

Environmental Product Declaration

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

AQUASCUD 420

from

Volteco S.p.A.



Programme:	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-0031946:001
Version date:	20YY-MM-DD
Validity date:	20YY-MM-DD

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



GENERAL INFORMATION

Programme Information	
Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
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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: 37510
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> Accredited by: Accredia 002242
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, if applicable: 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: AQUASCUD 420

Product identification: Two-component flexible waterproofing

Visual representation of the product:



CPC code: **37510**

Product description: This is a system for waterproofing, definitively and without resorting to demolition, balconies, terraces, solar pavers and all flat surfaces, including paved ones. It is a fast, practical and extremely elastic waterproof protective shield equipped with CORE CURING TECHNOLOGY, free of Portland cement, replaced by highly reactive components for effective curing even in conditions of low temperatures and partially humid substrates.

Aquascud 420 is supplied in 20.7 kg units (15 kg bag of powder + 5.7 kg jar of liquid).

Name and location of production site: Via delle Industrie, 49, 31050 Ponzano Veneto (TV)

Website: <https://volteco.com/it/prodotti/aquascud-system-420>

CONTENT DECLARATION

Product content	Mass-%	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material, kg C/product or declared unit
Inorganic binders	5-10	0	0	0
Organic binders	35-40	0	0	0
Fillers	35-40	0	0	0
Additives	0.4-0.6	0	0	0
Water	4-8	0	0	0
Total	100%	0	0	0

Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C/product or declared unit
Wood	0,02778	2,78%	0
Polyethylene	0,00290	0,29%	0
Nylon	0,00040	0,04%	0
Polypropylene	0,01594	1,59%	0
TOTAL	0,04702	4,70%	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.

Note: The product content declaration is reported in percentage ranges rather than exact values. This deviation from the PCR-required format was adopted to protect confidential commercial information and product formulation data.

LCA INFORMATION

Declared unit: 1 kg AQUASCUD 420 (packaging is not included)

Reference service life: not applicable

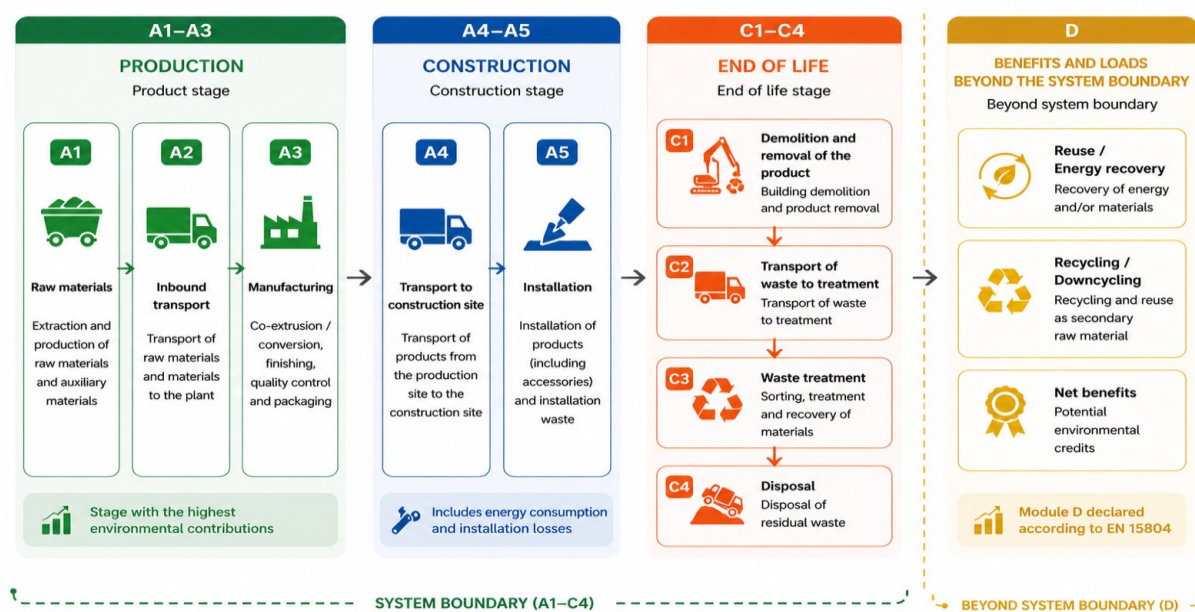
Time representativeness: the primary data cover a period of 12 months and the reference year is 2024; the general data and databases have been used in their most recent possible version.

Geographical scope: global

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

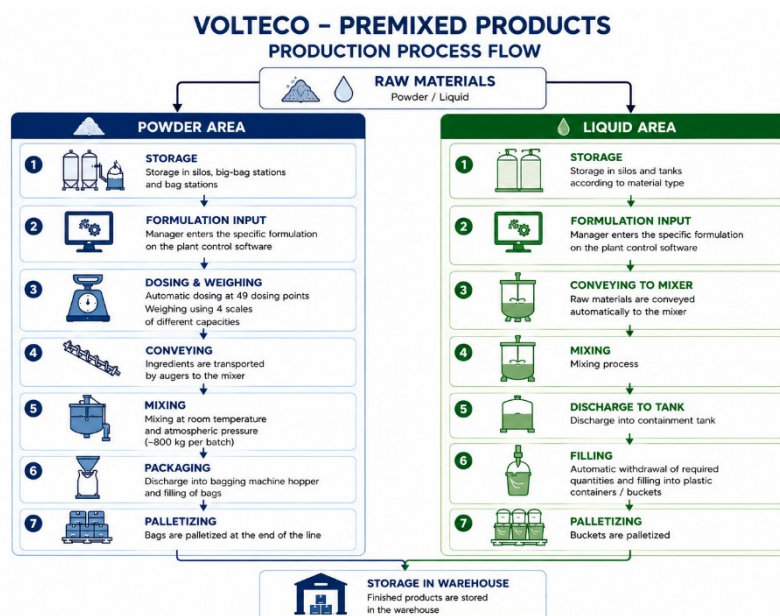
Description of system boundaries: Cradle to gate with options, modules C1–C4, module D and with optional modules (A1–A3 + C + D and additional modules). The additional modules are A4–A5. Modules B1–B7 are not applicable because the product is integrated into the building structure and does not require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

Process flow diagram:



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

Focus manufacturing stage



A4 (Distribution): transport of the finished product to the end customers plus 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.

Storage:

The product must be stored in a dry environment, avoiding exposure to frost and heat (at a temperature between +5°C and +40°C) and direct exposure to the sun before application.

Product preparation:

Shake the liquid component in its container, then pour it into a bucket. Gradually add the powdered component of AQUASCUD under agitation; Mix for 2÷3 minutes using a drill with whisk until a homogeneous and lump-free mixture is obtained. It tolerates the addition of water up to a maximum of 4% of the liquid component, equal to about one glass per package.

Application:

The product can be applied by hand with a special toothed trowel and/or with a toothed puller, or by roller. A first abundant layer of AQUASCUD 420 mixture is applied in order to guarantee a minimum thickness of 1÷1.5 mm, making sure that the mixture penetrates well into the substrate and completely covers the surface (average consumption 2÷2.5 kg/m² in relation to the flatness of the substrate). Insert the AQUASCUD BASIC membrane into the first coat of mixture, then apply the second coat.

The following finished product installation scenarios were considered:

Aquascud 420 on balconys	
Productivity assumptions m2/d	60
Aquascud 420 (3.6-4 Kg/m ²)	35%
Aquascud Basic	
Overlap	10%

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
- 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	28%					-	-	-	-	-	-	-	-	-	-	-	-

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 **4.45**, corresponding to a "good" quality level.

It is hereby declared that an upstream Environmental Product Declaration (EPD) was used as the data source, which is not fully compliant with the LCA rules of this study, as the version of the Ecoinvent database applied (v. 3.6) is more than two years older than the study date. The registration number of the original EPD, 1.1.00475.2023, of the supplier ECOCEM was labeled as a proxy data, and to consolidate this choice, a sensitivity analysis was conducted, which verified that the use of the Ecoinvent dataset generally produces variations of less than 3%.

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.

It is important to remember, however, that this indicator does not cover all relevant aspects of data quality and is not comparable across different product categories.

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	3%
Transport of material to manufacturing site	Database	Ecoinvent v3.11	2024	Primary data	19%
Aluminized Cement	EPD	EPD-IES-002235:003:003	2023	Primary data (>90%)	6%
Production of Packaging	Database	Ecoinvent v3.11	2024	Secondary data	0%
Other processes	Databases	Ecoinvent v3.11	2019–2024	Secondary data	0%
Total share of primary data, of GWP-GHG results for A1-A3					28%

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.	1,01E+00	1,09E-01	1,31E-01	3,62E-03	1,62E-02	2,87E-03	5,80E-04	0,00E+00
GWP-fossil	kg CO ₂ eq.	1,01E+00	1,09E-01	1,23E-01	3,62E-03	1,62E-02	2,87E-03	5,80E-04	0,00E+00
GWP-biogenic	kg CO ₂ eq.	-4,72E-02	2,29E-05	5,59E-02	4,02E-07	4,03E-06	2,81E-06	6,44E-08	0,00E+00
GWP-luluc	kg CO ₂ eq.	2,04E-04	3,60E-05	1,50E-04	3,71E-07	7,24E-06	3,29E-06	5,93E-08	0,00E+00
ODP	kg CFC 11 eq.	9,73E-09	2,37E-09	2,42E-09	5,38E-11	2,05E-10	3,01E-11	8,61E-12	0,00E+00
AP	mol H ⁺ eq.	2,95E-03	3,55E-04	3,45E-04	3,24E-05	5,52E-05	1,97E-05	5,18E-06	0,00E+00
EP-freshwater	kg P eq.	1,04E-04	7,40E-06	3,44E-05	1,17E-07	1,77E-06	7,63E-07	1,87E-08	0,00E+00
EP-marine	kg N eq.	7,57E-04	1,19E-04	9,28E-05	1,51E-05	1,75E-05	7,23E-06	2,41E-06	0,00E+00
EP-terrestrial	mol N eq.	7,12E-03	1,29E-03	8,47E-04	1,65E-04	1,90E-04	7,78E-05	2,64E-05	0,00E+00
POCP	kg NMVOC eq.	3,05E-03	5,33E-04	3,93E-04	4,94E-05	7,48E-05	2,32E-05	7,90E-06	0,00E+00
ADP-minerals&metals*	kg Sb eq.	1,85E-06	3,65E-07	4,65E-07	1,29E-09	5,30E-08	1,94E-09	2,07E-10	0,00E+00
ADP-fossil*	MJ	1,88E+01	1,54E+00	1,98E+00	4,72E-02	2,24E-01	3,79E-02	7,55E-03	0,00E+00
WDP*	m ³	4,12E-01	5,96E-03	1,99E-02	1,01E-04	1,04E-03	2,42E-04	1,61E-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 CO ₂ eq.	1,01E+00	1,09E-01	1,30E-01	3,62E-03	1,62E-02	2,87E-03	5,80E-04	0,00E+00

Resource use indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	6,17E-01	2,50E-02	5,83E-01	2,97E-04	3,11E-03	2,78E-03	4,75E-05	0,00E+00
PERM	MJ	4,49E-01	0,00E+00	-4,49E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,07E+00	2,50E-02	1,35E-01	2,97E-04	3,11E-03	2,78E-03	4,75E-05	0,00E+00
PENRE	MJ	1,96E+01	1,64E+00	2,79E+00	5,02E-02	2,38E-01	4,03E-02	8,03E-03	0,00E+00
PENRM	MJ	6,63E-01	0,00E+00	-6,63E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	2,03E+01	1,64E+00	2,13E+00	5,02E-02	2,38E-01	4,03E-02	8,03E-03	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	m ³	1,06E-02	1,79E-04	5,49E-04	2,95E-06	2,79E-05	7,88E-06	4,72E-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	1,11E-03	1,05E-05	3,17E-05	3,28E-07	1,51E-06	1,78E-07	5,26E-08	0,00E+00
Non-hazardous waste disposed	kg	1,46E-01	7,36E-02	2,13E-02	3,20E-05	1,04E-02	4,82E-05	5,11E-06	0,00E+00
Radioactive waste disposed	kg	7,46E-06	4,52E-07	1,69E-06	4,94E-09	4,42E-08	5,30E-08	7,90E-10	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	
EN	European Norm (Standard)
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
CEN	European Committee for Standardization
CLC	Co-location centre
CPC	Central product classification
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 premixed products rev. 02 2026 05 26

VERSION HISTORY

Version 1, 20YY-MM-DD

- Original Version of the EPD

