ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Mataki

U.M Universal Membran EchoTech

Nordic Waterproofing AB

ECHOTECH

EPD HUB, 6122

Published on 27.04.2026, last updated on 27.04.2026, valid until 26.04.2031

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

NORDIC WATERPROOFING

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Nordic Waterproofing AB
Address	Bruksgatan 42, 263 39 Höganäs, Sweden
Contact details	info@mataki.com
Website	www.mataki.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 17388-1 Flexible sheets for waterproofing - Part 1: Cradle to grave
Sector	Construction product
Category of EPD	Sister EPD
Parent EPD number	HUB-3298
Scope of the EPD	Cradle to gate with options, A4-B7, and modules C1-C4, D
EPD author	Roula Toft, Nordic Waterproofing AB
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Afzal khan Peerukhan, as authorized verifier acting for EPD HUB Limited

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	U.M Universal Membran EchoTech
Additional labels	U.M.R Universal Membran EchoTech
Product reference	-
Place(s) of raw material origin	Sweden, EU & World
Place of production	Höganäs, Sweden
Place(s) of installation and use	Sweden
Period for data	Calendar year 2025
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	-
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	75,7

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m2 of installed product
Declared unit mass	3,5 kg
Mass of packaging	0,21 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	1,77
GWP-total, A1-A3 ($kgCO_2e$)	1,02
Secondary material, inputs (%)	5,44
Secondary material, outputs (%)	100
Total energy use, A1-A3 (kWh)	11,3
Net freshwater use, A1-A3 (m^3)	0,02

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Nordic Waterproofing AB is one of Nordic's leading producers and suppliers of waterproofing products and services for buildings and infrastructure. With a history dating back to 1889, the company has over 130 years of experience in developing solutions tailored to the Nordic climate. Nordic Waterproofing AB offers a comprehensive range of products, including waterproofing membranes for flat and pitched roofing, underlayers and barriers to buildings. Furthermore, the company offers a diverse range of complementary products and accessories such as the NWP Solar, which enable the integration of renewable energy systems into roofing projects.

Nordic Waterproofing`s products are characterized by:

- High quality
- Local adaptation
- Ease of installation
- Energy and environmental awareness
- Long service life

Nordic Waterproofing AB is a key member of the Nordic Waterproofing Group, a prominent entity in the European waterproofing industry. The Group is recognized for its extensive range of innovative waterproofing products and services tailored for buildings and infrastructure.

PRODUCT DESCRIPTION

U.M Universal Membran EchoTech is a waterproofing membrane intended for use as a temporary weather protection, vapour barrier, and similar applications. The product is used as the lower layer in the DuoTech and DuoTech Nordic systems, as well as in the HALOPROOF® Vapour Barrier Roofing System. The membrane is approved as a bitumen vapor barrier and is CE-marked in accordance with EN 13707, EN 13969, and EN 13970. Importantly, it contains renewable raw materials to support sustainability objectives in construction, combining durability with environmental responsibility.

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

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	-	-
Minerals	40-50	Sweden
Fossil materials	50-60	EU & World
Bio-based materials	5-15	EU

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0,23
Biogenic carbon content in packaging, kg C	0,00111

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m2 of installed product
Mass per declared unit	3,5 kg
Functional unit	1 m2 of installed product
Reference service life	50 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	x	x	x	x	x	x	x	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 product consists of bitumen, polymers, and fillers. Upstream production of raw materials includes the processing of these materials as modelled in the LCA.
Transport of raw materials from suppliers to the manufacturing facility is included in module A2. The data used for A2 are based on actual routes from internal logistics data.
Manufacturing takes place at our factory in Höganäs, Sweden. At the manufacturing site, the raw materials are heated and mixed. A reinforcement is impregnated and coated with this bitumen mixture. The resulting membrane is covered with sand and film. Subsequently, the product is cooled, rolled, and packed on a wooden pallet. The pallet is wrapped with polyethylene packaging film before being sent to customers. The manufacturing process uses only electricity from renewable sources. Waste from manufacturing and raw material packaging are included in the study and are based on actual processing agreement (confidential). Product waste is sent to a recycling facility for waste treatment to be crushed and used in asphalt manufacturing replacing virgin raw materials in road paving. Plastic and metal waste is sent to recycling. Other combustible waste is sent to energy recovery. Transport methods and distances of manufacturing waste are based on actual routes to the closest recycling facility.
Electricity, fuel, heat, water consumption, emissions, and waste generation are recorded at factory level. Allocation to the product is carried out based on mass of produced product.
The use of green energy in manufacturing is demonstrated through contractual instruments (GOs, RECs, etc.), and its use is ensured throughout the validity period of this EPD.

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 distance for product delivery from the production plant to the construction site is 529 km. This is based on the annual sales volume of the product. The transport method is lorry, and the volume capacity utilization factor is assumed to be 100%. Empty returns are not considered since it is assumed that the return trip can be used by other clients. Since products are packed properly, there are no losses during transportation.

The installation loss of the product is estimated to be 0.5%. Installation is done by torching of the edges and with mechanical fasteners such as screws and polypropylene thermal break tubes. If the installation is carried out by fully torching, it will increase the impact of the installation by approximately 0.4 kg CO2e. The emissions from the average weight of the installed mechanical fasteners are included in this study. Waste from installation is classified as materials that are recycled or incinerated with energy recovery. The assumed transport distance for waste handling is 100 km.

PRODUCT USE AND MAINTENANCE (B1-B7)

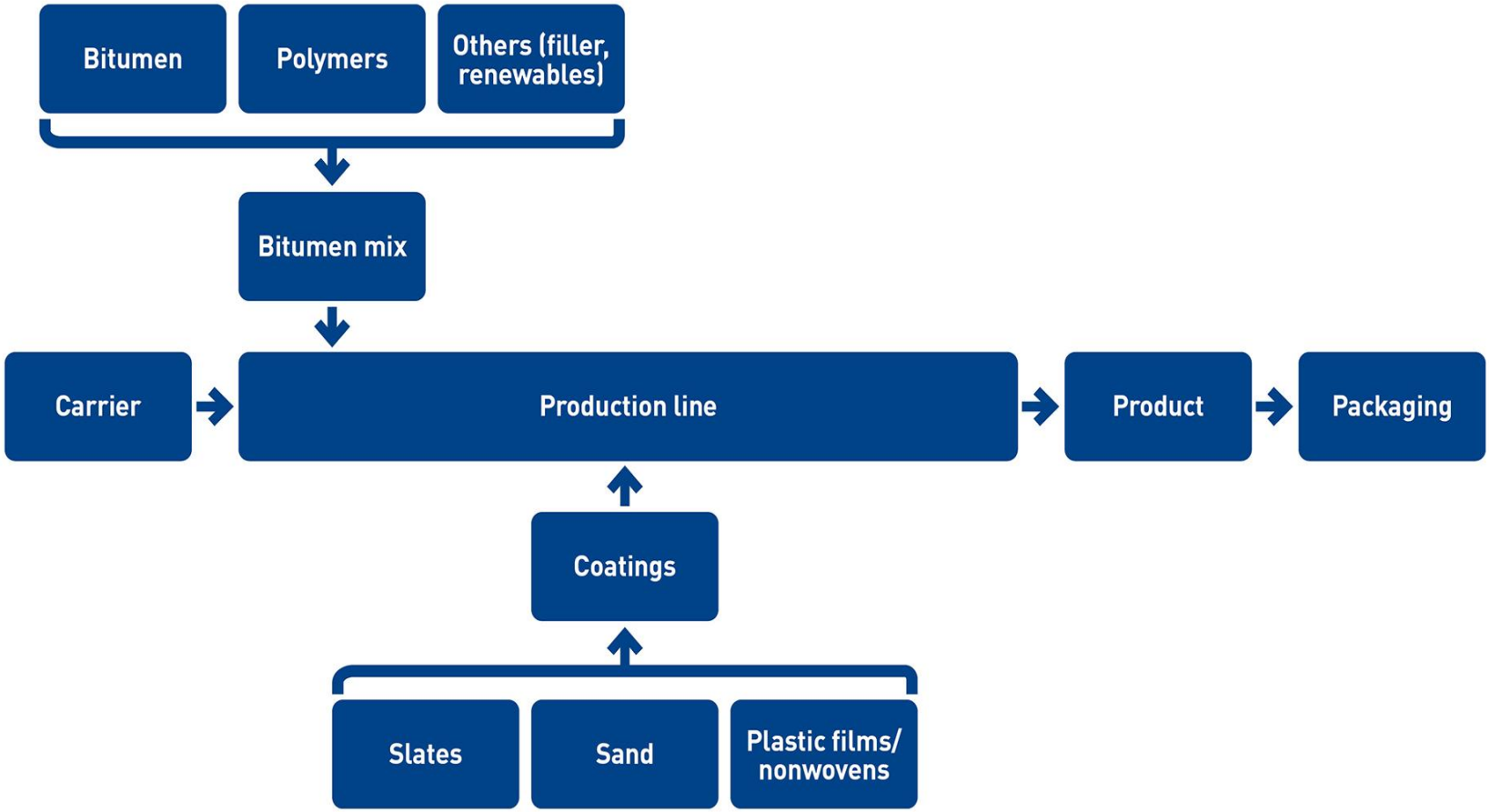
During the use stage (B1-B7) there is no environmental impact caused by the product. There are no emissions and no consumption of raw materials. There is no need for maintenance, repair, replacement or renovation during the use of the product, under standard conditions.
The product does not consume energy or water during its life. The scenarios included are representative of the most likely alternatives.
Air, soil, and water impacts during the use phase have not been studied.
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 stage, it is assumed that the product will be dismantled manually and thus will not require any processes with an environmental impact. The waste is collected as separate construction waste and sent to a recycling facility for waste treatment. The transportation distance to the waste treatment facility (that can shred and prepare the membranes for recycling) is estimated to be 300 km, and the transportation method is lorry. The diesel and electricity used to shred the sheets prior to recycling are included in this study. The bitumen membranes are assumed to be recycled and used in asphalt manufacturing to replace virgin materials in road paving.

Benefits and loads of incineration and recycling are included in Module D. Benefits also include the avoided use of primary materials. The benefit of bitumen membrane recycling is the avoidance of virgin bitumen and sand/gravel in asphalt production. Module D covers loads from the incineration and recycling of plastic, paper, cardboard and wood, as well as benefits in the form of heat and electricity generated from incineration.

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 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	No allocation
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	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 v3.2.4. 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‘.

A3 and EoL: Agreement of collecting, handling and material recycling of product waste (Confidential).

A3 and EoL: Environmental permit for the material recycling process (Confidential).
A5 x EoL Plastic packaging EU scenario: EuroParl (2023)
A5 x EoL Wood packaging EU scenario: Eurostat & PSR-0014
C2-C4 Steel, Construction (World Steel Association, 2020): https://worldsteel.org/wp-content/uploads/Life-cycle-inventory-LCI-study-2020-data-release.pdf

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-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	1,02E+00	3,80E-01	5,54E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,05E-01	8,49E-01	5,24E-05	-5,94E-01
GWP – fossil	kg CO_2e	1,77E+00	3,80E-01	5,33E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,05E-01	3,99E-02	5,24E-05	-5,97E-01
GWP – biogenic	kg CO_2e	-8,09E-01	7,62E-05	2,00E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,48E-05	8,09E-01	-1,67E-08	3,48E-03
GWP – LULUC	kg CO_2e	5,60E-02	1,36E-04	4,60E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,08E-05	1,17E-04	3,00E-08	-3,10E-05
Ozone depletion pot.	kg CFC-$_{11}$e	1,32E-07	7,55E-09	4,26E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,87E-09	4,76E-10	1,52E-12	-3,95E-08
Acidification potential	mol H^+e	8,15E-03	7,90E-04	1,52E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,84E-04	2,76E-04	3,72E-07	-3,81E-03
EP-freshwater[2)]	kg Pe	8,40E-05	2,56E-05	1,08E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,59E-05	2,90E-06	4,31E-09	-8,97E-05
EP-marine	kg Ne	7,59E-03	1,90E-04	4,06E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,21E-04	1,27E-04	1,42E-07	-8,29E-03
EP-terrestrial	mol Ne	1,62E-02	2,05E-03	3,86E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,41E-03	1,32E-03	1,55E-06	-1,61E-03
POCP ("smog")[3)]	kg NMVOCe	1,24E-02	1,31E-03	1,56E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,52E-04	3,94E-04	5,54E-07	-3,75E-03
ADP-minerals & metals[4)]	kg Sbe	6,80E-06	1,26E-06	1,94E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,73E-07	1,45E-07	8,33E-11	-2,47E-06
ADP-fossil resources	MJ	1,04E+02	5,34E+00	9,79E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,88E+00	5,23E-01	1,29E-03	-1,01E+02
Water use[5)]	m^3e depr.	1,18E+00	2,65E-02	1,71E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,33E-02	9,66E-03	3,71E-06	-9,86E-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-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	3,80E+00	2,80E-08	1,90E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,63E-08	7,38E-09	8,46E-12	-5,40E+00
Ionizing radiation[6)]	kBq U235e	2,81E-01	6,89E-03	2,67E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,33E-03	9,73E-03	8,09E-07	-4,55E-02
Ecotoxicity (freshwater)	CTUe	7,06E+00	7,10E-01	1,77E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,55E-01	7,21E-02	1,08E-04	-5,50E-01
Human toxicity, cancer	CTUh	8,17E-09	6,37E-11	2,98E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,49E-11	9,67E-12	9,67E-15	-1,15E-09
Human tox. non-cancer	CTUh	4,55E-01	3,38E-09	2,27E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,80E-09	2,23E-10	2,22E-13	-6,45E-01
SQP[7)]	-	8,93E+01	3,23E+00	1,57E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,72E+00	1,45E-01	2,53E-03	-9,10E-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-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	1,03E+01	9,35E-02	2,49E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,94E-02	9,52E-02	1,24E-05	-2,74E-01
Renew. PER as material	MJ	4,09E-02	0,00E+00	-3,55E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-5,41E-03	0,00E+00	3,01E-03
Total use of renew. PER	MJ	1,03E+01	9,35E-02	2,14E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,94E-02	8,98E-02	1,24E-05	-2,71E-01
Non-re. PER as energy	MJ	3,03E+01	5,34E+00	4,36E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,88E+00	-2,36E+00	1,29E-03	-1,19E+01
Non-re. PER as material	MJ	7,03E+01	0,00E+00	-1,99E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-6,79E+01	0,00E+00	-8,45E+01
Total use of non-re. PER	MJ	1,01E+02	5,34E+00	2,37E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,88E+00	-7,02E+01	1,29E-03	-9,64E+01
Secondary materials	kg	1,93E-01	2,48E-03	1,83E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,29E-03	4,04E-04	3,23E-07	1,32E-01
Renew. secondary fuels	MJ	4,18E-03	3,13E-05	9,22E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,65E-05	3,09E-06	6,70E-09	-1,40E-05
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	2,34E-02	7,27E-04	3,59E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,81E-04	2,19E-04	1,34E-06	-4,67E-03

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	1,89E-02	7,76E-03	7,23E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,02E-03	1,29E-03	1,42E-06	-3,41E-02
Non-hazardous waste	kg	1,21E+00	1,64E-01	1,34E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,40E-02	3,27E-02	3,25E-05	-1,87E+00
Radioactive waste	kg	7,74E-04	1,71E-06	9,46E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,70E-07	2,10E-06	1,97E-10	-1,06E-03

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	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	0,00E+00	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 recycling	kg	3,79E-01	0,00E+00	1,87E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,62E+00	0,00E+00	0,00E+00
Materials for energy rec	kg	7,01E-03	0,00E+00	3,58E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	MJ	1,23E-01	0,00E+00	4,25E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	1,87E-02	0,00E+00	1,37E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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 – Heat	MJ	1,04E-01	0,00E+00	2,89E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	1,78E+00	3,77E-01	5,32E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,04E-01	3,98E-02	5,20E-05	-5,79E-01
Ozone depletion Pot.	kg $CFC_{-11}e$	5,67E-07	6,01E-09	9,43E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,29E-09	3,80E-10	1,21E-12	-3,23E-08
Acidification	kg SO_2e	6,86E-03	6,34E-04	1,22E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,24E-04	1,97E-04	2,75E-07	-3,09E-03
Eutrophication	kg PO_4^3e	3,63E-03	1,60E-04	2,82E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,27E-04	4,52E-05	8,75E-08	-1,47E-03
POCP (“smog”)	kg C_2H_4e	4,40E-04	6,71E-05	1,43E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,69E-05	1,50E-05	2,60E-08	-1,63E-04
ADP-elements	kg Sbe	5,09E-06	1,23E-06	1,90E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,57E-07	1,44E-07	8,17E-11	-2,45E-06
ADP-fossil	MJ	9,64E+01	5,22E+00	9,37E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,84E+00	3,93E-01	1,27E-03	-1,01E+02

ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[9)]	kg CO_2e	1,83E+00	3,80E-01	5,34E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,05E-01	4,00E-02	5,25E-05	-5,97E-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. Heat and power co-generation, biogas, gas engine, Sweden, Ecoinvent, 0.0071 kgCO2e/MJ
2. Electricity production, hydro, run-of-river, Sweden, Ecoinvent, 0.0044 kgCO2e/kWh
3. Propane, burned in building machine, World, Ecoinvent, 0.0945 kgCO2e/MJ

Transport scenario documentation - A4 (Transport resources)

1. Transport, freight, lorry 16-32 metric ton, EURO6, 529 km

Transport to the building site (A4) - Scenario documentation

Scenario parameter	Value
Capacity utilization (including empty return) %	100
Bulk density of transported products	7,73E+02
Volume capacity utilization factor	<1

Installation at the building site (A5) - Scenario documentation

Scenario parameter	Value
Energy: type and consumption (MJ or kWh)	Torch-on equipment Modelled with Propane, burned in building machine, Ecoinvent, 0.384 kWh/DU
Water use (m^3)	-
Ancillary materials: type and mass (kg)	Steel fixings, Ecoinvent 0.056 kg/DU Polypropylene fixings, Ecoinvent, 0.068 kg/DU
Waste materials: type and mass (kg)	Plastic packaging PE: 0,043 kg/DU Wooden pallet: 0,003316 kg/DU Product solid watse: 0,0178 kg/DU
Waste materials: output routes	PE: 32,5% recycling, 42,5% incineration, 25% disposal. Wood: 31% recycling, 31% incineration, 38% disposal. Solid: 100% incineration.
Direct emissions (kg)	-

End of life (C1-C4) - Scenario documentation

Scenario information	Value
Collection process: collected separately (kg)	3,624 kg/DU
Collection process: Mixed waste (kg)	-
Recovery: re-use (kg)	0
Recovery: recycling (kg)	3,616
Recovery: energy recovery (kg)	0
Disposal (kg)	0,0084
Scenario assumptions e.g. transportation (mode, km) & other	300 km

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

Afzal khan Peerukhan, as authorized verifier acting for EPD HUB Limited27.04.2026