

Environmental Product Declaration

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

AMPHIBIA 3000 GRIP

from

Volteco S.p.A.



Program:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
Licensee:	-
Type of EPD:	EPD of a single product from a manufacturer
EPD registration number:	EPD-IES-0031951:001
Version date:	2026-07-03
Validity date:	2031-07-02

An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com



GENERAL INFORMATION

Information Program	
Program:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
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Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): < CONSTRUCTION PRODUCTS, PCR 2019:14, version 2.0.1. UN CPC code: 36990
PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Rob Rouwette (chair), Noa Meron (co-chair).
The review panel may be contacted via the Secretariat www.environdec.com/support.

Third-party Verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:
☒ Individual EPD verification without a pre-verified LCA/EPD tool Third-party verifier: <i>SGS ICS Italia S.r.l.</i> Accreditation number: 002242. Accredited by: Accredia
Procedure for follow-up of data during EPD validity involves third party verifier:
☐ Yes ☒ No

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

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

INFORMATION ABOUT EPD OWNER

Owner of the EPD: Volteco S.p.A.

Address: Via delle Industrie, 47, 31050 Ponzano Veneto TV

Contact: Sara Bertolini - Sara.Bertolini@VOLTECO.IT

Address and contact information of the LCA practitioner commissioned by the EPD owner:
Michele De Leonardis - m.deleonardis@isoengineering.it

Description of the organisation:

Volteco S.p.A. is an Italian company specialized in the development of solutions for waterproofing, protection, durability and restoration of building structures. Founded in 1976 and based in Ponzano Veneto, it designs and manufactures advanced systems to prevent and solve problems related to water infiltration and humidity, contributing to the safety and durability of buildings, infrastructures and civil works.

The company operates in over 30 countries, while maintaining strong roots in the Italian market, which currently accounts for about 80% of its turnover. The range of solutions includes waterproofing systems, barriers against rising damp, protective coatings and solutions for waterproofing below ground level and above ground level.

Through continuous research and development, Volteco offers high-performance solutions, oriented towards quality, reliability over time and attention to environmental and safety aspects. The company supports designers, contractors and installers in all phases of the project, from the choice of the most suitable solutions to the technical training of installers.

Volteco's value chain is based on quality, traceability and responsibility, with particular attention to the selection of raw materials and collaboration with suppliers consistent with their safety, reliability and sustainability strategies.



Product-related or management system-related certifications:

Volteco S.p.A. is ISO 9001:2015, ISO 14001:2015 and ISO 45001 certified.

PRODUCT INFORMATION

Product name: AMPHIBIA 3000 GRIP

Product identification: Self-clinching, self-healing and self-sealing water-reactive multilayer waterproof membrane for pre/post-casting application.

Visual representation of the product



CPC code: 36990

Product description:

AMPHIBIA 3000 GRIP is a waterproof membrane in EPDM, pre/post-casting, reactive to contact with water, self-repairing, self-sealing and self-clinching to concrete. It is composed of a continuous co-extruded multilayer polymeric mantle, with differentiated functionality for a total watertightness of the underground structures from water infiltration. It is made of three layers with an expansive capacity differentiated by the following characteristics:

- TIGHT BARRIER, watertight layer
- CORE, self-sealing expansive safety layer even in the event of a puncture
- ACTIVE BARRIER, a water-reactive layer with controlled expansion, prevents lateral migration of water and seals overlaps.

It is also equipped on the interface, which comes into contact with the concrete, with a calibrated non-woven fabric that allows the mechanical adhesion of the membrane to the structure.

Name and location of production site: Via delle Industrie, 47, 31050 Ponzano Veneto (TV)

Website: <https://volteco.com/en/products/amphibia-3000-grip>

CONTENT DECLARATION

Below are the main components of the AMPHIBIA 3000 GRIP waterproofing membrane mixture relating to 1 square meter of product:

Product content	Mass, kg	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material, kg C/product or declared unit
Polymer	0,7-0,8	0	0	0
Additives	0,2-0,3	0	0	0
Mineral fillers	0,5-0,6	0	0	0
Non-woven fabric	0-0,1	0	0	0
Total	1,6	0	0	0

Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C/product or declared unit
Polyethylene	0,0065	0,41%	0
Nylon	0,0011	0,07%	0
Cardboard	0,0439	2,75%	0
Wood	0,0285	1,78%	0
TOTAL	0,0800	5,00%	0

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

In this case it was not calculated in accordance with the PCR since the data does not derive from specific analyses.

It is declared that the product under study does not contain any hazardous substances among those included in the Candidate List of SVHC for Authorisation.

LCA INFORMATION

Declared unit: 1 m² of surface area coated with Amphibia 3000 GRIP (packaging is considered as additional weight)

Conversion factor to mass: 1,6 kg/ m²

Reference service life: not applicable

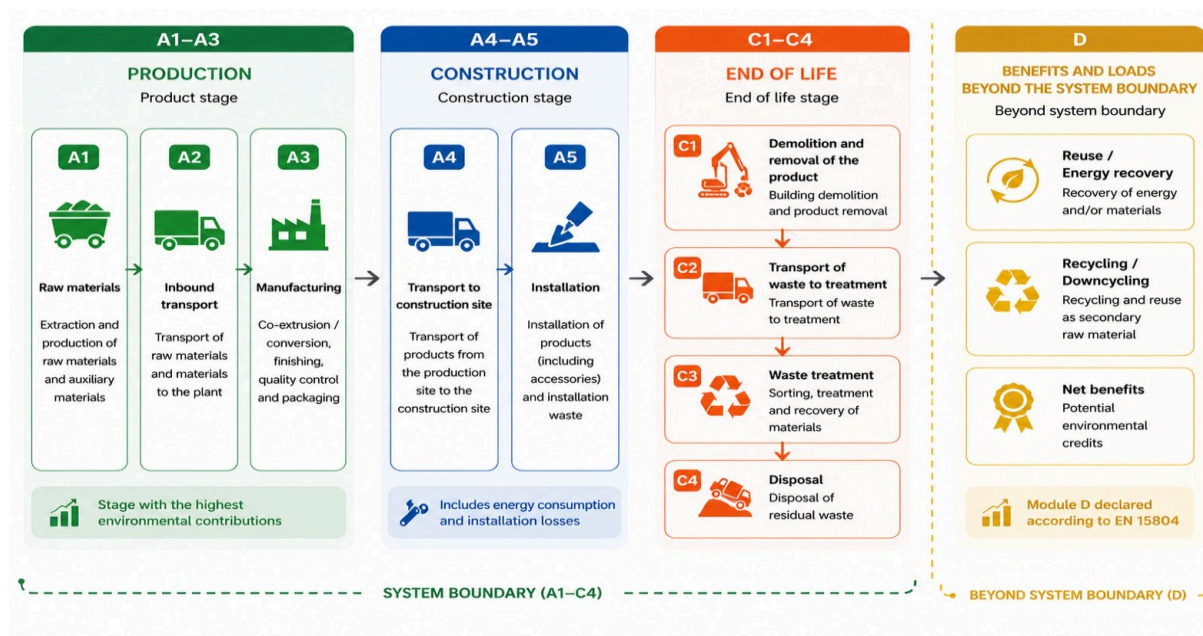
Time representativeness: the primary data cover a period of 12 months and the reference year is 2024; the general data and databases have been used in their most recent possible version.

Geographical scope: global

Database(s) and LCA software used: Ecoinvent version 3.11, SimaPro v. Craft 10.3.0.1

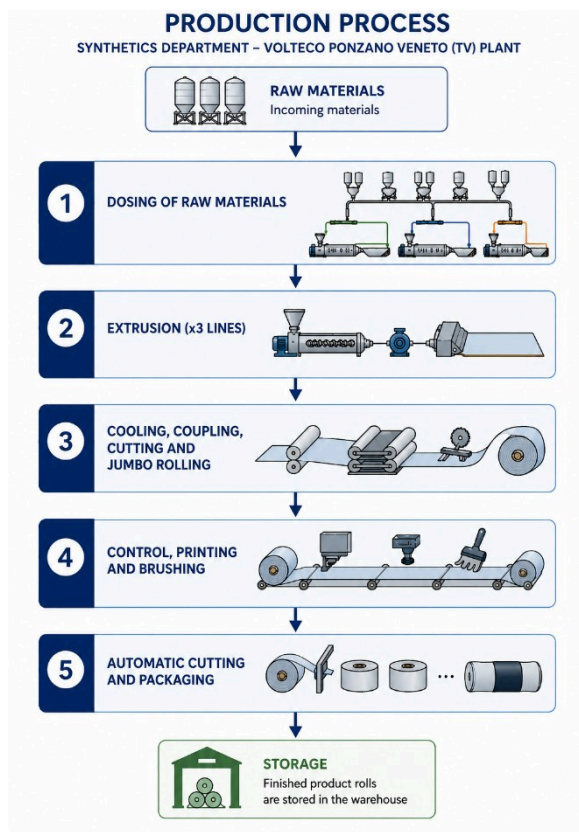
Description of system boundaries: Cradle to gate with options, modules C1–C4, module D and with optional modules (A1–A3 + C + D and additional modules). The additional modules are A4–A5 Modules B1–B7 are not applicable because the product is integrated into the building structure and does not require maintenance interventions

Process flow diagram:



A1-A3: extraction and transport of raw materials, including packaging.

A3: Production process



A4 (Distribution): transport of the finished product to the end customers, including transport to the construction site.

A5 (installation): Application of the product, including the production and transportation of any necessary auxiliary materials and the necessary energy and water flows.

The following finished product installation scenarios were considered:

SCENARIO 1: Raft foundation

Productivity assumption m²/d	900
Overlap	5%
Bi Mastic	0.9 m/m²
Stapling only on perimeter formwork	(66 overs x 5 staples) /900sqm=0.4
Aktivo 201 on edges	1 cartridge/300 sqm

SCENARIO 2: PRE-CAST masonry within formwork (excluding pressure corners)

Hypothesis 1 Basement

Overlap	5%
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Staples fixing overlaps	gr/10cm on 0.92incid/sqm=10gr/m
Bi Mastic	0.37 m/sqm real
AMPHIBIA Stopper	n.2/ml h.270=0.74/sqm
Aktivo 201 on Stopper	9cm/cap thickness 0.5cm
SCENARIO 3: PRE-CAST masonry against regularized provisional works	
Overlap	Hypothesis 1 Basement 5%
Nails/washer with gunshot gun (top only)	n.3/sheet h2.70= 0.62/sqm
Bi Mastic	0.9 m/m ²

It was assumed that the three scenarios would be used with equal probability, therefore the results will be an average of the three scenarios

C1-C4: Since no target market specific data are available for the modelling of demolition/deconstruction in module C1, transport in module C2, material sorting and treatment in C3 or compaction of inert construction waste for landfill (including backfilling) in module C4, and the product being intended to be part of a completed building or construction work, in accordance with the PCR the default data in Table 4 of paragraph 4.8.4 have been used.

Processes in C1	Energy carrier	Quantity [kWh/tonne]
Demolition/deconstruction of concrete/reinforced concrete	Diesel	10
Processes in C2	Distance	Means of transport
Transport (for products/materials not to be incinerated)	80 km	16–32 tonne lorry (EURO 5), 50% load factor
Processes in C3	Energy carrier	Quantity [kWh/tonne]
Loading and unloading at sorting facility	Diesel	1.8
Mechanical sorting	Electricity	2.2
Crushing of concrete	Diesel	2.0
Processes in C4	Energy carrier	Quantity [kWh/tonne]
Compacting of inert construction waste for landfills (including backfilling)	Diesel	1.6

D: there are no benefits and potential for recovery/reuse beyond the system boundaries considered.

Allocation Criteria

In the present study, a mass allocation intended as "co-product allocation" was used in the following cases:

- Consumption of electricity from the grid and photovoltaics;

- Auxiliary Materials
- Materials for plant maintenance
- Waste produced in the plant.

Energy mix used in A3 and the impact of electricity in terms of GWP-GHG:

Electricity supplied by the grid, it is considered Country specific Ecoinvent dataset (residual mix, medium voltage) based on AIB (2024), Association of Issuing Bodies, European Residual Mixes, Results of the calculation of Residual Mixes for the calendar year 2023, Version 1.0, 2024-05-30.

The energy mix used in A3 including the share of photovoltaic and the impact of electricity in terms of GWP-GHG is 0.507 kg CO₂ eq./kWh

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

	Product stage			Distribution/ installation stage		Use stage							End-of-life stage				Beyond product life cycle
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling- potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	GLO	GLO	IT	GLO	GLO								GLO				GLO
Share of primary data	24%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data quality

In accordance with EN 15941 and the PCR requirements, a data quality assessment was performed for the datasets contributing to the environmental impact results. The assessment covers data representative of at least 80% of each declared environmental impact indicator and evaluates the geographical, technological, and temporal representativeness of the datasets, as well as their precision, completeness, consistency, and data sources. The quality of the relevant data used for the EPD in terms of its time, geography and technology representativeness using EN 15804:2012+A2:2019, Annex E, E2 produced a DQR (Data Quality Rating) equal to **3.73**, corresponding to a "sufficient" quality level.

The overall percentage of primary data used in forms A1-A3 was estimated in this EPD. This percentage specifically concerns data relating to energy consumption, transport and direct emissions related to modules A1-A3.

The percentage of primary data was calculated based on the results of the GWP-GHG indicator. This represents a simplified parameter of data quality, useful for encouraging the prevalent use of primary data, thus improving representativeness and comparability between different EPDs.

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Generation of electricity used in manufacturing of product	Database	Ecoinvent v3.11	2024	Primary data	14%
Transport of material to manufacturing site	Database	Ecoinvent v3.11	2024	Primary data	10%
Production of Packaging	Database	Ecoinvent v3.11	2024	Secondary data	0%
Other processes	Database	Ecoinvent v3.11	2019–2024	Secondary data	0%
Total share of primary data, of GWP-GHG results for A1-A3					24%

ENVIRONMENTAL PERFORMANCE

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

Mandatory impact category indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO ₂ eq.	4,89E+00	4,72E-01	1,76E-01	5,80E-03	2,59E-02	4,60E-03	9,28E-04	0,00E+00
GWP-fossil	kg CO ₂ eq.	4,89E+00	4,71E-01	5,45E-02	5,80E-03	2,59E-02	4,59E-03	9,28E-04	0,00E+00
GWP-biogenic	kg CO ₂ eq.	-1,13E-01	1,06E-04	2,40E-01	6,44E-07	6,45E-06	4,49E-06	1,03E-07	0,00E+00
GWP-luluc	kg CO ₂ eq.	4,19E-03	2,11E-04	5,68E-05	5,93E-07	1,16E-05	5,27E-06	9,49E-08	0,00E+00
ODP	kg CFC 11 eq.	1,37E-07	6,87E-09	3,86E-07	8,61E-11	3,29E-10	4,81E-11	1,38E-11	0,00E+00
AP	mol H ⁺ eq.	2,15E-02	4,22E-03	2,36E-04	5,18E-05	8,84E-05	3,16E-05	8,29E-06	0,00E+00
EP-freshwater	kg P eq.	1,14E-03	4,08E-05	1,52E-05	1,87E-07	2,84E-06	1,22E-06	2,99E-08	0,00E+00
EP-marine	kg N eq.	4,57E-03	1,14E-03	1,34E-04	2,41E-05	2,80E-05	1,16E-05	3,86E-06	0,00E+00
EP-terrestrial	mol N eq.	4,82E-02	1,26E-02	6,41E-04	2,64E-04	3,04E-04	1,24E-04	4,22E-05	0,00E+00
POCP	kg NMVO C eq.	2,56E-02	3,96E-03	2,88E-04	7,90E-05	1,20E-04	3,72E-05	1,26E-05	0,00E+00
ADP-minerals & metals*	kg Sb eq.	4,07E-05	1,32E-06	2,85E-07	2,07E-09	8,48E-08	3,11E-09	3,31E-10	0,00E+00
ADP-fossil*	MJ	1,08E+02	6,39E+00	8,39E-01	7,55E-02	3,58E-01	6,07E-02	1,21E-02	0,00E+00
WDP*	m ³	1,65E+00	2,58E-02	3,36E-02	1,61E-04	1,66E-03	3,88E-04	2,58E-05	0,00E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption								

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

Disclaimer: 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).

Additional mandatory and voluntary impact category indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-GHG ¹	kg CO2 eq.	4,89E+00	4,72E-01	1,64E-01	5,80E-03	2,59E-02	4,60E-03	9,28E-04	0,00E+00

Resource use indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	5,48E+00	8,37E-02	9,95E-01	4,75E-04	4,97E-03	4,45E-03	7,60E-05	0,00E+00
PERM	MJ	9,33E-01	0,00E+00	-9,33E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	6,41E+00	8,37E-02	6,16E-02	4,75E-04	4,97E-03	4,45E-03	7,60E-05	0,00E+00
PENRE	MJ	8,34E+01	6,79E+00	1,21E+00	8,03E-02	3,81E-01	6,46E-02	3,23E+01	0,00E+00
PENRM	MJ	3,26E+01	0,00E+00	-3,04E-01	0,00E+00	0,00E+00	0,00E+00	-3,23E+01	0,00E+00
PENRT	MJ	1,16E+02	6,79E+00	9,01E-01	8,03E-02	3,81E-01	6,46E-02	1,28E-02	0,00E+00
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m3	3,74E-02	7,11E-04	8,64E-04	4,72E-06	4,47E-05	1,26E-05	7,55E-07	0,00E+00
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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water								

Note: Option A was chosen to separate the use of primary energy into energy used as a raw material and energy used as an energy carrier, as indicated in ANNEX 3: GUIDANCE TO CALCULATING THE PRIMARY ENERGY USE INDICATORS of the PCR.

¹ This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO2 is set to zero.

Waste indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1,34E-03	4,12E-05	2,01E-05	5,26E-07	2,41E-06	2,86E-07	8,41E-08	0,00E+00
Non-hazardous waste disposed	kg	4,89E-01	2,42E-01	1,18E-02	5,11E-05	1,66E-02	7,72E-05	8,18E-06	0,00E+00
Radioactive waste disposed	kg	6,60E-05	1,26E-06	9,71E-07	7,90E-09	7,07E-08	8,48E-08	1,26E-09	0,00E+00

Output flow indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
PT	European Norm (Standard)
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
CEN	European Committee for Standardization
CLC	Co-location centre
CPC	Central product classification
GHS	Globally harmonized system of classification and labelling of chemicals
GRI	Global Reporting Initiative
SVHC	Substances of Very High Concern
ND	Not Declared

REFERENCES

- General Programme Instructions of International EPD System. Version. 5.0.1
- PCR Construction Products and construction services 2019:14 version 2.0.1 valid until 2030-04-07
- UNI EN ISO 14040: 2021, Environmental management – Life cycle assessment – Principles and framework of reference.
- UNI EN ISO 14044: 2021, Environmental management – Life cycle assessment – Requirements and guidelines.
- UNI EN ISO 14025:2010, Environmental labels and declarations - Environmental Type Declarations III - Principles and procedures.
- EN 15804:2012+A2:2019 Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction works
- JRC/EF 3.1 characterization factors
- Life Cycle Assessment Study Synthetics products rev. 02 2026 05 26

VERSION HISTORY

Version 1, 2026-07-03

- Original Version of the EPD

