



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804 +A2 & ISO 14025

Brennix Brandskydds massa

EPD HUB, EPD number

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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.



GENERAL INFORMATION

MANUFACTURER

Manufacturer	Stål & Brandteknik AB
Address	Klastorpsvägen 13, 152 28 Södertälje, Sweden
Contact details	info@brandteknikab.se
Website	www.brandteknikab.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
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	Matthias Mattsson, Stål & Brandteknik AB
EPD verification	Independent verification of this EPD and data, according to ISO 14025: Internal verification External verification
EPD verifier	Sarah Curpen 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	Brennix Brandskyddsmassa
Additional labels	-
Product reference	3313
Place(s) of raw material origin	Europe
Place of production	Rosersberg, Sweden
Place(s) of installation and use	Sweden
Period for data	FIY 2024
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3 (%)	-
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	28,7

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg
Declared unit mass	1 kg
Mass of packaging	12 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	0,31
GWP-total, A1-A3 (kgCO ₂ e)	0,29
Secondary material, inputs (%)	0,14
Total energy use, A1-A3 (kWh)	2,32
Net freshwater use, A1-A3 (m ³)	0

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Stål & Brandteknik AB has specialized in passive fire protection since 1989. The company provides fire protection solutions for the construction and industrial sectors, focusing on long-term safety and sustainability. With over 30 years of experience in the field, we offer high-quality products and services that help meet fire protection requirements in both new construction and renovation projects. Our work is characterized by expertise, reliability, and a strong commitment to creating safe environments.

PRODUCT DESCRIPTION

Brennix Brandskydds massa is a factory-produced, gypsum-based dry mortar supplied as powder and mixed with water on site. It is intended for permanent fire sealing of ventilation, pipe, and cable penetrations, as well as empty openings, in fire-separating floors and walls made of solid non-combustible materials such as concrete, lightweight concrete, brick, or equivalent, and in lightweight partition walls made of gypsum boards on wooden or steel stud frames. The product has a typical dry density of approximately 1000 kg/m³, depending on mixing ratio and application method. The material is non-combustible and classified as Euroclass A1. It is applied by casting or trowelling, with the application thickness adapted to the penetration size and fire-sealing system. The product cures hydraulically, and fire resistance performance is classified up to EI 120, determined at system level depending on penetration type, dimensions, and supporting construction.

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

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0	-
Minerals	99	Europe
Fossil materials	1	Europe
Bio-based materials	0	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0,003836

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg
Mass per declared unit	1 kg
Functional unit	-
Reference service life	-

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. 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. The environmental impacts considered for the product stage (A1–A3) cover the production of raw materials, their transport to the manufacturing site, and the manufacturing and packaging processes at the factory in Rosersberg, Sweden.

Raw materials are sourced from European suppliers. Transportation of raw materials to the factory is modelled using generic transport assumptions and distances in accordance with the background datasets applied in the LCA model.

Manufacturing energy use is based on site-specific electricity consumption data from the factory. A location-based electricity mix is applied in accordance with the datasets used

in the LCA software. Fuels and electricity used by manufacturing equipment are included in this stage.

The production process includes dosing and mixing of raw materials, followed by filling of the finished product into bags for storage and distribution. Material losses occurring during mixing, handling, cleaning of equipment, and packaging are included in module A3 as manufacturing waste.

Manufacturing waste mainly consists of gypsum-based material residues and packaging-related waste. This waste is collected on site and transported to appropriate waste treatment facilities using generic transport assumptions as defined in the background datasets.

Waste treatment routes include recycling, incineration, or landfill depending on the waste type. Transport and treatment of manufacturing waste are included in module A3 only. Manufacturing waste is not included in the end-of-life modules (C1–C4), which apply exclusively to the installed product after its service life.

Material losses during manufacturing processes as well as losses during electricity transmission are included in the assessment in accordance with EN 15804 and the applied PCR.

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.

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. Transportation of the finished product from the manufacturing facility in Rosersberg, Sweden, to the construction site in Södertälje, Sweden, is included in module A4. Transport is modelled as road transport by truck with an

assumed distance of 63 km. Vehicle capacity utilization is assumed to be 100% (full load). Empty return trips are not included, as it is assumed that the transport service provider uses return trips for other deliveries.

Module A5 covers the installation of the product at the construction site. The product is installed by casting or trowelling into openings and penetrations. No additional energy consumption is required during installation, as the product is applied manually without the use of powered equipment. Material losses during installation are assumed to be negligible and are therefore not modelled separately. Minor material residues and packaging waste generated during installation are included in module A5 as installation waste.

Installation waste mainly consists of empty packaging and small amounts of product residues. This waste is assumed to be collected on site and treated according to typical construction site waste management practices. Waste treatment routes include recycling, incineration, or landfill depending on the waste type.

Transport and treatment of installation waste are included in module A5 using generic transport distances and waste treatment processes as defined in the background datasets applied in the LCA model. Benefits and loads from incineration and recycling of packaging materials are reported in module D in accordance with EN 15804.

No additional installation materials are required, and the use phase does not generate operational energy or water consumption.

PRODUCT END OF LIFE (C1-C4, D)

At the end of life, the product is assumed to be demolished together with the surrounding building structure during normal building demolition activities. The product is not selectively dismantled, but removed as part of mixed construction and demolition waste. Module C1 (deconstruction/demolition) does not include any separately allocated energy consumption for the product, as demolition activities are performed at building level and the contribution of the product is considered negligible.

It is assumed that the product waste generated during demolition is collected as mixed construction waste and transported to a waste treatment facility. A transport distance of 50 km by lorry is assumed in module C2, representing typical waste transport conditions.

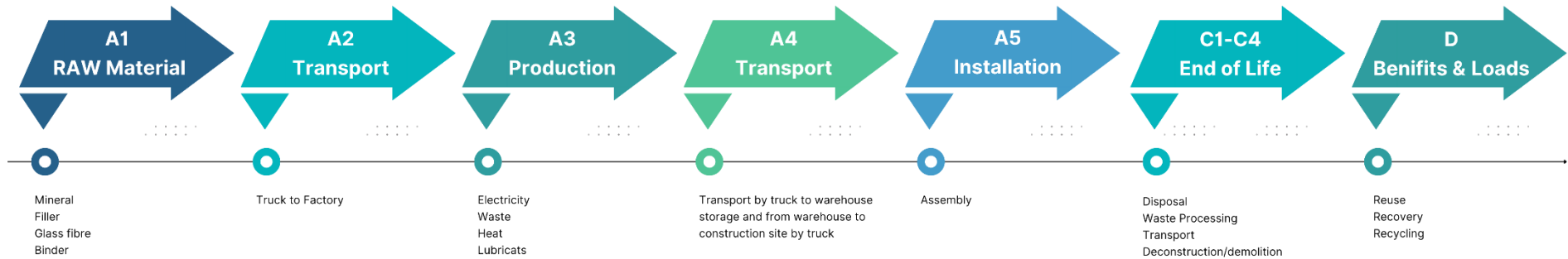
In module C3 (waste processing), the product waste may undergo preparatory treatment prior to final disposal. No energy recovery is credited or declared for the gypsum-based product. Although the applied background dataset may technically include energy recovery processes, no benefits from energy recovery are accounted for in the declared results, as the end-of-life scenario assumes disposal via landfill.

In module C4, the product waste is assumed to be disposed of in landfill, which represents the typical end-of-life route for gypsum-based construction products. The end-of-life treatment distribution is therefore assumed as 100% landfill, with no incineration or recycling.

The end-of-life scenario is based on generic European waste management assumptions and background datasets used in the LCA model, in accordance with EN 15804 and the applied PCR.

SYSTEM DIAGRAM

Essential Steps in the Project Life Cycle



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 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.

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 done as per 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	No allocation
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	None
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'.

Standards and program rules
EN 15804:2012+A2:2019/AC:2021,
Sustainability of construction works –
Environmental product declarations – Core
rules for the product category of construction
products.

ISO 14025:2006, Environmental labels and
declarations – Type III environmental
declarations – Principles and procedures.

ISO 14040:2006 and ISO 14044:2006,
Environmental management – Life cycle
assessment – Principles, framework,
requirements and guidelines.

EPD Hub Core PCR, Version 1.2, 24 March
2025.

LCA software and databases

One Click LCA EPD Generator for EPD Hub V3
and EPD System Verification v3.2.3.

Ecoinvent Association. Ecoinvent database
v3.10.1 / v3.11, allocation, cut-off, EN
15804+A2. Zurich, Switzerland.

One Click LCA databases providing background
datasets for transport, electricity supply, fuel
use, and waste treatment processes.

Other sources

Manufacturer-specific production data
provided by Stål & Brandteknik AB.

Generic European construction and
demolition waste management assumptions
are based on datasets from the Ecoinvent
database implemented in the One Click LCA
platform, including datasets for waste
collection, transport, recycling, incineration,
and landfill treatment.

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	2,28E-01	5,72E-02	3,46E-03	2,89E-01	6,70E-03	3,45E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,60E-03	1,22E-02	3,79E-03	-4,75E-02
GWP – fossil	kg CO ₂ e	2,27E-01	5,72E-02	2,95E-02	3,14E-01	6,70E-03	7,05E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,44E-03	1,22E-02	3,79E-03	-1,70E-02
GWP – biogenic	kg CO ₂ e	9,89E-04	1,28E-05	-2,63E-02	-2,53E-02	1,52E-06	2,74E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,82E-06	-8,47E-06	-1,21E-06	-3,05E-02
GWP – LULUC	kg CO ₂ e	2,10E-04	2,56E-05	2,38E-04	4,73E-04	3,00E-06	8,56E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,62E-04	1,82E-05	2,17E-06	6,62E-06
Ozone depletion pot.	kg CFC ₋₁₁ e	1,12E-07	8,44E-10	9,90E-10	1,14E-07	9,89E-11	1,84E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,68E-10	2,36E-10	1,10E-10	-1,41E-10
Acidification potential	mol H ⁺ e	1,47E-03	1,95E-04	1,99E-04	1,86E-03	2,28E-05	1,92E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,50E-05	3,98E-03	2,69E-05	-1,22E-04
EP-freshwater ²⁾	kg Pe	6,66E-05	4,45E-06	1,47E-05	8,57E-05	5,21E-07	1,55E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,44E-07	1,20E-06	3,12E-07	-1,18E-05
EP-marine	kg Ne	2,65E-04	6,41E-05	7,69E-05	4,06E-04	7,50E-06	9,35E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,56E-06	3,36E-05	1,02E-05	-3,40E-05
EP-terrestrial	mol Ne	2,84E-03	6,97E-04	6,65E-04	4,21E-03	8,16E-05	9,28E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,67E-05	2,98E-04	1,12E-04	-3,73E-04
POCP (“smog”) ³⁾	kg NMVOCe	1,03E-03	2,87E-04	1,71E-04	1,49E-03	3,37E-05	4,10E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,26E-05	3,36E-04	4,01E-05	-1,10E-04
ADP-minerals & metals ⁴⁾	kg Sbe	3,28E-05	1,60E-07	2,57E-07	3,32E-05	1,87E-08	5,36E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,43E-08	3,28E-08	6,02E-09	-1,46E-05
ADP-fossil resources	MJ	3,25E+00	8,30E-01	4,22E+00	8,30E+00	9,72E-02	1,45E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,63E-02	1,96E-01	9,30E-02	-2,12E-01
Water use ⁵⁾	m ³ e depr.	9,32E-02	4,10E-03	6,96E-02	1,67E-01	4,80E-04	3,24E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,47E-04	2,28E-03	2,68E-04	8,51E-04

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	1,67E-08	5,73E-09	3,19E-09	2,56E-08	6,70E-10	7,54E-10	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,36E-10	7,53E-09	6,11E-10	-1,35E-09
Ionizing radiation ⁶⁾	kBq 11235e	1,10E-02	7,23E-04	2,95E-01	3,07E-01	8,46E-05	4,94E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,19E-05	2,95E-04	5,85E-05	-1,79E-04
Ecotoxicity (freshwater)	CTUe	3,12E+00	1,17E-01	1,93E-01	3,44E+00	1,37E-02	6,93E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,68E-01	2,58E-01	7,80E-03	-7,23E-02
Human toxicity, cancer	CTUh	1,31E-10	9,44E-12	3,72E-11	1,77E-10	1,11E-12	3,73E-12	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,00E-12	8,22E-12	6,99E-13	-4,20E-12
Human tox. non-cancer	CTUh	5,50E-09	5,37E-10	5,34E-10	6,58E-09	6,29E-11	1,57E-10	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,45E-11	5,70E-10	1,60E-11	-1,26E-10
SQP ⁷⁾	-	1,00E+00	8,36E-01	4,76E+00	6,60E+00	9,79E-02	1,18E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,04E-02	2,21E-01	1,83E-01	-1,39E+00

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	2,35E-01	1,14E-02	7,01E-01	9,47E-01	1,33E-03	-2,64E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,34E-03	3,98E-03	8,98E-04	-2,27E-01
Renew. PER as material	MJ	0,00E+00	0,00E+00	2,42E-01	2,42E-01	0,00E+00	-2,42E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-7,00E-02
Total use of renew. PER	MJ	2,35E-01	1,14E-02	9,42E-01	1,19E+00	1,33E-03	-5,05E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,34E-03	3,98E-03	8,98E-04	-2,97E-01
Non-re. PER as energy	MJ	2,38E+00	8,30E-01	4,18E+00	7,38E+00	9,72E-02	7,02E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,74E-02	1,96E-01	9,30E-02	-1,83E-01
Non-re. PER as material	MJ	0,00E+00	0,00E+00	9,43E-03	9,43E-03	0,00E+00	-9,43E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,12E-02
Total use of non-re. PER	MJ	2,38E+00	8,30E-01	4,19E+00	7,39E+00	9,72E-02	6,08E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,74E-02	1,96E-01	9,30E-02	-1,95E-01
Secondary materials	kg	1,36E-03	3,53E-04	5,67E-04	2,28E-03	4,14E-05	5,08E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,94E-05	7,13E-05	2,34E-05	9,94E-03
Renew. secondary fuels	MJ	1,39E-04	4,49E-06	3,59E-03	3,73E-03	5,25E-07	5,99E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,90E-07	9,38E-07	4,84E-07	-2,40E-05
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	2,49E-03	1,23E-04	1,91E-03	4,52E-03	1,44E-05	6,37E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,76E-05	-3,15E-04	9,67E-05	7,45E-08

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	2,91E-02	1,41E-03	2,64E-03	3,31E-02	1,65E-04	6,91E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,38E-04	7,26E-04	1,03E-04	-1,52E-03
Non-hazardous waste	kg	7,65E-01	2,60E-02	6,66E-02	8,57E-01	3,05E-03	5,10E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,01E-03	6,05E-01	2,35E-03	-4,37E-02
Radioactive waste	kg	3,53E-06	1,77E-07	6,30E-05	6,67E-05	2,07E-08	1,08E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,50E-08	7,35E-08	1,43E-08	-8,12E-08

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	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
Materials for recycling	kg	2,51E-06	0,00E+00	3,11E-04	3,14E-04	0,00E+00	2,38E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	4,05E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,09E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	6,07E-01	0,00E+00
Exported energy	MJ	-1,10E-01	0,00E+00	0,00E+00	-1,10E-01	0,00E+00	6,14E-02	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	2,66E-02	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	3,66E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ADP-fossil	MJ	3,01E+00	8,19E-01	3,19E-01	4,15E+00	9,58E-02	7,84E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,53E-02	1,91E-01	9,21E-02	-2,07E-01
ADP-fossil	MJ	1,66E+00	0,00E+00	4,10E+00	5,76E+00	9,58E-02	1,04E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,80E-02	1,91E-01	9,21E-02	-2,07E-01

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 _{2e}	2,27E-01	5,72E-02	2,97E-02	3,14E-01	6,70E-03	7,06E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,60E-03	1,22E-02	3,79E-03	-1,69E-02

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. Electricity, medium voltage, residual mix, Sweden, Ecoinvent, 0.0512 kgCO₂e/kWh
2. Electricity, medium voltage, residual mix, Sweden, Ecoinvent, 0.0512 kgCO₂e/kWh

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry >32 metric ton, EURO5, 63 km
2. Market for transport, freight, lorry >32 metric ton, EURO5, 50 km

Transport to the building site (A4) - Scenario documentation

Scenario parameter	Value
Capacity utilization (including empty return) %	100
Bulk density of transported products	7,88E+02
Volume capacity utilization factor	-

Installation at the building site (A5) - Scenario documentation

Scenario parameter	Value
Energy: type and consumption (MJ or kWh)	0 MJ / 0 kWh
Water use (m ³)	0.0002 m ³ per declared unit (≈ 0.2 liter/kg)
Ancillary materials: type and mass (kg)	0 kg
Waste materials: type and mass (kg)	0.05 kg per declared unit
Waste materials: output routes	Waste is collected on site and treated according to standard construction waste management practices. Packaging is mainly directed to recycling or incineration, and product residues to landfill.
Direct emissions (kg)	0 kg

End of life (C1-C4) - Scenario documentation

Scenario information	Value
Collection process: collected separately (kg)	-
Collection process: Mixed waste (kg)	-
Recovery: re-use (kg)	0
Recovery: recycling (kg)	0,41
Recovery: energy recovery (kg)	0,61
Disposal (kg)	0
Scenario assumptions e.g. transportation (mode, km) & other	Transport 50 km by lorry; deconstruction is performed at building level and the contribution of the product is considered negligible. The product is treated as mixed construction and demolition waste and is assumed to be disposed of as 100% landfill.

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

Sarah Curpen as an authorized verifier for EPD Hub Limited 07.05.2026

