



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Bemix P3
Finja Bemix Aktiebolag



EPD HUB, HUB-6368

Published on 19.05.2026, last updated on 19.05.2026, valid until 19.05.2031

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.2 (24 Mar 2025) and JRC characterization factors EF 3.1.



Created with One Click LCA



GENERAL INFORMATION

MANUFACTURER

Manufacturer	Finja Bemix Aktiebolag
Address	Finvids väg 6, 194 47, Upplands Väsby, SE
Contact details	info@bemix.se
Website	www.bemix.se

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804:2012+A2:2019/AC:2021 and ISO 14025
PCR	EPD Hub Core PCR Version 1.2, 24 Mar 2025 EN 16908 Cement and building lime
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Cecilia Söderman Finja Bemix AB
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal verification <input checked="" type="checkbox"/> External verification
EPD verifier	Yazan Badour as an authorized verifier for EPD Hub

This EPD is intended for business-to-business and/or business-to-consumer communication. The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	Bemix P3
Additional labels	
Product reference	1100150, 1100140
Place(s) of raw material origin	Sweden and EU
Place of production	Strängnäs, Sweden
Place(s) of installation and use	Sweden, Norway and Denmark
Period for data	Calendar year 2023
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	
GTIN (Global Trade Item Number)	7331933522806, 7331933726372
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	9,67

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 metric ton
Declared unit mass	1000 kg
Mass of packaging	30 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	330
GWP-total, A1-A3 (kgCO ₂ e)	329
Secondary material, inputs (%)	0,03
Total energy use, A1-A3 (kWh)	587
Net freshwater use, A1-A3 (m ³)	1,96

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Bemix is part of Finja AB and we develop and manufacture high-tech special mortars for professionals. Finja Bemix AB primarily develops and supplies special dry mortars to the construction industry and has a wide range of high-tech and specially adapted expansion mortars. The products are aimed at professionals, and their areas of use include everything from advanced substructures for machines, crane runways, traverses, columns and bridge bearings to anchor bolts in rock and jointing of prefabricated concrete elements. Deliveries are made from factories in Sweden. At Bemix, we believe in a sustainable future and want to contribute to a safe and stable society. Therefore, we continue to develop products with a strong focus on environmentally friendly products and the production that makes the choice of materials easy for our customers.

PRODUCT DESCRIPTION

Bemix P3 is a dry-mix expanding mortar that is pumpable. It is mixed with water on site, in mortar mixers, to obtain a ready-to-use, easy-flowing, expanding, frost-resistant, universal mortar for underpinning. Compressive strength at +20°C > 50 MPa after 28 days according to EN12190.

Further information can be found at:
www.bemix.se

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals		
Minerals	100	EU
Fossil materials		
Bio-based materials		

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0,016
Biogenic carbon content in packaging, kg C	0,289

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 metric ton
Mass per declared unit	1000 kg
Functional unit	
Reference service life	100 years

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D		
x	x	x	x	x	ND	ND	ND	ND	ND	ND	ND	x	x	x	x	x		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Not declared = ND.

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

A market-based approach is used in modelling the electricity mix utilized in the factory.

Dry concrete is produced in a controlled industrial process to ensure consistent quality and performance. The production process begins with the preparation and controlled dosing of raw materials, including cement, sand, aggregates, and additives, according to a defined product recipe.

Approximately 5% of the sand fraction is separated during the sorting process and reused internally in other production processes, thereby reducing the demand for primary raw materials. Production losses consist mainly of dust, fine particles, and negligible residual fractions from mixer cleaning; these materials are collected and treated as mineral waste.

All raw materials are transported to the production plant using standard heavy-duty trucks (EURO 6). Where supplier-specific transport data are unavailable, standard transport distances and assumptions from the applicable PCR are applied (typically ranging from 1 to 2,000 km depending on the origin of the material). Transport fuel is conventional diesel unless otherwise specified by the raw material supplier.

The mixing process is powered by electricity and internally supplied thermal energy. Thermal energy is generated through the drying of aggregates using propane. The electricity mix corresponds to the national grid mix at the production site. Energy consumption covers material handling, dosing systems, mixers, dust collection systems, and packaging machinery. Energy use data are based on primary production data from Finja Betong AB.

After mixing, the dry concrete is packed either into small paper bags or plastic bags, which are placed on wooden pallets and secured with a shrink plastic hood, or into large bulk bags (big bags) made of plastic, also placed on wooden pallets. Packaging materials are included in the life cycle assessment and are modelled in accordance with PCR rules. Packaging waste generated on site during production (e.g. damaged bags or plastic film residues) is collected and treated through recycling or energy recovery. Management of production waste follows PCR requirements. Mineral waste (such as dust and screened fines) is transported to local recycling or disposal

facilities; transport distances for waste treatment (module C2) are assumed to be 20-50 km, depending on regional infrastructure. Non-mineral waste, including damaged packaging materials, is sent to appropriate recycling or waste management streams. All waste transport from the factory related to production waste (A3 → C2) is included in the model.

After packing and palletization, finished dry concrete products are stored at the factory prior to outbound distribution. Transport of finished products to construction sites is modelled in module A4 and is not included in modules A1–A3.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

The average transport distance from the manufacturing site in Strängnäs to the construction site is assumed to be 154 km, while the average transport distance from the warehouse in Finja to the construction site is assumed to be 196 km.

Transportation is modelled using Euro 6 heavy-duty lorries with full vehicle load capacity (100% volume utilization). While actual loading conditions may vary in practice, this variation is considered negligible due to the relatively small contribution of transport emissions to the overall environmental impact.

No product losses are assumed to occur during transport, as the goods are properly secured and handled throughout the logistics chain.

Installation is carried out using standard construction practices.

Very small product losses may occur during installation under normal handling conditions. These losses are considered negligible (≈0%) and therefore no additional material input or waste treatment is modelled.

Consequently, no separate impacts are reported in module A5 for installation losses, in accordance with EN 15804+A2.

Packaging materials (wood and plastic) generated during installation (A5) are collected at the construction site and transported to the nearest waste treatment facility (assumed distance: 50 km). Of the plastic packaging, 40% are recycled, 37% are incinerated, and 23% end up in landfilled. Of the wooden packaging, 32% are recycled, 30% are incinerated, and 38% end up in landfilled.

PRODUCT END OF LIFE (C1-C4, D)

At the end of life, the product is assumed to be demolished together with the surrounding construction materials using standard mechanical demolition (C1). The resulting material is collected as mineral construction and demolition waste. Energy use for demolition is modelled using One Click LCA default datasets for mechanical demolition of mineral construction materials.

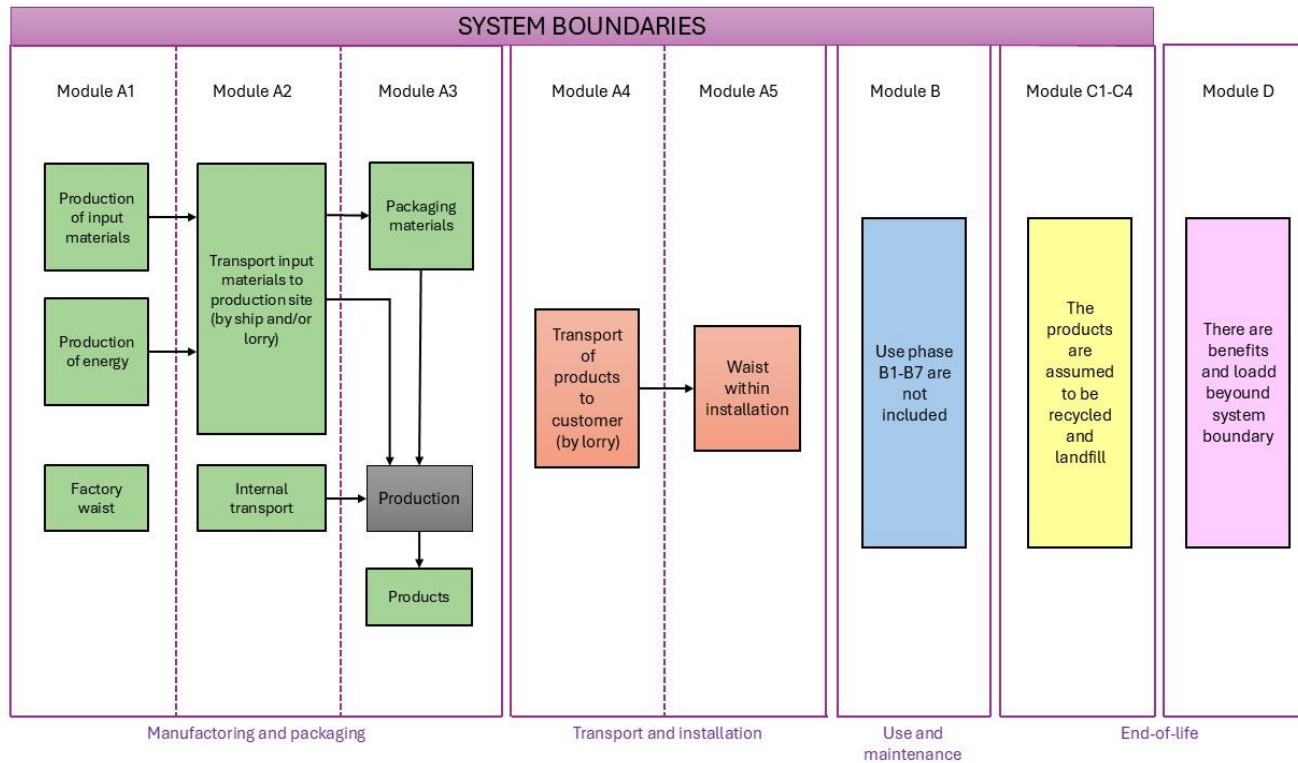
The waste is transported to a suitable waste treatment facility over an average distance of 50 km by Euro 6 heavy-duty truck, in accordance with One Click LCA default transport assumptions for construction waste (C2). At the waste treatment facility, the mineral construction waste containing the dry mortar is crushed and sorted. Due to the integrated nature of dry mortar products, separation of mortar as a standalone material is not feasible. End-of-life treatment is therefore modelled using One Click LCA default waste processing datasets, with 70% of the mineral waste assumed to be recycled as secondary aggregate (C3) and the remaining 30% disposed of in an inert landfill (C4).

The selected datasets for modules C3 and C4 are directly correlated with the defined treatment routes (recycling and landfill), ensuring consistency with One Click LCA default end-of-life modelling and EN 15804+A2.

The recycled mineral fraction is assumed to substitute virgin natural aggregate. Where applicable, recyclable plastic waste (e.g. packaging) is assumed to be recycled and to substitute for virgin plastic material. The associated environmental benefits and loads are reported in Module D in

accordance with EN 15804+A2 and One Click LCA default substitution modelling.

MANUFACTURING PROCESS



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process that is more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

Very small amounts of lubricating oil are used for the trucks that unload incoming material, 0.001kg, and therefore the gross weight falls below the cut-off rule.

VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC:2021 and JRC EF 3.1.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are made according to the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	Allocated by mass or volume
Packaging material	Allocated by mass or volume
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	-

This EPD is product and factory specific.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification v3.2.5. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11/3.12 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11/3.12 environmental data sources follow the methodology 'allocation, Cut-off, EN 15804+A2'.

Plastic packaging - Exported energy - Debunking Efficient Recovery: The Performance of EU Incineration Facilities, 2023
<https://zerowasteeurope.eu/wp-content/uploads/2023/01/Debunking-Efficient-Recovery-Full-Report-EN.docx.pdf>

Plastic packaging - Packaging waste treatment - EUROSTAT,
https://ec.europa.eu/eurostat/databrowser/view/env_waspac__custom_8519242/default/table?lang=en
Wood packaging - Packaging waste treatment - EUROSTAT,
https://ec.europa.eu/eurostat/databrowser/view/env_waspac__custom_8519174/default/table?lang=en
Wood packaging - Exported energy - Debunking Efficient Recovery: The Performance of EU Incineration Facilities, 2023
<https://zerowasteeurope.eu/wp-content/uploads/2023/01/Debunking-Efficient-Recovery-Full-Report-EN.docx.pdf>
Demolition of concrete - Gervasio, H. & Dimova, S., JRC Technical report: Model for Life Cycle Assessment (LCA) of buildings, 2018

ENVIRONMENTAL IMPACT DATA

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.

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	2,82E+02	9,11E+00	3,75E+01	3,29E+02	2,52E+01	7,42E+00	ND	ND	ND	ND	ND	ND	ND	1,00E+00	9,50E+00	3,06E+00	1,87E+00	-3,16E+01
GWP – fossil	kg CO ₂ e	2,82E+02	9,10E+00	3,85E+01	3,30E+02	2,52E+01	6,35E+00	ND	ND	ND	ND	ND	ND	ND	1,00E+00	9,49E+00	3,06E+00	1,87E+00	-2,01E+01
GWP – biogenic	kg CO ₂ e	6,03E-02	1,28E-03	-1,05E+00	-9,93E-01	5,07E-03	1,07E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,91E-03	-7,03E-03	-3,47E-03	-1,15E+01
GWP – LULUC	kg CO ₂ e	6,15E-02	3,54E-03	5,56E-02	1,21E-01	9,05E-03	3,55E-04	ND	ND	ND	ND	ND	ND	ND	1,03E-04	3,41E-03	3,14E-04	1,07E-03	-1,97E-02
Ozone depletion pot.	kg CFC-11e	1,31E-06	1,76E-07	9,53E-07	2,44E-06	5,02E-07	4,22E-09	ND	ND	ND	ND	ND	ND	ND	1,53E-08	1,89E-07	4,69E-08	5,42E-08	-3,57E-07
Acidification potential	mol H ⁺ e	6,39E-01	3,92E-02	9,51E-02	7,74E-01	5,25E-02	1,87E-03	ND	ND	ND	ND	ND	ND	ND	9,04E-03	1,97E-02	2,76E-02	1,33E-02	-1,10E-01
EP-freshwater ²⁾	kg Pe	3,25E-02	5,92E-04	5,21E-03	3,83E-02	1,70E-03	8,04E-05	ND	ND	ND	ND	ND	ND	ND	2,89E-05	6,39E-04	8,84E-05	1,54E-04	-7,21E-03
EP-marine	kg Ne	1,77E-01	9,13E-03	2,34E-02	2,09E-01	1,26E-02	1,23E-03	ND	ND	ND	ND	ND	ND	ND	4,19E-03	4,74E-03	1,28E-02	5,06E-03	-2,23E-02
EP-terrestrial	mol Ne	2,00E+00	1,00E-01	2,44E-01	2,34E+00	1,36E-01	7,18E-03	ND	ND	ND	ND	ND	ND	ND	4,59E-02	5,12E-02	1,40E-01	5,53E-02	-2,55E-01
POCP (“smog”) ³⁾	kg NMVOCe	5,73E-01	4,40E-02	1,40E-01	7,58E-01	8,73E-02	2,14E-03	ND	ND	ND	ND	ND	ND	ND	1,37E-02	3,29E-02	4,19E-02	1,98E-02	-9,07E-02
ADP-minerals & metals ⁴⁾	kg Sbe	9,99E-04	2,89E-05	1,69E-04	1,20E-03	8,40E-05	1,95E-06	ND	ND	ND	ND	ND	ND	ND	3,59E-07	3,16E-05	1,10E-06	2,98E-06	-9,79E-05
ADP-fossil resources	MJ	1,27E+03	1,26E+02	7,88E+02	2,18E+03	3,55E+02	3,83E+00	ND	ND	ND	ND	ND	ND	ND	1,31E+01	1,34E+02	4,01E+01	4,60E+01	-3,56E+02
Water use ⁵⁾	m ³ e depr.	2,84E+01	6,15E-01	1,15E+01	4,05E+01	1,76E+00	5,80E+00	ND	ND	ND	ND	ND	ND	ND	3,27E-02	6,64E-01	1,00E-01	1,33E-01	-1,79E+01

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO₄e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	4,06E-06	6,26E-07	1,06E-06	5,75E-06	1,86E-06	2,28E-08	ND	ND	ND	ND	ND	ND	ND	2,57E-07	6,99E-07	5,99E-06	3,02E-07	-1,32E-06
Ionizing radiation ⁶⁾	kBq 11235e	9,32E+00	1,58E-01	4,94E+00	1,44E+01	4,58E-01	2,71E-02	ND	ND	ND	ND	ND	ND	ND	5,80E-03	1,72E-01	1,78E-02	2,89E-02	-2,84E+00
Ecotoxicity (freshwater)	CTUe	2,28E+02	1,65E+01	8,67E+01	3,31E+02	4,72E+01	2,99E+00	ND	ND	ND	ND	ND	ND	ND	7,21E-01	1,78E+01	2,21E+00	3,86E+00	-4,94E+01
Human toxicity, cancer	CTUh	3,96E-08	1,58E-09	7,46E-09	4,87E-08	4,23E-09	4,03E-10	ND	ND	ND	ND	ND	ND	ND	1,03E-10	1,59E-09	3,15E-10	3,45E-10	-4,69E-09
Human tox. non-cancer	CTUh	1,89E-06	7,60E-08	1,94E-07	2,16E-06	2,24E-07	1,57E-08	ND	ND	ND	ND	ND	ND	ND	1,63E-09	8,45E-08	4,99E-09	7,93E-09	-1,59E-07
SQP ⁷⁾	-	2,85E+02	7,01E+01	1,86E+02	5,41E+02	2,14E+02	3,70E+00	ND	ND	ND	ND	ND	ND	ND	9,18E-01	8,07E+01	2,81E+00	9,05E+01	-1,56E+02

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy ⁸⁾	MJ	9,36E+01	2,16E+00	5,75E+01	1,53E+02	6,21E+00	-1,07E+01	ND	ND	ND	ND	ND	ND	ND	8,30E-02	2,34E+00	2,54E-01	4,44E-01	4,73E+01
Renew. PER as material	MJ	0,00E+00	0,00E+00	9,43E+00	9,43E+00	0,00E+00	-9,43E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E+02
Total use of renew. PER	MJ	9,36E+01	2,16E+00	6,69E+01	1,63E+02	6,21E+00	-2,02E+01	ND	ND	ND	ND	ND	ND	ND	8,30E-02	2,34E+00	2,54E-01	4,44E-01	1,48E+02
Non-re. PER as energy	MJ	1,23E+03	1,26E+02	6,00E+02	1,96E+03	3,55E+02	-1,99E+02	ND	ND	ND	ND	ND	ND	ND	1,31E+01	1,34E+02	4,01E+01	4,60E+01	-3,56E+02
Non-re. PER as material	MJ	3,11E+01	0,00E+00	7,71E+01	1,08E+02	0,00E+00	-7,71E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-2,18E+01	-9,34E+00	9,17E+01
Total use of non-re. PER	MJ	1,26E+03	1,26E+02	6,77E+02	2,07E+03	3,55E+02	-2,76E+02	ND	ND	ND	ND	ND	ND	ND	1,31E+01	1,34E+02	1,83E+01	3,66E+01	-2,65E+02
Secondary materials	kg	3,35E-01	6,02E-02	2,21E-01	6,16E-01	1,65E-01	1,09E-02	ND	ND	ND	ND	ND	ND	ND	5,44E-03	6,20E-02	1,66E-02	1,16E-02	1,95E+00
Renew. secondary fuels	MJ	2,99E-03	6,95E-04	4,95E-01	4,98E-01	2,08E-03	1,18E-04	ND	ND	ND	ND	ND	ND	ND	1,42E-05	7,84E-04	4,35E-05	2,39E-04	-1,15E-03
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m ³	1,66E+00	1,67E-02	2,85E-01	1,96E+00	4,83E-02	1,27E-01	ND	ND	ND	ND	ND	ND	ND	8,66E-04	1,82E-02	2,65E-03	4,78E-02	-4,54E-01

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	5,65E+00	1,85E-01	1,16E+00	7,00E+00	5,16E-01	7,67E-02	ND	ND	ND	ND	ND	ND	ND	1,46E-02	1,94E-01	4,46E-02	5,08E-02	-1,50E+00
Non-hazardous waste	kg	1,67E+02	3,82E+00	1,12E+02	2,82E+02	1,09E+01	1,13E+01	ND	ND	ND	ND	ND	ND	ND	1,99E-01	4,10E+00	6,08E-01	1,16E+00	-7,54E+01
Radioactive waste	kg	2,38E-03	3,93E-05	1,13E-03	3,54E-03	1,14E-04	6,91E-06	ND	ND	ND	ND	ND	ND	ND	1,42E-06	4,28E-05	4,35E-06	7,04E-06	-7,14E-04

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	3,30E-02	3,30E-02	0,00E+00	3,30E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,32E+02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	7,00E+02	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	3,31E-01	3,31E-01	0,00E+00	2,07E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,10E+01	ND	ND	ND	ND	ND	ND	ND	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	1,31E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy – Heat	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,80E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO ₂ e	2,82E+02	9,05E+00	3,83E+01	3,29E+02	2,51E+01	6,36E+00	ND	ND	ND	ND	ND	ND	ND	9,96E-01	9,43E+00	3,05E+00	1,86E+00	-1,99E+01
Ozone depletion Pot.	kg CFC ₁₁ e	1,09E-06	1,40E-07	7,69E-07	2,00E-06	3,99E-07	3,48E-09	ND	ND	ND	ND	ND	ND	ND	1,21E-08	1,50E-07	3,72E-08	4,31E-08	-2,94E-07
Acidification	kg SO ₂ e	4,95E-01	3,16E-02	7,64E-02	6,03E-01	4,21E-02	1,40E-03	ND	ND	ND	ND	ND	ND	ND	6,36E-03	1,59E-02	1,94E-02	9,83E-03	-8,85E-02
Eutrophication	kg PO ₄ ³ e	5,34E-01	5,29E-03	1,15E-01	6,55E-01	1,06E-02	4,67E-04	ND	ND	ND	ND	ND	ND	ND	1,48E-03	4,01E-03	4,54E-03	3,12E-03	-1,93E-02
POCP (“smog”)	kg C ₂ H ₄ e	3,30E-02	2,34E-03	9,02E-03	4,44E-02	4,46E-03	1,37E-04	ND	ND	ND	ND	ND	ND	ND	4,76E-04	1,68E-03	1,46E-03	9,29E-04	-7,63E-03
ADP-elements	kg Sbe	4,49E-04	2,83E-05	1,67E-04	6,44E-04	8,20E-05	1,83E-06	ND	ND	ND	ND	ND	ND	ND	3,49E-07	3,09E-05	1,07E-06	2,92E-06	-9,65E-05

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADP-fossil	MJ	1,11E+03	1,24E+02	7,16E+02	1,95E+03	3,47E+02	3,36E+00	ND	ND	ND	ND	ND	ND	ND	1,30E+01	1,31E+02	3,98E+01	4,55E+01	-3,08E+02

ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG ⁹⁾	kg CO ₂ e	2,82E+02	9,11E+00	3,86E+01	3,30E+02	2,52E+01	6,35E+00	ND	ND	ND	ND	ND	ND	ND	1,00E+00	9,49E+00	3,06E+00	1,87E+00	-2,01E+01

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. In addition, the characterisation factors for the flows – CH₄ fossil, CH₄ biogenic and Dinitrogen monoxide – were updated. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterisation factor for biogenic CO₂ is set to zero.

SCENARIO DOCUMENTATION

DATA SOURCES

Manufacturing energy scenario documentation

1. Diesel, burned in building machine, World, Ecoinvent, 0.10 kgCO₂e/MJ
2. Heat production, propane, at industrial furnace >100kW, World, Ecoinvent, 0.0945 kgCO₂e/MJ
3. Market for electricity, medium voltage, Sweden, Ecoinvent, 0.0295 kgCO₂e/kWh

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry 16-32 metric ton, EURO6, 135,52 km
2. Market for transport, freight, lorry 16-32 metric ton, EURO6, 57,6 km
3. Market for transport, freight, lorry 16-32 metric ton, EURO6, 23,52 km

Transport to the building site (A4) - Scenario documentation

Scenario parameter	Value
Capacity utilization (including empty return) %	50
Bulk density of transported products	2,06E+03
Volume capacity utilization factor	<1

Installation at the building site (A5) - Scenario documentation

Scenario parameter	Value
Energy: type and consumption (MJ or kWh)	-
Water use (m ³)	Tap water, 130 liters, to mix the mortar and then clean up excess mortar and tools
Ancillary materials: type and mass (kg)	-
Waste materials: type and mass (kg)	Wood (pallets / wooden packaging): 25 kg per declared unit (1 metric ton of product) Plastic packaging (PP and LDPE): 5 kg per declared unit (1 metric ton of product) Basis for the assumption: The quantities are based on standard packaging configurations per 1 metric ton of product and typical installation practice. No significant product losses occur during installation when the product is handled correctly; any minor losses are considered negligible and are therefore not quantified separately.
Waste materials: output routes	Packaging materials (wood and plastic) generated during installation (A5) are collected at the construction site and transported to the nearest waste treatment facility

	(assumed distance: 50 km). Of the plastic packaging, 2,0kg is recycled, 1,85kg is incinerated, and 1,15kg is landfilled and of the wooden packaging, 8,0kg is recycled, 7,5kg is incinerated, and 9,5kg is landfilled.
Direct emissions (kg)	No direct emissions to air, water, or soil arising from the installation process are considered relevant for this product. During curing, approximately 0.130m ³ of water per declared unit evaporates from the product. This evaporation represents a physical phase change of water and does not constitute a direct emission with environmental impact as defined in EN 15804+A2, since it is not associated with energy use, chemical reactions, or pollutant release.

End of life (C1-C4) - Scenario documentation

Scenario information	Value
Collection process: collected separately (kg)	-
Collection process: Mixed waste (kg)	At the end of life, the product is integrated into the building structure and cannot be separated as an individual waste fraction. 100% of the product mass, 1000kg, is collected as mixed mineral construction and demolition waste.
Recovery: re-use (kg)	0
Recovery: recycling (kg)	700
Recovery: energy recovery (kg)	0
Disposal (kg)	0
Scenario assumptions e.g. transportation (mode, km) & other	50km

THIRD-PARTY VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier. The project report on the Life Cycle Assessment and the report(s) on features of environmental relevance are filed at EPD Hub. EPD Hub PCR and ECO Platform verification checklist are used.

EPD Hub is not able to identify any unjustified deviations from the PCR and EN 15804+A2 in the Environmental Product Declaration and its project report.

EPD Hub maintains its independence as a third-party body; it was not involved in the execution of the LCA or in the development of the declaration and has no conflicts of interest regarding this verification.

The company-specific data and upstream and downstream data have been examined as regards plausibility and consistency. The publisher is responsible for ensuring the factual integrity and legal compliance of this declaration.

The software used in creation of this LCA and EPD is verified by EPD Hub to conform to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules and General Program Instructions.

Verified tools

Tool verifier: Magaly Gonzalez Vazquez

Tool verification validity: 27 March 2025 - 26 March 2028

Yazan Badour as an authorized verifier for EPD Hub Limited 19.05.2026

