ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Putsbruk C Grov (CS II)
Combimix AB

EPD HUB, HUB-6494

Published on 28.05.2026, last updated on 28.05.2026, valid until 28.05.2031

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	Combimix AB
Address	Backamo 620, 459 91 Ljungskile, Sweden / Verkstadsvägen 6, 746 40 Bålsta, Sweden
Contact details	miljo@combimix.se
Website	https://www.combimix.com/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	Ebba Hultman
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Haiha Nguyen 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	Putsbruk C Grov (CS II)
Place(s) of raw material origin	Sweden, Europe
Place of production	Backamo & Bålsta, Sweden
Place(s) of installation and use	Sweden, Europe
Period for data	10/2024 - 9/2025
Averaging in EPD	Multiple factories
Variation in GWP-fossil for A1-A3 (%)	±5,8
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	54,5

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg
Declared unit mass	1 kg
Mass of packaging	0,0285 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	0,2
GWP-total, A1-A3 ($kgCO_2e$)	0,16
Secondary material, inputs (%)	0,15
Total energy use, A1-A3 (kWh)	0,79
Net freshwater use, A1-A3 (m^3)	0

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Combimix develops and manufactures mineral-based products for the construction industry. The assortments includes products for floor leveling, facade plastering, masonry, casting, concrete renovation and restoration mortar for cultural buildings.

PRODUCT DESCRIPTION

Putsbruk C Grov is a lime/cement-based pumpable render mortar in render class C (CS II), designed for rough rendering and levelling in combination with a primer mortar on heavy wall constructions. It is suitable for both new construction and renovation, indoors and outdoors, and forms part of the Combi-Tradition and Combi-Tradition ROT render systems.
The mortar achieves a compressive strength of 1.5–5.0 MPa and is classified as fire class A1, with good frost resistance and no capillary water absorption (W 0) according to EN 998-1.

Further information can be found at:
https://www.combimix.com/se/

PRODUCT RAW MATERIAL MAIN COMPOSITION

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

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	-
Biogenic carbon content in packaging, kg C	0,011

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 product stage (A1-A3) encompasses environmental impacts from the production of raw materials and ancillary materials used in manufacturing, as well as fuel consumption by machinery and the management of production waste at manufacturing facilities. The study also considers material losses occurring during the manufacturing processes as well as losses during electricity distribution.

Raw materials consist of sand, cement, and filler materials sourced from Swedish and European suppliers. European materials are transported to Sweden via a combination of truck and ship. Transport distances vary between 90-1450 km for truck transport and 140-160 km for sea transport, followed by distribution to production facilities throughout Sweden. The manufacturing process comprises raw material production, transport to factory, and blending. During blending, all raw materials are added to mixing vessels where they are mixed together into a homogeneous product. Energy consumption in the manufacturing phase is based on the Swedish residual electricity mix, applying a market-based approach at medium voltage.

Production waste generated during the manufacturing process is managed through internal reuse. Waste material is reintroduced as filler material in subsequent product batches, thereby minimizing material losses and avoiding external waste disposal. The product is packaged in paper and plastic bags and palletized on wood pallets, with a total packaging mass of 0,0285kg per kg of product.

TRANSPORT AND INSTALLATION (A4-A5)

Environmental impact from transport to construction site (A4) includes direct emissions from fuel combustion, emissions from fuel production, and infrastructure-related emissions. The product is delivered from factory to customer by truck at full capacity utilization over an average distance of 150 km. For installation (A5), the product is mixed with 18% tap water. The packaging materials are collected and transported to the nearest waste treatment facility (50 km) where 40% of plastic, 83% of paper and 32% of wood is recycled, 37% of plastic, 8% of paper and 30% of wood is incinerated, and 23% of plastic, 9% of paper and 38% of wood ends up in landfill (source: Eurostat).

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase. Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

At the end of life, the mortar is treated according to the Eurostat scenario for mineral waste from 2022 with a total recovery rate of 80%. Demolition is carried out mechanically (C1) using diesel powered construction machinery, with an energy consumption of 0.01 kWh per declared unit. The demolished material is collected, sorted and transported to waste treatment facilities (C2) with an average transport distance of 250 km for recovered material and 50 km for landfill. In the waste treatment stage (C3), the material is crushed and sorted, with 80% recovered as backfill material for construction and 20% sent to landfill (C4), in accordance with the Eurostat scenario for mineral waste from 2022 with a total recovery rate of 80%. Due to the recovery potential, the environmental benefits of material recovery are reported separately in Module D

MANUFACTURING PROCESS AND SYSTEM BOUNDARY

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	Not applicable
Manufacturing energy and waste	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple factories
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	±5,8

This EPD is product and based on averaged data from multipe production facilities (Bålsta and Backamo). The climate impact varies only marginally between the factories (approximately ±5,8%for GWP-fossil A1-A3), which can primarily be attributed to minor differences in energy consumption and transport distances for raw materials. This variation complies with the requirements in GPI 2.9.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification v3.2.4. 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‘.

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_2e	1,31E-01	4,66E-02	-2,07E-02	1,57E-01	1,66E-02	5,76E-02	ND	ND	ND	ND	ND	ND	ND	3,61E-03	2,32E-02	1,68E-02	4,46E-03	-2,76E-02
GWP – fossil	kg CO_2e	1,31E-01	4,66E-02	2,10E-02	1,98E-01	1,66E-02	1,58E-02	ND	ND	ND	ND	ND	ND	ND	3,60E-03	2,31E-02	1,68E-02	4,45E-03	-1,32E-02
GWP – biogenic	kg CO_2e	5,61E-04	9,27E-06	-4,18E-02	-4,12E-02	3,76E-06	4,18E-02	ND	ND	ND	ND	ND	ND	ND	3,68E-07	5,24E-06	-2,02E-05	-1,06E-06	-1,44E-02
GWP – LULUC	kg CO_2e	1,90E-05	1,74E-05	3,29E-05	6,93E-05	7,43E-06	8,11E-06	ND	ND	ND	ND	ND	ND	ND	3,69E-07	1,04E-05	3,64E-05	9,40E-06	-8,03E-07
Ozone depletion pot.	kg $CFC\text{-}_{11}$e	3,14E-09	9,02E-10	8,17E-10	4,86E-09	2,45E-10	3,05E-10	ND	ND	ND	ND	ND	ND	ND	5,52E-11	3,42E-10	2,69E-10	8,80E-11	-1,64E-10
Acidification potential	mol H^+e	2,64E-04	1,08E-04	1,48E-04	5,20E-04	5,66E-05	4,52E-05	ND	ND	ND	ND	ND	ND	ND	3,25E-05	7,89E-05	1,10E-04	2,74E-05	-7,88E-05
EP-freshwater[2)]	kg Pe	3,38E-06	3,23E-06	4,90E-06	1,15E-05	1,29E-06	1,32E-06	ND	ND	ND	ND	ND	ND	ND	1,04E-07	1,80E-06	5,65E-06	3,19E-07	-6,40E-06
EP-marine	kg Ne	8,08E-05	2,76E-05	6,10E-05	1,69E-04	1,86E-05	1,89E-05	ND	ND	ND	ND	ND	ND	ND	1,51E-05	2,59E-05	3,89E-05	1,11E-05	-1,77E-05
EP-terrestrial	mol Ne	9,64E-04	2,98E-04	6,55E-04	1,92E-03	2,03E-04	1,69E-04	ND	ND	ND	ND	ND	ND	ND	1,65E-04	2,82E-04	4,20E-04	1,20E-04	-2,01E-04
POCP ("smog")[3)]	kg NMVOCe	3,26E-04	1,73E-04	2,11E-04	7,10E-04	8,35E-05	6,14E-05	ND	ND	ND	ND	ND	ND	ND	4,93E-05	1,16E-04	1,36E-04	4,02E-05	-6,25E-05
ADP-minerals & metals[4)]	kg Sbe	5,93E-07	1,51E-07	9,74E-08	8,41E-07	4,63E-08	5,38E-08	ND	ND	ND	ND	ND	ND	ND	1,29E-09	6,46E-08	4,62E-08	9,82E-09	-5,74E-08
ADP-fossil resources	MJ	1,03E+00	6,60E-01	5,39E-01	2,23E+00	2,41E-01	1,70E-01	ND	ND	ND	ND	ND	ND	ND	4,72E-02	3,36E-01	2,49E-01	7,53E-02	-1,97E-01
Water use[5)]	m^3e depr.	2,89E-01	3,29E-03	7,55E-03	2,99E-01	1,19E-03	2,26E-02	ND	ND	ND	ND	ND	ND	ND	1,18E-04	1,66E-03	1,53E-03	2,84E-04	-1,24E-02

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	3,11E-09	3,63E-09	3,22E-09	9,96E-09	1,66E-09	1,31E-09	ND	ND	ND	ND	ND	ND	ND	9,25E-10	2,32E-09	8,38E-09	2,14E-09	-1,00E-09
Ionizing radiation[6]	kBq U235e	1,26E-02	8,14E-04	1,47E-02	2,81E-02	2,10E-04	1,51E-03	ND	ND	ND	ND	ND	ND	ND	2,09E-05	2,92E-04	4,03E-04	5,32E-05	-1,70E-03
Ecotoxicity (freshwater)	CTUe	4,33E-01	8,86E-02	4,41E-02	5,66E-01	3,41E-02	5,60E-02	ND	ND	ND	ND	ND	ND	ND	2,60E-03	4,75E-02	1,07E-01	1,60E-02	-3,45E-02
Human toxicity, cancer	CTUh	2,31E-11	7,80E-12	5,39E-12	3,63E-11	2,74E-12	3,02E-12	ND	ND	ND	ND	ND	ND	ND	3,71E-13	3,82E-12	4,14E-12	8,94E-13	-3,10E-12
Human tox. non-cancer	CTUh	3,68E-10	4,19E-10	1,13E-10	9,00E-10	1,56E-10	1,06E-10	ND	ND	ND	ND	ND	ND	ND	5,87E-12	2,17E-10	1,83E-10	3,04E-11	-9,86E-11
SQP[7]	-	1,06E+00	4,46E-01	4,82E-01	1,99E+00	2,43E-01	1,57E-01	ND	ND	ND	ND	ND	ND	ND	3,30E-03	3,38E-01	2,41E-01	8,74E-02	-3,29E-01

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	5,92E-02	1,12E-02	5,77E-01	6,47E-01	3,30E-03	-3,63E-01	ND	ND	ND	ND	ND	ND	ND	2,99E-04	4,60E-03	6,93E-03	8,65E-04	2,03E-02
Renew. PER as material	MJ	0,00E+00	0,00E+00	3,67E-01	3,67E-01	0,00E+00	-3,67E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,23E-01
Total use of renew. PER	MJ	5,92E-02	1,12E-02	9,44E-01	1,01E+00	3,30E-03	-7,31E-01	ND	ND	ND	ND	ND	ND	ND	2,99E-04	4,60E-03	6,93E-03	8,65E-04	1,43E-01
Non-re. PER as energy	MJ	8,26E-01	6,60E-01	4,75E-01	1,96E+00	2,41E-01	9,59E-02	ND	ND	ND	ND	ND	ND	ND	4,72E-02	3,36E-01	2,49E-01	7,53E-02	-1,98E-01
Non-re. PER as material	MJ	1,08E-01	0,00E+00	6,49E-02	1,73E-01	0,00E+00	-6,49E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-8,64E-02	-2,16E-02	3,19E-02
Total use of non-re. PER	MJ	9,34E-01	6,60E-01	5,40E-01	2,13E+00	2,41E-01	3,10E-02	ND	ND	ND	ND	ND	ND	ND	4,72E-02	3,36E-01	1,63E-01	5,38E-02	-1,66E-01
Secondary materials	kg	1,54E-03	3,03E-04	2,96E-04	2,14E-03	1,03E-04	1,40E-04	ND	ND	ND	ND	ND	ND	ND	1,96E-05	1,43E-04	9,91E-05	2,73E-05	1,77E-03
Renew. secondary fuels	MJ	3,59E-02	3,82E-06	2,32E-02	5,92E-02	1,30E-06	2,96E-03	ND	ND	ND	ND	ND	ND	ND	5,12E-08	1,82E-06	1,11E-06	3,60E-07	-8,66E-07
Non-ren. secondary fuels	MJ	1,58E-01	0,00E+00	0,00E+00	1,58E-01	0,00E+00	7,88E-03	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	2,86E-03	9,12E-05	1,87E-04	3,14E-03	3,56E-05	2,72E-04	ND	ND	ND	ND	ND	ND	ND	3,12E-06	4,96E-05	-7,82E-04	3,77E-05	-3,12E-04

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	1,88E-03	1,04E-03	1,59E-03	4,51E-03	4,08E-04	4,25E-04	ND	ND	ND	ND	ND	ND	ND	5,25E-05	5,69E-04	5,97E-04	1,07E-04	-1,03E-03
Non-hazardous waste	kg	4,45E-02	2,14E-02	7,96E-02	1,46E-01	7,56E-03	1,01E-01	ND	ND	ND	ND	ND	ND	ND	7,15E-04	1,05E-02	1,11E+00	2,06E-03	-3,87E-02
Radioactive waste	kg	3,60E-06	2,02E-07	3,51E-06	7,30E-06	5,14E-08	3,91E-07	ND	ND	ND	ND	ND	ND	ND	5,12E-09	7,16E-08	9,80E-08	1,30E-08	-4,26E-07

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	6,18E-05	0,00E+00	1,58E-04	2,20E-04	0,00E+00	5,03E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	8,20E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	1,03E-05	0,00E+00	1,05E-04	1,16E-04	0,00E+00	5,79E-06	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	1,20E-07	0,00E+00	1,35E-03	1,35E-03	0,00E+00	4,99E-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	2,12E-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	2,87E-02	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_2e	1,28E-01	4,63E-02	2,37E-02	1,98E-01	1,65E-02	1,65E-02	ND	ND	ND	ND	ND	ND	ND	3,59E-03	2,30E-02	1,67E-02	4,43E-03	-1,31E-02
Ozone depletion Pot.	kg $CFC_{-11}e$	2,55E-09	7,18E-10	5,04E-10	3,78E-09	1,96E-10	2,39E-10	ND	ND	ND	ND	ND	ND	ND	4,37E-11	2,73E-10	2,16E-10	7,01E-11	-1,36E-10
Acidification	kg SO_2e	2,16E-04	8,56E-05	1,18E-04	4,20E-04	4,33E-05	3,55E-05	ND	ND	ND	ND	ND	ND	ND	2,29E-05	6,03E-05	8,31E-05	2,00E-05	-6,24E-05
Eutrophication	kg PO_4^3e	1,83E-04	2,12E-05	3,48E-04	5,52E-04	1,05E-05	3,19E-05	ND	ND	ND	ND	ND	ND	ND	5,34E-06	1,47E-05	2,09E-05	5,76E-06	-1,17E-05
POCP (“smog”)	kg C_2H_4e	2,32E-05	8,66E-06	1,38E-05	4,57E-05	3,86E-06	3,64E-06	ND	ND	ND	ND	ND	ND	ND	1,71E-06	5,37E-06	6,10E-06	1,70E-06	-5,27E-06
ADP-elements	kg Sbe	4,66E-07	1,47E-07	7,61E-08	6,89E-07	4,52E-08	4,59E-08	ND	ND	ND	ND	ND	ND	ND	1,26E-09	6,30E-08	4,53E-08	9,59E-09	-5,67E-08

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	8,57E-01	6,47E-01	3,82E-01	1,89E+00	2,38E-01	1,52E-01	ND	ND	ND	ND	ND	ND	ND	4,68E-02	3,31E-01	2,43E-01	7,45E-02	-1,68E-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	1,31E-01	4,66E-02	2,11E-02	1,98E-01	1,66E-02	1,58E-02	ND	ND	ND	ND	ND	ND	ND	3,61E-03	2,32E-02	1,68E-02	4,46E-03	-1,32E-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

Scenario information	Value
Electricity data source and quality	Electricity, medium voltage, residual mix, Sweden, Ecoinvent
Electricity CO2e / kWh	0.0512
Diesel data source and quality	Market for diesel, burned in building machine, World, Ecoinvent
Diesel CO2e / MJ	0.10

Transport scenario documentation - A4 (Transport resources)

Fuel type, consumption and vehicle type	Market for transport, freight, lorry >32 metric ton, EURO5
Average transport distance, km	150
Capacity utilization (including empty return) %	According to Ecoinvent 3.10.1 dataset average for Europe
Bulk density of transported products	1 200 kg/m³
Volume capacity utilization factor	<1

Installation scenario documentation - A5

Ancillary materials for installation / kg	0
Water use / m³	0.00018
Other resource use / kg	0
Energy use during installation / kWh or MJ	0
Waste materials before waste processing / kg	Paper: 0,002 Wood: 0,025
Output materials as result of waste processing	Wood sorting: 0,0017 Wood incineration with energy recovery: 0,0075 Wood landfill: 0.0095 Paper sorting: 0.00018 Paper incineration with energy recovery: 0.000034 Paper landfill: 0.000038 Plastic sorting: 0,00035 Plastic incineration with energy recovery: 0,00056 Plastic sorting: 0,0006
Direct emissions to ambient air / m³	0,000161

End-of-life scenario documentation - C1-C4

Collection process – kg collected separately	1.019
Collection process – kg collected with mixed waste	0
Recovery process – kg for re-use	0
Recovery process – kg for recycling	0.82
Recovery process – kg for energy recovery	0
Disposal (total) – kg for final deposition	0.20
Scenario assumptions e.g. transportation	Crushed material reused as fill. C3: 250 km by lorry. C4: 50 km by lorry to final disposal.

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

Haiha Nguyen as an authorized verifier for EPD Hub Limited 28.05.2026