

# Environmental Product Declaration

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



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

## Waterproofing sheet membrane: Water – Stop and Primo

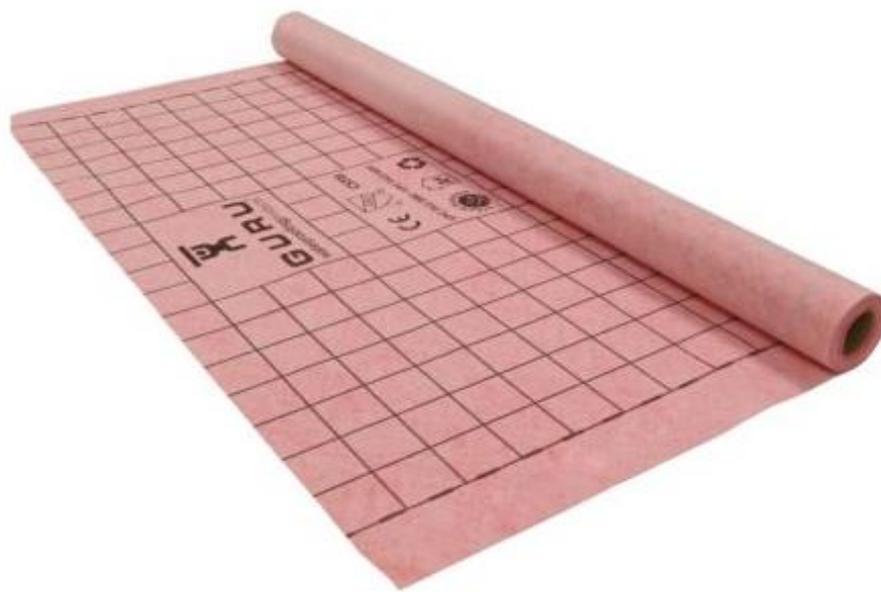
from

**Estil Guru**



Programme:	The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a>
Programme operator:	EPD International AB
EPD registration number:	S-P-10295
Publication date:	2024-03-09
Valid until:	2024-03-08

*An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)*



## General information

### Programme information

<b>Programme:</b>	The International EPD® System
<b>Address:</b>	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
<b>Website:</b>	<a href="http://www.environdec.com">www.environdec.com</a>
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<b>Accountabilities for PCR, LCA and independent, third-party verification</b>
<b>Product Category Rules (PCR)</b>
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): PCR 2019:14 Construction Products, version 1.3.2
PCR review was conducted by: The International EPD® System Technical Committee. See <a href="http://www.environdec.com">www.environdec.com</a> for a list of members. The review group can be contacted through the Secretariat at <a href="http://www.environdec.com/contact">www.environdec.com/contact</a> .
<b>Life Cycle Assessment (LCA)</b>
LCA accountability: <i>Juan José Pinzón Rodríguez, Marcel Gómez Consultoría Ambiental S.L.</i>
<b>Third-party verification</b>
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:  <input checked="" type="checkbox"/> EPD verification by individual verifier  Third-party verifier: <i>Elisabet Amat, eamat@greenize.es</i>  Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier:  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterization factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

## Company information

Owner of the EPD: Estil Guru S.L.U

Contact: Alejandro Sisternes; alejandro@estilguru.com

Description of the organization: ESTIL GURU S.L.U. is a consolidated company in the construction and waterproofing sector. Its waterproofing systems are designed to cover all possible situations that require a waterproofing; Interiors, bathrooms, showers, exteriors, flat roofs passable and non-passable, swimming pools.

Product-related or management system-related certifications:

- CE
- CPR (KIWA)
- IAPMO – Crack Isolation
- IAPMO - Waterproofing
- AVIS TECHNIQUE 13/19 - 1454\_V1 (SEPI 2020)
- AVIS TECHNIQUE 13/19 - 1455\_V1(SPEC 2020)
- VOC Emission Certificate (Bremer Umweltinstitut)

Name and location of production site(s): POL. IND. EL PLA, C/ DELS TELERS 22, 46870, ONTINYENT (VALENCIA)

## Product information

Product name: Waterproofing sheet membrane: Water – Stop and PRIMO

Product identification: Waterproofing sheet membrane: Water – Stop and PRIMO

Product description: The WATER-STOP waterproofing sheet is a waterproof, elastic geotextile sheet, with a very good grip to surfaces and with a very small thickness due to its innovative multilayer extrusion process. With an expected service lifetime of 50 years, it is perfect for waterproofing exteriors, interiors, terraces, walkable and non-walkable roofs, showers, swimming pools.

Its main characteristics include: Flexibility, easy installation without the need for personnel or specialized machinery, durability (since its durability is unlimited as long as it is not exposed to the sun, no uncontrollable external factors occur and our installation conditions are followed) and a minimum installation height is achieved compared to traditional waterproofing products.

On the other hand, PRIMO waterproofing sheet is a plastic sheet with nonwoven synthetic fibers on both sides, for waterproofing under floor and wall coverings in shower areas, flat roofs, terraces, balconies, pool decks, cornices, window frames and window frames. and walls in shower areas, flat roofs, terraces, balconies, swimming pool decks, cornices, window frames and other surfaces other outdoor surfaces and indoor wet areas.

Waterproofing sheet membrane: Water-Stop and PRIMO properties

Properties	Norma	Water-Stop	PRIMO	Average
Representativeness of the product in factory production	-	99%	1%	-
Weight per m <sup>2</sup> (kg)	EN 1849-2	0.26	0.20	0.26
Thickness (mm)		0.57	0.50	0.57
Density (kg/m <sup>3</sup> )	-	456	400	456
Water tightness	EN 1928	Approved	Approved	-
Tensile strength (L // T)	EN 12311-2 (A)	≥200	≥190 // ≥200	-
Elongation resistance (L // T)		≥20 // ≥10	≥45 // ≥75	-
Overlap resistance (shear)	EN 12317-2	≥75 // ≥100	PND	-
Impact resistance	EN 12691 (A)	≥500	≥500	-
Static load resistance	EN 12730 (B)	≥20	≥20	-
Low temperature bending	EN 495-5	-20	-20	-
Reaction to fire	EN13501-5	F	F	-

UN CPC code: 54530 Roofing and waterproofing services

Geographical scope: Spain and Europe

## LCA information

Functional unit: 1 m<sup>2</sup> of waterproofing sheet membrane: Water – Stop and PRIMO installed with an average thickness of 0.57 mm and an average weight of 260 g, with a reference service life of 50 years

Reference service life: 50 years

Time representativeness: The primary data were obtained from the production center and refer to the year 2023.

Database(s) and LCA software used: Ecoinvent v3.8 (allocation, cut-off by classification) and SimaPro 9.3. The calculation methodologies are in accordance with UNE-EN 15804:2012+A2:2019.

Description of system boundaries: Cradle-to-grave: The EPD covers the modules A, B, C and D.

As it is a passive product within a construction, the use stage (including modules B1 to B7) is considered negligible and is not declared.

Modularity and polluter payer principles have been followed. The following processes have been excluded:

- Manufacture of equipment used in production, buildings or any other capital goods;
- The transportation of personnel to the plant;
- Transportation of personnel within the plant;
- Research and development activities;
- Long-term emissions.
- Raw materials pigments

At least 95% of all mass and energy inputs and outputs of the central system, identified in the life cycle inventory included in this report, have been included. Those inputs and outputs for which data are not

available, which together represent less than 5% of the mass, such as packaging waste of auxiliary materials, have not been considered.

Wherever possible, allocation has been avoided. Total energy consumption has no allocation as it is the total energy consumption calculated based on the actual consumption of the machines involved in the transformations; and waste generation data for the factory have been allocated using economic criteria, based on the sales volume to suppliers that carry out waste treatment.

#### A1 Raw Materials Supply

This module takes into account the acquisition of raw materials that make up the products. In this case, the waterproofing sheet is composed of 30% geotextile and 70% polyolefin, where the geotextile is 50% polyester and the remaining 50% polypropylene, while the polyolefin is low density polyethylene.

#### A2 Transport

The raw materials are transported to the factory. The modelling includes road and/or boat transportation of each raw material until the deliver at Estil Guru manufacturing plant for its further processing. Also are included the packaging transport.

#### A3 Manufacture

At this stage, all the elementary input and output flows associated with the production of membranes were inventoried from the primary data on the quantity and type of raw materials, packaging, energy sources and water used, as well as the waste generated. It has not been necessary to apply any allocation.

The quantity of waterproofing produced takes into account the production losses, estimated at 3%, which have been taken into account for the calculations of this stage.

#### A4 Distribution

For the waterproofing, a distance of 118.43 km by road has been considered when the distribution is national and 121.31 km by ship.

The main parameters affecting the result of this stage are:

PARAMETER	VALUE (expressed in Functional unit)
Type of fuel and consumption of the vehicle or type of means of transportation used	National distribution: >32 tn Euro 6 truck with a diesel consumption of 0.38 liters per km and Transoceanic ship
Distance	National/International distribution 121 km (by road) + 118 km (by ship)
Usage capacity (including return transport without load)	% assumed in Ecoinvent
Bulk density of the transported product	456 kg/m <sup>3</sup>
Volume use capacity factor	1 (default)

#### A5 Installation

This module includes all materials and energy used for the installation of the product. At the same time, transport and waste management are taken into account.

The installation is manual and considers an average consumption of cement glue of 2 kg/m<sup>2</sup> of installed roof, regardless of thickness.

The installation also takes into account a 2% waterproofing sheet rejection rate due to breakage and defects that occur during distribution. This rejected product is sent to landfill as it is an inert material. Packaging waste, including the wooden pallet, plastic packaging, cardboard tubes, paper label and

plastic bag are sent to landfill.

PARAMETER	VALUE (expressed in Functional unit)
Secondary materials for installation: Cement glue	2 kg/m <sup>2</sup>
Consumption of other resources	None
Quantitative description of the type of energy (regional mix) and its consumption during the installation process.	None
Waste of materials on site, prior to the processing of waste generated during the installation of the product:	Losses 2% Packaging waste: - Pallet 8.65E-03 kg - Film 2.21E-04 kg - Cardboard 5.92E-05 kg - Paper label 1.73E-06 kg - LDPE bag 8.31E-06 kg
Direct emissions to air, soil or water	Considered negligible

#### B. Usage stage

Once the installation is completed, no technical actions or operations are required during the use stages until the end of the reference service life. Therefore, waterproofing sheet have no impact at this stage.

#### C1 Deconstruction / Demolition

The demolition of the product is part of the demolition of the building. Therefore, it is assumed that the environmental impact is very low and therefore can be disregarded

#### C2 Transport

It is considered that once the product (slate) is demolished, 100% goes to the landfill located 50 km away in 7.5-16 ton trucks.

#### C3 Treatment of waste for reuse, recovery or recycling

It is considered that 100% of slate waste is disposed in a landfill.

#### C4 Final disposal

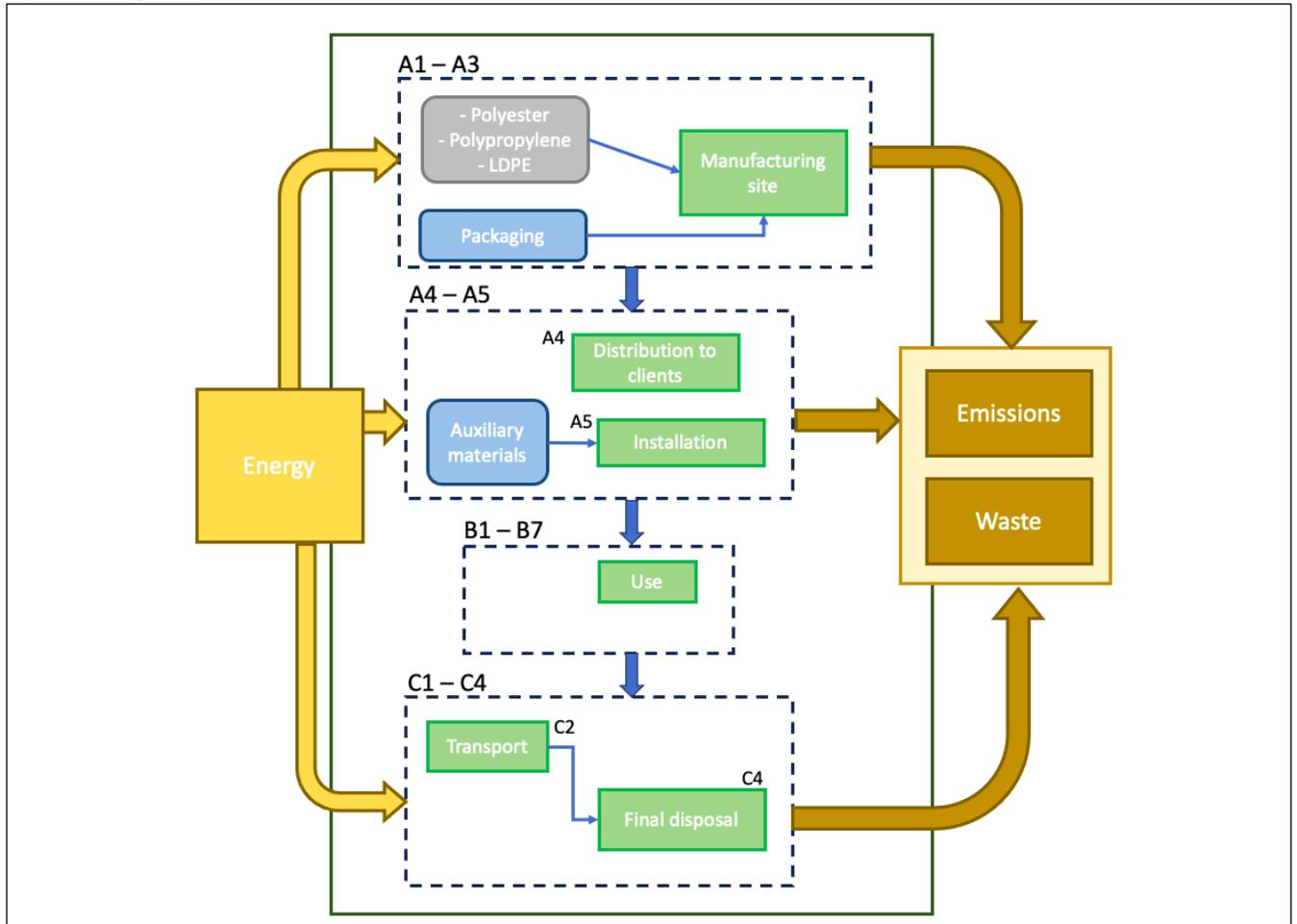
The most unfavorable scenario is considered. Therefore, 100% of the demolition waste is disposed of in a landfill.

PARAMETER	VALUE (expressed in Functional unit)
Waste collection process specified by type	100% to landfill, collected and mixed with the rest of construction waste
Recovery system specified by type	0% recycling
Specified discharge by type	100% landfill
Assumptions for scenario development	Waste from the demolition of construction profiles is transported 50 km by 7.5-16 ton Euro 6 trucks to the final treatment or disposal site.

#### Recycling charges and benefits (module D)

Since 100% of the waste is destined for landfill, the value of module D is equal to 0.

System diagram:



More information:

- The life cycle analysis study has been carried out by Estil Guru with the technical support of Marcel Gómez Consultoría Ambiental.
- More information about the product: [www.estilguru.com](http://www.estilguru.com).

The quality of the input data has been evaluated according to its technological, temporal and geographical coverage. The representativeness of the selected processes is considered to be good, resulting in a value of 4.56 out of 5.

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

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage	
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential	
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	
Modules declared	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	EU	EU	ES	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	
Specific data used	95%			-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Variation – products	28%			-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Variation – sites	0%																	

X: Module declared; GLO: Global; EU: Europe; ES: Spain

## Content information

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Polyester	3.86E-02	0	0
Polypropylene	3.95E-02	0	0
Polyolefin (LDPE)	1.81E-01	0	0
TOTAL	2.60E-01	0	0
Packaging materials	Weight, kg	Weight-% (versus the product)	Weight biogenic carbon, kg C/kg
Pallet	8.65E-03	3.33%	4.33E-03
Film	2.21E-04	0.09%	-
Cardboard tube	5.92E-05	0.02%	2.96E-05
Paper label	1.73E-06	0.00%	8.67E-07
LDPE bag	8.31E-06	0.00%	-
TOTAL	8.94E-03	3.45%	4.36E-03

During the life cycle of the product, no hazardous substance included in the "Candidate List of Substances of Very High Concern (SVHC) for authorization" has been used in a percentage greater than 0.1% of the weight of the product.

## Results of the environmental performance indicators

LCIA results are relative expressions and do not predict impacts on category endpoints, exceeding thresholds, safety margins, or risks.

All the results presented below refer to the life cycle of 1 m<sup>2</sup> of waterproofing sheet membrane: Water – Stop and PRIMO installed with an average thickness of 0.57 mm and an average weight of 260 g, with a reference service life of 50 years.

### Mandatory impact category indicators according to EN 15804

Results per functional or Functional unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	7.84 E-01	2.23 E-02	2.43 E+00	0	0	0	0	0	0	0	0	1.98 E-02	0	1.19 E-02	0
GWP-biogenic	kg CO <sub>2</sub> eq.	- 1.60 E-02	0	1.60 E-02	0	0	0	0	0	0	0	0	0	0	0	0
GWP-luluc	kg CO <sub>2</sub> eq.	7.16 E-04	2.34 E-07	2.29 E-03	0	0	0	0	0	0	0	0	1.59 E-07	0	4.31 E-06	0
GWP-total	kg CO <sub>2</sub> eq.	7.68 E-01	2.23 E-02	2.44 E+00	0	0	0	0	0	0	0	0	1.98 E-02	0	1.19 E-02	0
ODP	kg CFC 11 eq.	6.72 E-07	5.28 E-09	2.33 E-07	0	0	0	0	0	0	0	0	4.67 E-09	0	2.12 E-09	0
AP	mol H <sup>+</sup> eq.	2.92 E-03	2.36 E-04	1.51 E-02	0	0	0	0	0	0	0	0	3.88 E-05	0	1.11 E-04	0
EP-freshwater	kg P eq.	2.57 E-05	1.21 E-08	8.21 E-05	0	0	0	0	0	0	0	0	1.01 E-08	0	1.43 E-07	0
EP-marine	kg N eq.	5.37 E-04	5.54 E-05	2.36 E-03	0	0	0	0	0	0	0	0	6.33 E-06	0	4.59 E-05	0
EP-terrestrial	mol N eq.	5.60 E-03	6.16 E-04	2.51 E-02	0	0	0	0	0	0	0	0	7.08 E-05	0	5.03 E-04	0
POCP	kg NMVOC eq.	2.94 E-03	1.63 E-04	8.56 E-03	0	0	0	0	0	0	0	0	2.49 E-05	0	1.39 E-04	0
ADP-minerals & metals*	kg Sb eq.	1.74 E-07	8.06 E-10	2.15 E-05	0	0	0	0	0	0	0	0	8.54 E-10	0	5.42 E-10	0
ADP-fossil*	MJ	2.27 E+01	3.18 E-01	3.52 E+01	0	0	0	0	0	0	0	0	2.79 E-01	0	1.59 E-01	0
WDP*	m <sup>3</sup>	7.43 E-01	- 5.42 E-05	1.54 E+00	0	0	0	0	0	0	0	0	- 4.66 E-05	0	3.96 E-04	0
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

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

## Additional mandatory and voluntary impact category indicators

Results per functional or Functional unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>1</sup>	kg CO <sub>2</sub> eq.	7.53 E-01	2.22 E-02	2.35 E+00	0	0	0	0	0	0	0	0	1.97 E-02	0	1.18 E-02	0
<i>Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017</i>																

## Resource use indicators

Results per functional or Functional unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	1.13 E+00	4.72 E-04	1.96 E+00	0	0	0	0	0	0	0	0	0	0	0	0
PERM	MJ	8.73 E-03	0	1.63 E-01	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	1.14 E+00	4.72 E-04	2.12 E+00	0	0	0	0	0	0	0	0	0	0	0	0
PENRE	MJ	2.43 E+01	3.38 E-01	3.76 E+01	0	0	0	0	0	0	0	0	4.27 E-04	0	3.74 E-03	0
PENRM	MJ	5.07 E+00	0	5.17 E+00	0	0	0	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.94 E+01	3.38 E-01	4.28 E+01	0	0	0	0	0	0	0	0	4.27 E-04	0	3.74 E-03	0
SM	kg	9.20 E-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FW	m <sup>3</sup>	1.41 E-02	9.59 E-07	3.76 E-02	0	0	0	0	0	0	0	0	7.65 E-07	0	1.90 E-05	0
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															

<sup>1</sup> This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO<sub>2</sub> is set to zero.

## Waste indicators

Results per functional or Functional unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2.19 E-04	6.82 E-07	2.90 E-05	0	0	0	0	0	0	0	0	7.32 E-07	0	3.39 E-07	0
Non-hazardous waste disposed	kg	2.41 E-02	1.36 E-05	5.42 E-01	0	0	0	0	0	0	0	0	1.15 E-05	0	2.26 E+00	0
Radioactive waste disposed	kg	3.24 E-05	2.28 E-06	7.68 E-05	0	0	0	0	0	0	0	0	1.99 E-06	0	9.99 E-07	0

## Output flow indicators

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

## Biogenic Carbon Content Information

Results per Functional unit		
Biogenic Carbon Content	Unit	Quantity
Biogenic carbon content in the product	kg C	0
Biogenic carbon content in the enclosed packaging.	kg C	4.36E-03

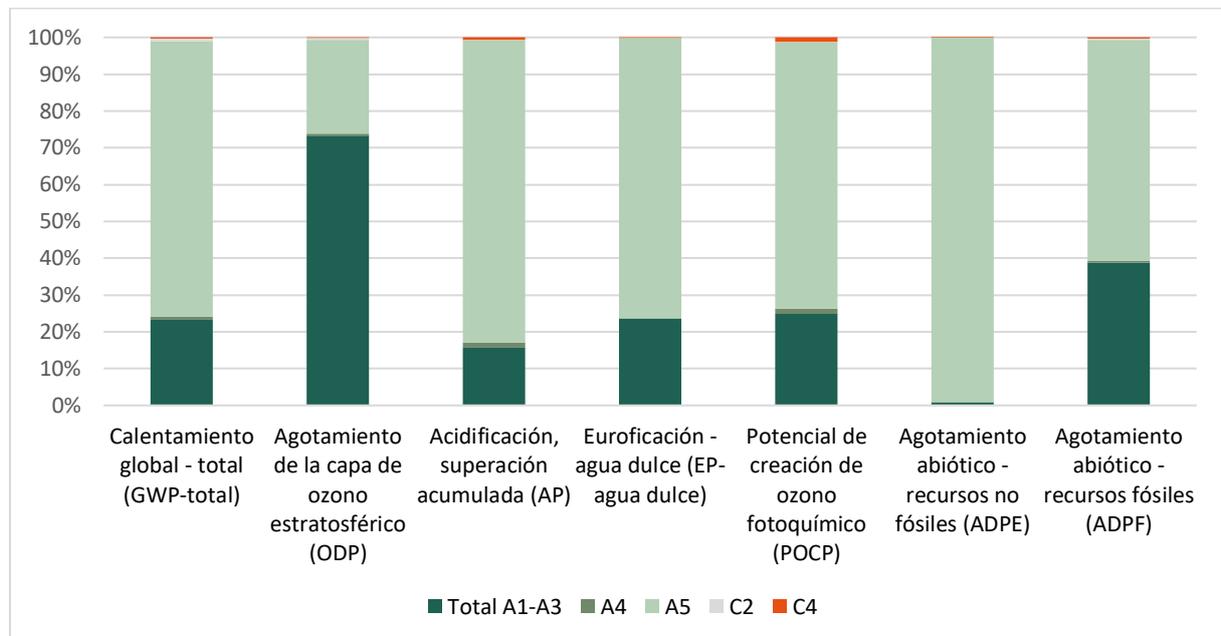
Note: 1 kg of biogenic carbon is equivalent to 44/12 kg CO<sub>2</sub>.

## LCA Interpretation

The life cycle impacts of the waterproofing sheets membrane are predominantly influenced by the A5 stage of the product across all impact categories. A5 exhibits the highest representation across all impact categories, ranging from 99% (Abiotic depletion potential – non-fossils) to 60% (Abiotic depletion potential – fossils), with the exception of the ozone depletion category, where it accounts for 25% of the overall life cycle assessment.

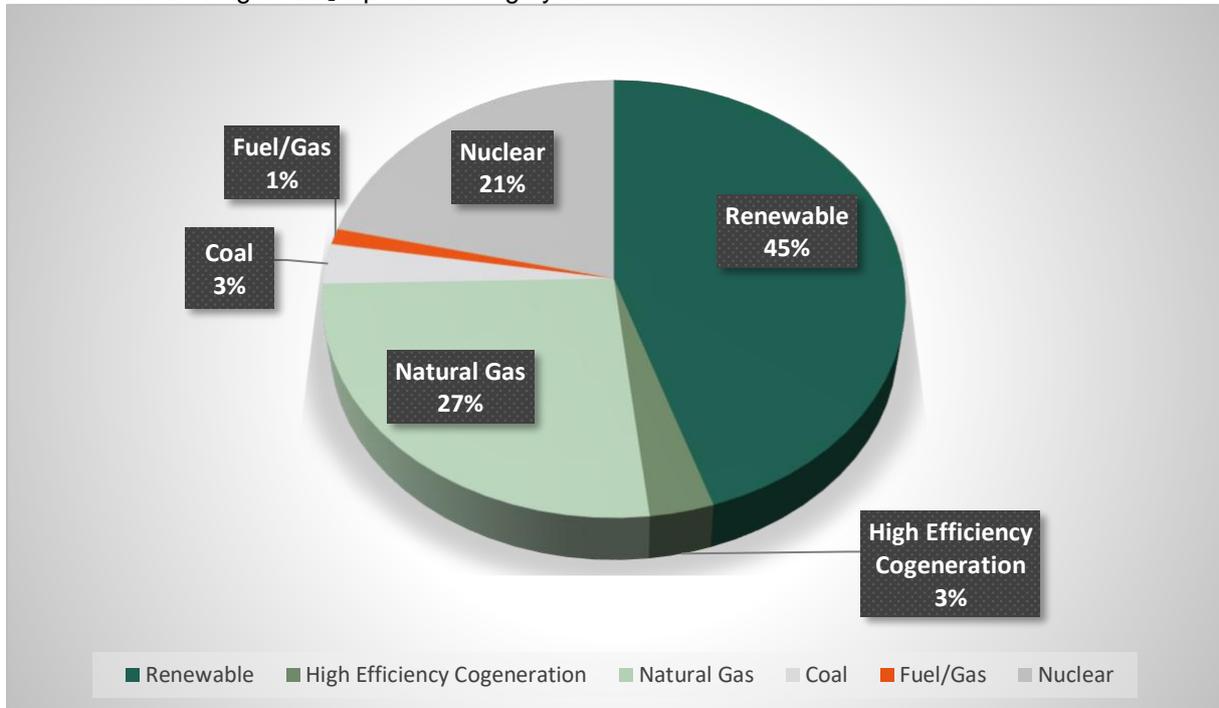
Following A5, stages A1-A3 hold the second-highest representation in the life cycle of the waterproofing sheets membrane, representing between 73% (ozone depletion) and 16% (acidification). However, in the case of Abiotic depletion potential – non-fossils, they represent less than 1%.

Conversely, the remaining stages (A4, C2, and C4) exhibit relatively low impact potentials, collectively contributing less than 2% to the total impact of the products.



## Additional environmental information

Iberdrola electricity mix was used for the characterization of electricity for the year 2023 and with emissions of 0.23 kg of CO<sub>2</sub> eq/kWh average year.



## Additional social and economic information

None

## Information related to Sector EPD

This EPD is not sectoral

## References

- General Programme Instructions of the International EPD® System. Version 4.0.
- PCR 2019:14. Construction products. Version 1.3.2
- CEN (2019): UNE-EN 15804:2012+A2:2020 Sustainability of construction works - Environmental product.
- Declarations - Basic rules for the category of construction products.
- ISO 14020:2000 Environmental labels and declarations - General principles.
- ISO 14025:2010 Environmental Labels and Claims - Type III Environmental Claims - Principles and Procedures.
- ISO 14040:2006 Environmental Management - Life Cycle Assessment - Principles and Framework.
- ISO 14044:2006 Environmental Management - Life Cycle Assessment - Requirements and Guidelines.
- Estil Guru Waterproofing sheets membrane: Water-stop and PRIMO LCA Report, Marcel Gomez consultoría Ambiental, 2024.

