years

Valid until: 2028/05/29

Scope of the EPD®: Global



THE INTERNATIONAL EPD® SYSTEM

Registration number

The International EPD® System:

S-P-08980



Production plant: **Greece**

General information

Company information

Manufacturer: Saint-Gobain Weber

Production plant: Greece

Programme used: EN 15804:2012+A2:2019 Sustainability of construction works – Environmental product declaration - core rules for the product category of construction product and The International EPD® System

PCR identification: PCR 2019:14 version 1.11 for Construction products and Construction services

Prepared by: IVL Swedish Environmental Research Institute, EPD International Secretariat

UN CPC CODE: 35110 – Paints and varnishes and related products.

Owner of the declaration: Saint-Gobain Weber.

Product name and manufacturer represented: This EPD describes the environmental impact of the weber water-based family products manufactured by Saint-Gobain Weber: weberprim EP 2K, weberdry easy roof, weberdry PUR seal aqua, weberdry PUR coat aqua.

EPD® prepared by: LCA Central Team, Saint-Gobain Weber (Michael.Medard@saint-gobain.com)

Geographical scope of the EPD®: Global

EPD® registration number: S-P-08980

Declaration issued: 2023/05/30, valid until: 2028/05/29

Demonstration of verification: An independent verification of the declaration was made, according to EN ISO 14025:2010. This verification was external and conducted by a third party, based on the PCR mentioned above (see information below).

Programme information

PROGRAMME: The International EPD® System

ADDRESS: EPD International AB - Box 210 60 - SE-100 31 Stockholm - Sweden

WEBSITE: www.environdec.com

E-MAIL: info@environdec.com

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

Product category rules (PCR): PCR 2019:14 Construction Products, version 1.11

PCR review was conducted by: The Technical Committee of the International EPD® System

President: Massimo Marino

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

☐ EPD process certification ☒ EPD verification

Third party verifier: Marcel Gómez, Consultoría Ambiental.

Tlf : 0034 630 64 35 93 – email : info@marcelgomez.com – www.marcelgomez.com

Approved by: The International EPD® System

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

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but from different PROGRAMMES may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

Product description

Product description and description of use

Certified for a life between 10 and 25 years life span (EOTA).

Consumption: 1.48 – 2.80 kg/m².

This EPD applies for a family of products manufactured by Saint-Gobain Weber in the plant located in Greece.

All technical characteristics and properties for any product could be find on the website. The tables below show the main characteristics of all the products considered in the water-based family.

Technical data/physical characteristics:

Product name	Technical description	Product description
weberdry easy roof	Liquid-applied hybrid polyurethane waterproofing membrane Water Based	Liquid-applied, highly permanent elastic, cold applied and cold curing, water based, hybrid polyurethane membrane, used for long-lasting waterproofing of roofs. EN 1504-2 Consumption: 1.0 – 1.5 kg/m ² applied in two or three layers.
weberprim EP 2K	Epoxy Primer, Water-based.	Transparent, rigid, epoxy primer. Used as a primer in waterproofing, sealing and floor coating applications on non-absorbent surfaces. Cures by reaction (cross linking) of the two components. Certified for 25 years expected life span (EOTA) & EN 1504-2 Consumption: 0.10 – 0.20 kg/m ² applied in one or two layers.
weberdry seal aqua PUR	Liquid-applied, Pure Polyurethane Waterproofing Membrane Water-based	Liquid-applied, highly permanent elastic, water-based polyurethane membrane used for long-lasting waterproofing of roofs, terraces, and balconies. Consists of flexible, water-based polyurethane resins (dispersion). Certified for 25 years expected life span (EOTA) & EN 1504-2 Consumption: 1.4 – 2.8 kg/m ² applied in two or three layers.
weberdry coat aqua PUR	Aliphatic Polyurethane Top-Coat, UV-stable, Water-based Light Pedestrian Traffic Areas	Water-based, pigmented, wear resistant, semi-rigid, UV & colour stable, polyurethane coating used as a top-coat for protection over water-based waterproofing membranes. Certified for 25 years expected life span (EOTA), EN 1504-2 & EN 13813 Consumption: 0.20 – 0.40 kg/m ² applied in one or two layers.

weberdry easy roof

Technical data*

PROPERTY	RESULTS	TEST METHOD
Elongation at Break	100 %	ASTM D 412
Tensile Strength	>1,5 N/ mm ²	ASTM D 412
Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928
Adhesion to concrete	>1,2 N/mm ²	EN 1542
Permeability to CO ₂ (measured in CE system)	3.4 g/m ² d	EN 1062-6
Water vapour permeability (measured in CE system)	17.75 g/m ² d	EN ISO 7783
Capillary absorption and permeability to water (measured in CE system)	0.009 kg/m ² .h ^{0.5}	EN 1062-3
Hardness (Shore A Scale)	60	ASTM D 2240 (15°)
Tack Free Time	6 hours	Conditions: 20°C, 50% RH
Light Pedestrian Traffic Time	18 hours	
Final Curing time	7 days	

weberprim EP 2K

Technical data*

PROPERTY	RESULTS	TEST METHOD
Composition	Epoxy resin + Hardener. Water based	
Mixing Ratio	A:B = 3:1	
Adhesion to aluminum	>2 N/mm ²	EN 1542
Adhesion to concrete	>4.5 N/mm ²	EN 1542
Hardness (SHORE A Scale)	>95	ASTM D 2240
Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928
Service Temperature	-30°C to +90°C	Inhouse lab
Application Temperature	10°C to 35°C	Conditions: 20°C, 50% RH
Pot Life	45-50 min	
Overcoating time	6-12 hours	
Final Curing time	7 days	

weberdry PUR seal aqua

Technical data*

PROPERTY	RESULTS	TEST METHOD
Tensile Strength at 20°C	>4,5 N/ mm ²	ASTM D 412
Elongation at Break at 20°C	>300%	ASTM D 412
Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928
Adhesion to primed concrete	>1,5 N/mm ² (concrete surface failure)	EN 1542
Hardness (Shore A Scale)	>65	ASTM D 2240 (15°)
Permeability to CO ₂ (measured in CE system)	4.55g/m ² d	EN 1062-6
Water vapour permeability (measured in CE system)	18.5g/m ² d	EN ISO 7783
Capillary absorption and permeability to water (measured in CE system)	0.025 kg/m ² .h ^{0.5}	EN 1062-3
Adhesion strength by pull-off test (measured in CE system)	1.5 N/mm ²	EN 1542
Light Pedestrian Traffic Time	18-24 hours	Conditions: 20°C, 50% RH
Final Curing time (ponding test)	10 days	

weberdry PUR coat aqua

Technical data

PROPERTY	RESULTS	TEST METHOD
Elongation at Break at 20°C	250%	ASTM D 412
Tensile Strength at 20°C	>10 N/mm ²	ASTM D 412
UV Stability, 2000h	excellent	ASTM G154
Permeability to CO ₂ (measured in CE system)	4.55g/m ² d	EN 1062-6
Water vapour permeability (measured in CE system)	18.5g/m ² d	EN ISO 7783
Capillary absorption and permeability to water (measured in CE system)	0.025 kg/m ² .h ^{0.5}	EN 1062-3
Adhesion strength by pull-off test (measured in CE system)	1.5 N/mm ²	EN 1542
Impact Resistance	19.6Nm	EN ISO 6272-1
Wear Resistance	10µm	EN 13892-4
Solar Reflectance Index (SRI) (white colour)	113	ASTM E1980-01
Infrared emittance (white colour)	0.88	ASTM C1371-04a
Solar Reflectance (white colour)	89	ASTM E903-12
Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928
Hardness (Shore A Scale)	>65	ASTM D 2240 (15°)
Rain Stability Time	4 hours	Conditions: 20°C, 50% RH
Light Pedestrian Traffic Time	18-24 hours	
Final Curing time (ponding test)	10 days	

Declaration of the main product components and/or materials

Weber water-based products can have a variable composition range. The composition range of the product is shown below. For its representation in the calculation model, an average product has been represented at the composition level, based on the contribution to the environmental impact of the different raw materials.

PRODUCT	WEIGHT (Kg/M ²)	Post-consumer recycled material, weight %	Biogenic material weight kg C/kg
Weber water-based products	1.48 – 2.80	0	0
PRODUCT COMPONENTS	WEIGHT (%)	Post-consumer recycled material, weight %	Biogenic material weight kg C/kg
Fillers	12 – 56 %	0 %	0 %
Acrylic	1 – 20 %	0 %	0 %
Water	23 – 45 %	0 %	0 %
PU	1 – 28 %	0 %	0 %
Additives	1 – 3 %	0 %	0 %
TOTAL	100 %	0 %	0 %
PACKAGING MATERIALS	WEIGHT (kg)	WEIGHT (%) vs the product	Biogenic material weight kg C/kg
Plastic packaging	3.32E-02 – 1.26E-01	3.32 – 12.60 %	0
Plastic wrap	5.28E-04 – 7.84E-04	0.05 – 0.08 %	0
EURO Wood-pallet	3.47E-02 – 5.16E-02	3.47 – 5.16 %	2.55E-03 – 3.43E-03

During the life cycle of the product any hazardous substance listed in the “Candidate List of Substances of Very High Concern (SVHC) for authorization” has been used in a percentage higher than 0.1% of the weight of the product. The verifier and the PROGRAMME operator do not make any claim nor have any responsibility of the legality of the product.

LCA calculation information

TYPE OF EPD	Cradle to grave and module D
FUNCTIONAL UNIT	1 kg of product installed and with an assumed working life between 10 and 25 years
SYSTEM BOUNDARIES	Cradle to grave + Module D = (A+B+C) + D
REFERENCE SERVICE LIFE (RSL)	The RSL is considered to be between 10 and 25 years, due to its nature and composition, these materials are of high quality and proven durability.
CUT-OFF RULES	In general, the cut-off criteria are 1% of the consumption of renewable and non-renewable primary energy and 1% of the total input mass of the manufacturing process (according to the EN 15804 standard). In the evaluation, all available data of the production process is considered, i.e., all raw materials used, auxiliary materials used and energy consumption using the best available data sets in the reference database. The following processes have been excluded: • Manufacture of equipment used in production, infrastructure, or any other capital goods. • Transportation of personnel to the plant or from the production site. • Research and development activities. • Long-term emissions.
ALLOCATIONS	In general, whenever possible, allocation was avoided. Materials production was divided into families, and input and output data related to each were collected, when the data could not be directly attributed to a specific product, they were generally assigned to the total production of materials without differentiation. The allocation of the consumption of common inputs such as water consumption, as well as common production outputs, such as solid waste generation, was made based on the total annual production of materials. The consumption reported for fuels and electricity was made at plant level, the allocation was assumed by total production (by mass). The modularity principle as well as the polluter-payer principle have been followed. The waste management data corresponds to all the waste generated in the facilities of the production plant, considering total generation of residues. Therefore, the reported data includes all the products made in the production plant.
GEOGRAPHICAL COVERAGE AND TIME PERIOD	Scope: Global. Data is collected from one production site located in Greece. Data collected for the year 2021. Cradle to grave study.
BACKGROUND DATA SOURCE	Ecoinvent v3.8
SOFTWARE	SimaPro v9.3

According to EN 15804:2012+A2:2019, EPDs of construction products may not be comparable if they do not comply with this standard. According to ISO 21930:2017, EPDs might not be comparable if they are from different programs.

LCA scope

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	GR	GR	GR	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO
Specific data used	>90 % GWP- GHG																
Variation products	One family of products is reported in this EPD																
Variation sites	Only one site is reported for this product																

Life cycle stages



Figure 1. Flow diagram of the Life Cycle

A1-A3, Product stage

Description of the stage:

The product stage of the Weber products is subdivided into 3 modules A1, A2 and A3 respectively, "Raw materials supply", "Transport to the manufacturer" and "Manufacturing". The aggregation of the modules A1, A2 and A3 is a possibility considered by the EN 15804 standard. This rule is applied in this EPD.

Description of the scenarios and other additional technical information:

A1, Raw materials supply

For each product, a model has been made and calculated per kilogram of product. Some products are the result of the combination of 2 or more components, some of them have component A and component B. In these cases, a weighted ratio of products A and B was calculated. The specific consumption per kg of product is calculated in kg/m².

For the quantification of impacts associated with raw materials, 100 % of the components reported in the production of materials have been used, including main and secondary raw materials.

A2, Transport to the manufacturer

To determine the transport of raw materials, the data collected by the production plant regarding their raw materials and data referring to their supply have been used. Additionally, the production plant has also reported the road transport distance for each of the secondary materials (consumables) used in the production activities during the year.

Consumable materials include fuels (diesel), oils and others. For each of these, the total quantity transported and the weighted average distance according to the quantity registered by each production center have been determined, to calculate the kg*kilometer ratio, which has been consolidated for each product.

Greece production center has reported the average distance and means of transport used for the mobilization of raw materials from their production site.

A3, Manufacturing

Based on the internal records of the production plant, the quantity of materials produced per year, by nature of the product, has been reported.

These products come from the combination of different polymers; some products are the result of more than 5 combined polymers.

The main inputs of the manufacturing system are:

- Energy: Electricity and Fuels.
- Water: Well intake or network consumption.
- Consumables: External raw materials, Waste to be processed and/or recovered.
- Transports: Packaging and waste.

The main outputs of the production system are:

- Waste generated: Hazardous, Non-hazardous.
- Emissions to: air, water or soil (none).

Manufacturing process flow diagram

System diagram:

Manufacturing process flow diagram: Basic scheme of the weber water-based products production line

- 1) Reception of raw materials
- 2) Quality control
- 3) Storage
- 4) Mix with resins and pigments
- 5) Mass distribution
- 6) Quality control

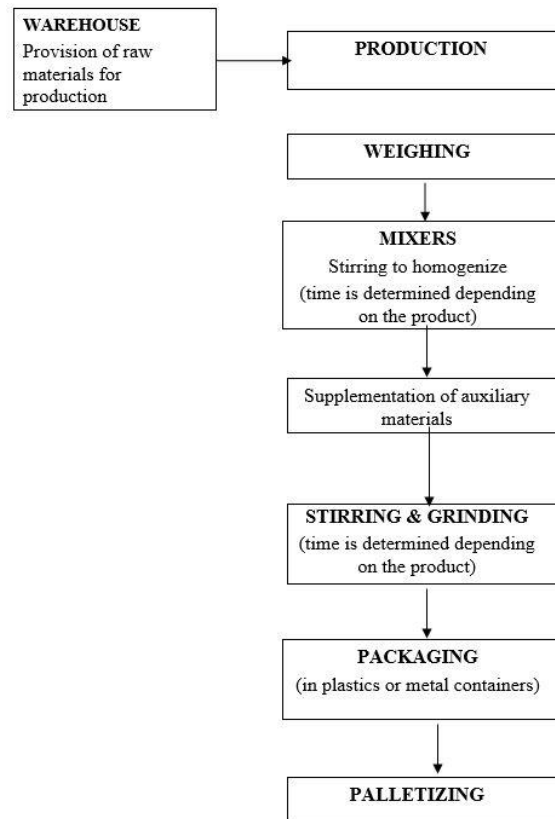


Figure 2. Manufacturing process for Saint-Gobain Weber Products

A4-A5, Construction process stage

Description of the 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:

Considering the wide distribution of products at an international and regional level, based on the sales distribution report, the total production sold by family and by country of destination is considered. For each of the destinations, according to information for internal use, the export ports in the country of origin and import ports in the destination countries are determined. An average transportation distance to the construction site is determined in each destination country.

For each case, the transport distances are determined and associated with a mode of transport: land freight vehicle, and maritime container ship. The detail of the technical parameters for the transport model is obtained from the Ecoinvent v3.8 database and its reference technical studies. The assumptions of this modelling are summarized below.

PARAMETER	VALUE	
Fuel type and consumption of vehicle or vehicle type used for transport e.g. long distance truck, boat, etc.	Transport, freight, lorry 16-32 metric ton, EURO6 {RER} transport, freight, lorry 16-32 metric ton, EURO6 Cut-off, U, diesel consumption 3.66E-02 kg/tkm	Transport, freight, sea, container ship {GLO} transport, freight, sea, container ship Cut-off, U, heavy fuel consumption: 2.52E-03 kg/tkm
Distance	Km by truck: 1140.94 km	Km by ship: 167.13 km
Capacity utilisation (including empty returns)	Percentage assumed by Ecoinvent database	Percentage assumed by Ecoinvent database
Apparent density:	1.04 – 1.43 kg / m ³	
Volume capacity utilisation factor	1 (by default)	1 (by default)

A5, Installation in the building:

Considering the uses and installation, it can be reported that more than 99 % of the cases require a manual installation that does not imply the use of extra resources, neither energy, nor water nor application machines, only spreading on the surfaces where the product is applied, and it remains. It is considered that it does not generate extra waste not previously considered, apart from that referring to the packaging in which the product is stored and the packaging in which it is transported from the country of origin to the destination.

There is an estimation of 0.3 % of material loss during the installation process. Regarding waste management, plastic waste (container pots), pallets, metal waste and mixed packaging are considered, which are assumed to be 100 % recycled considering at an average distance scenario of 50 km.

B1-B7, Use stage (excluding potential savings)

Description of the stage: the use stage is divided into the following modules:

- The use stage is divided into the following modules: Use – B1, Maintenance – B2, Repair – B3,
- Replacement – B4, Refurbishment – B5, Operational energy and water use – B6 and B7
- Once installation is complete, no actions or technical operations are required during the use stages until the end of life stage. The product does not require any energy, water or material input to keep it in working order. Furthermore, it is not exposed to the indoor atmosphere of the building, nor is it in contact with the circulating water or the ground.

Description of scenarios and additional technical information:

Based on their design features and components, Saint-Gobain Weber products have an assumed working life between 10 and 25 years. Regardless of the installation conditions and multiple applications for final finishing, the maintenance needs are none. Therefore, the impact of these stages is 0.

C1-C4, End of Life Stage

Description of the stage: Landfill is considered to be the worst scenario. The end of life stage is divided into the following modules:

C1, Deconstruction, demolition

The deconstruction and/or dismantling of the product take part of the demolition of the entire building.

C2, Transport to waste processing

The model use for the transportation is applied.

C3, Waste processing for reuse, recovery and/or recycling

The product is considered to be landfilled without reuse, recovery or recycling. No environmental loads are attributed to this stage.

C4, Disposal

The product is considered to be landfilled.

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

PARAMETER	VALUE/DESCRIPTION
Collection process specified by type	1 kg collected with mixed construction waste.
Recovery system specified by type	0 % of Waste
Disposal specified by type	100 % to municipal landfill
Assumptions for scenario development (e.g. transportation)	Average truck trailer with 16-32 metric ton payload, EURO6 diesel consumption 3.66E-02 kg/tkm; 50 km distance to landfill

D, Reuse/recovery/recycling potential

Packaging could be partly reused, recycled or landfilled. The D module contains the benefits or load linked to the future use of recycled packaging.

100% of wastes are landfilled. There is no reuse nor recovery nor recycling of this product. Hence, no recycling benefits are reported on Module D.

LCA results

As specified in EN 15804:2012+A2:2019 and also the Product-Category Rules, the environmental impacts are declared and reported using the baseline characterization factors from ILCD. Specific data has been supplied by the plant, and generic data comes from Ecoinvent v3.8 databases. All emissions to air, water, and soil, and all materials and energy used have been included.

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.

All data results are representative for 1 kg of weber water-based products, as declared unit. Estimated impact results are only relative statements that do not indicate impact category endpoints, exceeding threshold values, safety margins, or risks.

Description of the system boundary, X = Included in LCA, MND = Module Not Declared

Environmental Impacts

Group 2. weberdry easy roof

Environmental indicators		PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				REUSE, RECOVERY RECYCLING
		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.]	1.67E+00	1.01E-01	4.75E-04	0	0	0	0	0	0	0	0	8.15E-03	0	5.35E-03	0
	Climate Change (fossil) [kg CO2 eq.]	1.70E+00	1.01E-01	4.71E-04	0	0	0	0	0	0	0	0	8.14E-03	0	5.27E-03	0
	Climate Change (biogenic) [kg CO2 eq.]	-3.26E-02	1.05E-04	3.06E-06	0	0	0	0	0	0	0	0	7.42E-06	0	7.97E-05	0
	Climate Change (land use change) [kg CO2 eq.]	4.61E-03	3.84E-05	1.82E-07	0	0	0	0	0	0	0	0	3.26E-06	0	1.91E-06	0
	Ozone depletion [kg CFC-11 eq.]	6.73E-07	2.51E-08	9.92E-11	0	0	0	0	0	0	0	0	1.89E-09	0	9.36E-10	0
	Acidification terrestrial and freshwater [Mole of H+ eq.]	1.07E-02	3.67E-04	2.54E-06	0	0	0	0	0	0	0	0	2.31E-05	0	4.91E-05	0
	Eutrophication freshwater [kg P eq.]	5.72E-05	7.14E-07	4.27E-09	0	0	0	0	0	0	0	0	5.81E-08	0	6.33E-08	0
	Eutrophication freshwater [kg (PO4)³ eq.]	1.76E-04	2.19E-06	1.31E-08	0	0	0	0	0	0	0	0	1.78E-07	0	1.94E-07	0
	Eutrophication marine [kg N eq.]	1.50E-03	8.21E-05	8.76E-07	0	0	0	0	0	0	0	0	4.59E-06	0	2.03E-05	0
	Eutrophication terrestrial [Mole of N eq.]	1.53E-02	9.13E-04	9.63E-06	0	0	0	0	0	0	0	0	5.12E-05	0	2.23E-04	0
	Photochemical ozone formation - human health [kg NMVOC eq.]	5.54E-03	3.41E-04	2.86E-06	0	0	0	0	0	0	0	0	1.97E-05	0	6.16E-05	0
	Resource use, mineral and metals [kg Sb eq.]¹	1.63E-05	2.40E-07	1.02E-09	0	0	0	0	0	0	0	0	2.89E-08	0	2.40E-10	0
	Resource use, energy carriers [MJ]¹	3.12E+01	1.64E+00	6.80E-03	0	0	0	0	0	0	0	0	1.23E-01	0	7.01E-02	0
	Water deprivation potential [m³ world equiv.]¹	1.33E+00	5.59E-03	1.94E-05	0	0	0	0	0	0	0	0	3.76E-04	0	1.75E-04	0

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

Resources Use indicators	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				D REUSE, RECOVERY, RECYCLING
	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]	2.03E+00	2.07E-02	1.20E-04	0	0	0	0	0	0	0	0	1.76E-03	0	1.65E-03	0
 Primary energy resources used as raw materials (PERM) [MJ]	2.56E-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
 Total use of renewable primary energy resources (PERT) [MJ]	2.06E+00	2.07E-02	1.20E-04	0	0	0	0	0	0	0	0	1.76E-03	0	1.65E-03	0
 Use of non-renewable primary energy (PENRE) [MJ]	3.35E+01	1.74E+00	7.22E-03	0	0	0	0	0	0	0	0	1.31E-01	0	7.45E-02	0
 Non-renewable primary energy resources used as raw materials (PENRM) [MJ]	1.55E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
 Total use of non-renewable primary energy resources (PENRT) [MJ]	3.50E+01	1.74E+00	7.22E-03	0	0	0	0	0	0	0	0	1.31E-01	0	7.45E-02	0
 Input of secondary material (SM) [kg]	0	0	0	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]	3.26E-02	1.93E-04	7.87E-07	0	0	0	0	0	0	0	0	1.40E-05	0	8.42E-06	0

Waste Category & Output flows

Waste Category & Output Flows		PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				D REUSE, RECOVERY, RECYCLING
		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
	Hazardous waste disposed (HWD) [kg]	2.45E-05	3.93E-06	1.66E-08	0	0	0	0	0	0	0	0	3.22E-07	0	1.50E-07	0
	Non-hazardous waste disposed (NHWD) [kg]	4.82E-01	1.51E-01	3.54E-02	0	0	0	0	0	0	0	0	6.46E-03	0	1.00E+00	0
	Radioactive waste disposed (RWD) [kg]	5.64E-05	1.11E-05	4.49E-08	0	0	0	0	0	0	0	0	8.34E-07	0	4.42E-07	0
	Components for re-use (CRU) [kg]	0	0	1.12E-03	0	0	0	0	0	0	0	0	0	0	0	0
	Materials for Recycling (MFR) [kg]	0	0	6.51E-02	0	0	0	0	0	0	0	0	0	0	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 (according to ISO 21930:2017)

		PRODUCT STAGE	CONSTRUCTION STAGE	USE STAGE								END OF LIFE STAGE				REUSE, RECOVERY RECYCLING
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
	Climate Change [kg CO2 eq.] ²	1.65E+00	9.99E-02	4.67E-04	0	0	0	0	0	0	0	0	8.07E-03	0	5.20E-03	0

² 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

		PRODUCT STAGE
Biogenic Carbon Content in kg C		A1 / A2 / A3
	Biogenic carbon content in product [kg]	0
	Biogenic carbon content in packaging [kg]	2.55E-03

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

Group 1. weberprim EP 2K and weberdry PUR seal aqua

		PRODUCT STAGE	CONSTRUCTION STAGE	USE STAGE								END OF LIFE STAGE				REUSE, RECOVERY RECYCLING
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
	Climate Change [kg CO2 eq.]	2.39E+00	1.01E-01	1.14E-03	0	0	0	0	0	0	0	0	8.15E-03	0	5.35E-03	0
	Climate Change (fossil) [kg CO2 eq.]	2.42E+00	1.01E-01	1.13E-03	0	0	0	0	0	0	0	0	8.14E-03	0	5.27E-03	0
	Climate Change (biogenic) [kg CO2 eq.]	-3.52E-02	1.05E-04	7.38E-06	0	0	0	0	0	0	0	0	7.42E-06	0	7.97E-05	0
	Climate Change (land use change) [kg CO2 eq.]	1.38E-03	3.84E-05	4.37E-07	0	0	0	0	0	0	0	0	3.26E-06	0	1.91E-06	0
	Ozone depletion [kg CFC-11 eq.]	2.59E-06	2.51E-08	2.39E-10	0	0	0	0	0	0	0	0	1.89E-09	0	9.36E-10	0
	Acidification terrestrial and freshwater [Mole of H+ eq.]	1.26E-02	3.67E-04	6.11E-06	0	0	0	0	0	0	0	0	2.31E-05	0	4.91E-05	0
	Eutrophication freshwater [kg P eq.]	9.87E-05	7.14E-07	1.03E-08	0	0	0	0	0	0	0	0	5.81E-08	0	6.33E-08	0
	Eutrophication freshwater [kg (PO ₄) ³ eq.]	3.03E-04	2.19E-06	3.15E-08	0	0	0	0	0	0	0	0	1.78E-07	0	1.94E-07	0
	Eutrophication marine [kg N eq.]	2.45E-03	8.21E-05	2.11E-06	0	0	0	0	0	0	0	0	4.59E-06	0	2.03E-05	0
	Eutrophication terrestrial [Mole of N eq.]	2.34E-02	9.13E-04	2.32E-05	0	0	0	0	0	0	0	0	5.12E-05	0	2.23E-04	0
	Photochemical ozone formation - human health [kg NMVOC eq.]	9.38E-03	3.41E-04	6.88E-06	0	0	0	0	0	0	0	0	1.97E-05	0	6.16E-05	0
	Resource use, mineral and metals [kg Sb eq.] ³	2.30E-05	2.40E-07	2.46E-09	0	0	0	0	0	0	0	0	2.89E-08	0	2.40E-10	0
	Resource use, energy carriers [MJ] ¹	4.82E+01	1.64E+00	1.64E-02	0	0	0	0	0	0	0	0	1.23E-01	0	7.01E-02	0
	Water deprivation potential [m ³ world equiv.] ¹	1.57E+00	5.59E-03	4.66E-05	0	0	0	0	0	0	0	0	3.76E-04	0	1.75E-04	0

³ 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

Resources Use indicators	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				D REUSE, RECOVERY, RECYCLING
	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]	2.84E+00	2.07E-02	2.89E-04	0	0	0	0	0	0	0	0	1.76E-03	0	1.65E-03	0
 Primary energy resources used as raw materials (PERM) [MJ]	3.45E-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
 Total use of renewable primary energy resources (PERT) [MJ]	2.87E+00	2.07E-02	2.89E-04	0	0	0	0	0	0	0	0	1.76E-03	0	1.65E-03	0
 Use of non-renewable primary energy (PENRE) [MJ]	5.17E+01	1.74E+00	1.74E-02	0	0	0	0	0	0	0	0	1.31E-01	0	7.45E-02	0
 Non-renewable primary energy resources used as raw materials (PENRM) [MJ]	3.80E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
 Total use of non-renewable primary energy resources (PENRT) [MJ]	5.55E+01	1.74E+00	1.74E-02	0	0	0	0	0	0	0	0	1.31E-01	0	7.45E-02	0
 Input of secondary material (SM) [kg]	0	0	0	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]	3.97E-02	1.93E-04	1.89E-06	0	0	0	0	0	0	0	0	1.40E-05	0	8.42E-06	0

Waste Category & Output flows

Waste Category & Output Flows		PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				D REUSE, RECOVERY, RECYCLING
		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
	Hazardous waste disposed (HWD) [kg]	3.50E-05	3.93E-06	4.00E-08	0	0	0	0	0	0	0	0	3.22E-07	0	1.50E-07	0
	Non-hazardous waste disposed (NHWD) [kg]	4.33E-01	1.51E-01	8.52E-02	0	0	0	0	0	0	0	0	6.46E-03	0	1.00E+00	0
	Radioactive waste disposed (RWD) [kg]	7.13E-05	1.11E-05	1.08E-07	0	0	0	0	0	0	0	0	8.34E-07	0	4.42E-07	0
	Components for re-use (CRU) [kg]	0	0	1.12E-03	0	0	0	0	0	0	0	0	0	0	0	0
	Materials for Recycling (MFR) [kg]	0	0	6.51E-02	0	0	0	0	0	0	0	0	0	0	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 (according to ISO 21930:2017)

		PRODUCT STAGE	CONSTRUCTION STAGE	USE STAGE								END OF LIFE STAGE				REUSE, RECOVERY RECYCLING
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
	Climate Change [kg CO2 eq.] ⁴	2.34E+00	9.99E-02	1.12E-03	0	0	0	0	0	0	0	0	8.07E-03	0	5.20E-03	0

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

		PRODUCT STAGE
Biogenic Carbon Content in kg C		A1 / A2 / A3
	Biogenic carbon content in product [kg]	0
	Biogenic carbon content in packaging [kg]	3.43E-03

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

Group 3. weberdry PUR coat aqua

Environmental indicators		PRODUCT STAGE	CONSTRUCTION STAGE	USE STAGE								END OF LIFE STAGE				REUSE, RECOVERY RECYCLING
		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.]	3.25E+00	1.01E-01	5.94E-04	0	0	0	0	0	0	0	0	8.15E-03	0	5.35E-03	0
	Climate Change (fossil) [kg CO2 eq.]	3.29E+00	1.01E-01	5.90E-04	0	0	0	0	0	0	0	0	8.14E-03	0	5.27E-03	0
	Climate Change (biogenic) [kg CO2 eq.]	-6.61E-02	1.05E-04	3.83E-06	0	0	0	0	0	0	0	0	7.42E-06	0	7.97E-05	0
	Climate Change (land use change) [kg CO2 eq.]	2.47E-02	3.84E-05	2.27E-07	0	0	0	0	0	0	0	0	3.26E-06	0	1.91E-06	0
	Ozone depletion [kg CFC-11 eq.]	2.91E-06	2.51E-08	1.24E-10	0	0	0	0	0	0	0	0	1.89E-09	0	9.36E-10	0
	Acidification terrestrial and freshwater [Mole of H+ eq.]	2.26E-02	3.67E-04	3.17E-06	0	0	0	0	0	0	0	0	2.31E-05	0	4.91E-05	0
	Eutrophication freshwater [kg P eq.]	1.32E-04	7.14E-07	5.34E-09	0	0	0	0	0	0	0	0	5.81E-08	0	6.33E-08	0
	Eutrophication freshwater [kg (PO ₄) ³ eq.]	4.06E-04	2.19E-06	1.64E-08	0	0	0	0	0	0	0	0	1.78E-07	0	1.94E-07	0
	Eutrophication marine [kg N eq.]	4.22E-03	8.21E-05	1.10E-06	0	0	0	0	0	0	0	0	4.59E-06	0	2.03E-05	0
	Eutrophication terrestrial [Mole of N eq.]	3.73E-02	9.13E-04	1.20E-05	0	0	0	0	0	0	0	0	5.12E-05	0	2.23E-04	0
	Photochemical ozone formation - human health [kg NMVOC eq.]	1.23E-02	3.41E-04	3.57E-06	0	0	0	0	0	0	0	0	1.97E-05	0	6.16E-05	0
	Resource use, mineral and metals [kg Sb eq.] ⁵	3.55E-05	2.40E-07	1.28E-09	0	0	0	0	0	0	0	0	2.89E-08	0	2.40E-10	0
	Resource use, energy carriers [MJ] ¹	4.83E+01	1.64E+00	8.51E-03	0	0	0	0	0	0	0	0	1.23E-01	0	7.01E-02	0
	Water deprivation potential [m ³ world equiv.] ¹	2.60E+00	5.59E-03	2.42E-05	0	0	0	0	0	0	0	0	3.76E-04	0	1.75E-04	0

⁵ 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

Resources Use indicators	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				D REUSE, RECOVERY, RECYCLING
	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]	4.29E+00	2.07E-02	1.50E-04	0	0	0	0	0	0	0	0	1.76E-03	0	1.65E-03	0
 Primary energy resources used as raw materials (PERM) [MJ]	3.24E-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
 Total use of renewable primary energy resources (PERT) [MJ]	4.32E+00	2.07E-02	1.50E-04	0	0	0	0	0	0	0	0	1.76E-03	0	1.65E-03	0
 Use of non-renewable primary energy (PENRE) [MJ]	5.19E+01	1.74E+00	9.04E-03	0	0	0	0	0	0	0	0	1.31E-01	0	7.45E-02	0
 Non-renewable primary energy resources used as raw materials (PENRM) [MJ]	1.94E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
 Total use of non-renewable primary energy resources (PENRT) [MJ]	5.38E+01	1.74E+00	9.04E-03	0	0	0	0	0	0	0	0	1.31E-01	0	7.45E-02	0
 Input of secondary material (SM) [kg]	0	0	0	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]	6.29E-02	1.93E-04	9.84E-07	0	0	0	0	0	0	0	0	1.40E-05	0	8.42E-06	0

Waste Category & Output flows

Waste Category & Output Flows		PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				D REUSE, RECOVERY, RECYCLING
		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
	Hazardous waste disposed (HWD) [kg]	4.61E-05	3.93E-06	2.08E-08	0	0	0	0	0	0	0	0	3.22E-07	0	1.50E-07	0
	Non-hazardous waste disposed (NHWD) [kg]	9.28E-01	1.51E-01	4.43E-02	0	0	0	0	0	0	0	0	6.46E-03	0	1.00E+00	0
	Radioactive waste disposed (RWD) [kg]	8.77E-05	1.11E-05	5.61E-08	0	0	0	0	0	0	0	0	8.34E-07	0	4.42E-07	0
	Components for re-use (CRU) [kg]	0	0	1.12E-03	0	0	0	0	0	0	0	0	0	0	0	0
	Materials for Recycling (MFR) [kg]	0	0	6.51E-02	0	0	0	0	0	0	0	0	0	0	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 (according to ISO 21930:2017)

		PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				REUSE, RECOVERY RECYCLING
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
	Climate Change [kg CO2 eq.] ⁶	3.18E+00	9.99E-02	5.84E-04	0	0	0	0	0	0	0	0	8.07E-03	0	5.20E-03	0

⁶ 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

		PRODUCT STAGE
Biogenic Carbon Content in kg C		A1 / A2 / A3
	Biogenic carbon content in product [kg]	0
	Biogenic carbon content in packaging [kg]	3.22E-03

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

LCA interpretation

The following figure refers to a declared unit of 1 kg of product expected to have an assumed working life between 10 and 25 years.



[1] This indicator corresponds to the abiotic depletion potential of fossil resources.

[2] This indicator corresponds to the total use of primary energy.

[3] This indicator corresponds to the use of net fresh water.

[4] This indicator corresponds to the sum of hazardous, non-hazardous and radioactive waste disposed.

With the graphic views above, it is possible to assess which steps of the LCA are the most impacting for the chosen indicators.

Global Warming Potential (Climate Change - GWP)

For GWP, the majority of contribution to this environmental impact is from the production modules (A1 – A3). This is primarily because the sources of greenhouse gas emissions are predominant in this part of the life cycle. CO₂ is generated upstream from the production of raw materials and electricity and is also released on site by the combustion of coke, diesel and natural gas. We can see that other sections of the life cycle also contribute to the GWP. However, the production modules contribute to over 95 % to the impact. Impacts from A4 (transport to clients), waste disposal transportation in A5 (disposal after installation) and C (transport and disposal at the end of life) are much lower than A1-A3.

Non-renewable resources consumption

The consumption of non-renewable resources has the highest value in the production modules, due to the consumption of diesel within the factory, with a contribution to impact higher than 95 %.

The contribution to this impact of the other modules is very small and is mainly due to the non-renewable resources consumed during the transport of the product to the construction place.

Energy Consumption

Modules A1 – A3 have the highest contribution to total energy consumption, contribution higher than 96 %. Energy is consumed in the form of electricity, and diesel during the manufacturing of the Product.

Water Consumption

Water is used within the manufacturing facility and almost all the impact comes from the production phase.

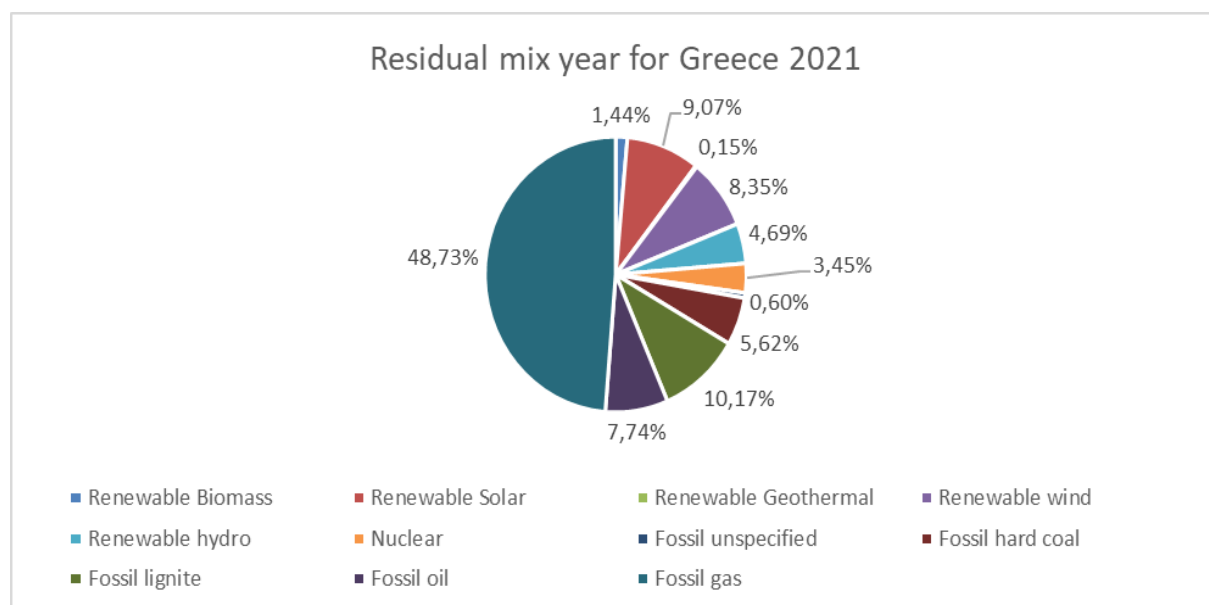
Waste Production

The largest contributor to the impact is the end of life phase with a contribution to the impact of 60 %. On the other hand production modules (A1-A3) has a contribution to the impact of 27%, phase A4 also has a remarkable contribution to the impact (9%).

Additional information:

Electricity information

TYPE OF INFORMATION	DESCRIPTION
Location	Representative of Electricity purchased by Greece
Geographical representativeness description	• Renewable Biomass- 1.44 % • Renewable Solar- 9.07 % • Renewable Geothermal- 0.15 % • Renewable wind- 8.35 % • Renewable hydro- 4.69 % • Nuclear- 3.45 % • Fossil unspecified- 0.60 % • Fossil hard coal- 5.62 % • Fossil Oil- 7.74 % • Fossil lignite- 10.17 % • Fossil gas- 48.73 %
Reference year	2021
Type of dataset	Cradle to gate from Ecoinvent v3.8 database
Source	European Residual Mixes 2021
CO ₂ emission kg CO ₂ eq. / kWh	444.63 (g/kWh)



Global warming potential for market application

Based on technical product properties all environmental impact indicators may be quantified for usual market product applications. As additional information, the following results present the GWP indicator for a typical application of water-based products on surfaces.

Parameter	Unit	A1	A2	A3	A1+A2+A3	A4	A5	C2	C4	Total
Density min	kg/m ³	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01
Density max	kg/m ³	1.47E+00	1.47E+00	1.47E+00	1.47E+00	1.47E+00	1.47E+00	1.47E+00	1.47E+00	1.47E+00
Average weight application	kg/m ²	1.52E+00	1.52E+00	1.52E+00	1.52E+00	1.52E+00	1.52E+00	1.52E+00	1.52E+00	1.52E+00
Minimum weight application	kg/m ²	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01
Maximum weight application	kg/m ²	2.80E+00	2.80E+00	2.80E+00	2.80E+00	2.80E+00	2.80E+00	2.80E+00	2.80E+00	2.80E+00
GWP – total	kg CO ₂ eq. / kg	1.76E+00	1.57E-01	2.40E-01	2.16E+00	1.01E-01	8.61E-04	8.14E-03	5.27E-03	2.27E+00
GWP – average	kg CO ₂ eq. / kg	2.69E+00	2.39E-01	3.66E-01	3.29E+00	1.54E-01	1.31E-03	1.24E-02	8.03E-03	3.47E+00
GWP – min	kg CO ₂ eq. / m ²	1.76E-01	1.57E-02	2.40E-02	2.16E-01	1.01E-02	8.61E-05	8.14E-04	5.27E-04	2.27E-01
GWP – max	kg CO ₂ eq. / m ²	4.93E+00	4.39E-01	6.72E-01	6.04E+00	2.82E-01	2.41E-03	2.28E-02	1.48E-02	6.37E+00

Data quality

Inventory data quality is judged by geographical, temporal, and technological representativeness. To cover these requirements and to ensure reliable results, first-hand industry data crossed with LCA background datasets were used. The data was collected from internal records and reporting documents from Saint-Gobain Weber. After evaluating the inventory, according to the defined ranking in the LCA report, the assessment reflects good inventory data quality.

Environmental impacts according to EN 15804:2012 + A1

The following tables presents results of 1 kg of water based products according to EN 15804 +A1.

Group 2. weberdry easy roof

Environmental impacts	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				REUSE, RECOVERY, RECYCLING
	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
Global Warming Potential (GWP) [kg CO ₂ eq.]	1.65E+00	9.99E-02	4.67E-04	0	0	0	0	0	0	0	0	8.07E-03	0	5.20E-03	0
Ozone depletion (ODP) [kg CFC 11eq.]	4.87E-07	1.98E-08	7.86E-11	0	0	0	0	0	0	0	0	1.50E-09	0	7.41E-10	0
Acidification potential (AP) [kg SO ₂ eq.]	9.11E-03	2.97E-04	1.92E-06	0	0	0	0	0	0	0	0	1.90E-05	0	3.56E-05	0
Eutrophication potential (EP) [kg (PO ₄) ₃ -eq.]	8.02E-04	3.89E-05	3.42E-07	0	0	0	0	0	0	0	0	2.41E-06	0	7.33E-06	0
Photochemical ozone creation (POCP) - [kg Ethylene eq.]	5.17E-04	1.30E-05	7.57E-08	0	0	0	0	0	0	0	0	9.57E-07	0	1.20E-06	0
Abiotic depletion potential for non-fossil resources (ADP-elements) [kg Sb eq.]	1.63E-05	2.40E-07	1.02E-09	0	0	0	0	0	0	0	0	2.89E-08	0	2.46E-10	0
Abiotic depletion potential for fossil resources (ADP-fossil fuels) [MJ]	2.90E+01	1.60E+00	6.62E-03	0	0	0	0	0	0	0	0	1.21E-01	0	6.76E-02	0

Group 1. weberprim EP 2K and weberdry PUR seal aqua

Environmental impacts	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				REUSE, RECOVERY, RECYCLING
	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
	Global Warming Potential (GWP) [kg CO2eq.]	2.34E+00	9.99E-02	1.12E-03	0	0	0	0	0	0	0	8.07E-03	0	5.20E-03	0
	Ozone depletion (ODP) [kg CFC 11eq.]	2.55E-06	1.98E-08	1.89E-10	0	0	0	0	0	0	0	1.50E-09	0	7.41E-10	0
	Acidification potential (AP) [kg SO2eq.]	1.04E-02	2.97E-04	4.62E-06	0	0	0	0	0	0	0	1.90E-05	0	3.56E-05	0
	Eutrophication potential (EP) [kg (PO4)3-eq.]	1.46E-03	3.89E-05	8.25E-07	0	0	0	0	0	0	0	2.41E-06	0	7.33E-06	0
	Photochemical ozone creation (POCP) - [kg Ethylene eq.]	1.31E-03	1.30E-05	1.82E-07	0	0	0	0	0	0	0	9.57E-07	0	1.20E-06	0
	Abiotic depletion potential for non-fossil resources (ADP-elements) [kg Sb eq.]	2.30E-05	2.40E-07	2.46E-09	0	0	0	0	0	0	0	2.89E-08	0	2.46E-10	0
	Abiotic depletion potential for fossil resources (ADP- fossil fuels) [MJ]	4.45E+01	1.60E+00	1.59E-02	0	0	0	0	0	0	0	1.21E-01	0	6.76E-02	0

Group 3. weberdry PUR coat aqua

Environmental impacts	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				REUSE, RECOVERY, RECYCLING
	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
Global Warming Potential (GWP) [kg CO ₂ eq.]	3.18E+00	9.99E-02	5.84E-04	0	0	0	0	0	0	0	0	8.07E-03	0	5.20E-03	0
Ozone depletion (ODP) [kg CFC 11eq.]	3.34E-06	1.98E-08	9.83E-11	0	0	0	0	0	0	0	0	1.50E-09	0	7.41E-10	0
Acidification potential (AP) [kg SO ₂ eq.]	1.90E-02	2.97E-04	2.40E-06	0	0	0	0	0	0	0	0	1.90E-05	0	3.56E-05	0
Eutrophication potential (EP) [kg (PO ₄) ₃ -eq.]	2.20E-03	3.89E-05	4.28E-07	0	0	0	0	0	0	0	0	2.41E-06	0	7.33E-06	0
Photochemical ozone creation (POCP) - [kg Ethylene eq.]	1.50E-03	1.30E-05	9.47E-08	0	0	0	0	0	0	0	0	9.57E-07	0	1.20E-06	0
Abiotic depletion potential for non-fossil resources (ADP-elements) [kg Sb eq.]	3.55E-05	2.40E-07	1.28E-09	0	0	0	0	0	0	0	0	2.89E-08	0	2.46E-10	0
Abiotic depletion potential for fossil resources (ADP-fossil fuels) [MJ]	4.41E+01	1.60E+00	8.28E-03	0	0	0	0	0	0	0	0	1.21E-01	0	6.76E-02	0

References

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6. ISO 14040:2006 Environmental management. Life cycle assessment. Principles and framework.
7. ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.
8. LCA report of Saint-Gobain Weber products (2022).