

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Beulco water meter bracket complete installation kit
Beulco Armatur AB



EPD HUB, HUB-7871
Published on 20.10.2026, last updated on 20.10.2026, valid until 19.10.2031

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	Beulco Armatur AB
Address	Gravörgatan 34, 253 60, Ramlösa, SE
Contact details	info@beulcoarmatur.se
Website	www.beulcoarmatur.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	Viktor Saltarski, Beulco Armatur AB
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Elena Antuña-Bernardo as an authorized verifier for EPD Hub

This EPD is intended for business-to-business 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	Beulco water meter bracket complete installation kit
Additional labels	-
Product reference	6111-1 range, A500-11 range, A500-15 range, 0261211000 and 0261211001
Place(s) of raw material origin	China, Germany, Italy, Sweden
Place of production	Helsingborg, Sweden
Place(s) of installation and use	Sweden
Period for data	01-01-2025 to 31-12-2025
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	+0.6% to +10.5%
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	2,04

ENVIRONMENTAL DATA SUMMARY

Declared unit	1kg installation kit
Declared unit mass	1 kg
Mass of packaging	0,042 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	8,03
GWP-total, A1-A3 ($kgCO_2e$)	8,06
Secondary material, inputs (%)	43
Total energy use, A1-A3 (kWh)	37,2
Net freshwater use, A1-A3 (m^3)	0,16

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Beulco Armatur AB are specialists in water and plumbing solutions. We have a genuine interest in and commitment to understanding our customers' needs for products that solve problems and improve efficiency. It is the combination of a broad base of standard products and prefabricated plumbing solutions that represent our greatest strength.

PRODUCT DESCRIPTION

The Beulco Water Meter Bracket Complete Installation Kit is a prefabricated assembly for the installation of water meters in potable water distribution systems. The product provides a fixed interface between the water meter and the building pipework, ensuring correct positioning, mechanical support and accessibility for inspection, maintenance and replacement. The assembly is supplied ready for installation and includes a water meter bracket together with the necessary connection components for mounting the meter.
The installation kit is available in several configurations to accommodate common water meter installation lengths, including 190 mm, adjustable 190–220 mm and 260 mm. Product variants are offered to meet different utility and installation requirements, including versions with integrated backflow protection where required by local regulations.
The product is intended for use in residential, commercial and public buildings, both in new construction and refurbishment projects. By providing a standardized installation arrangement, the kit facilitates the installation, exchange and servicing of water meters while maintaining the required installation dimensions specified by water utilities and municipalities.
The installation kit is manufactured from metallic and polymeric components selected for long-term use in potable water applications. The design enables secure fixation of the water meter and provides installation flexibility through adjustable connection arrangements. The product is developed for compatibility with commonly used water meter types and dimensions in Nordic water supply systems.
This EPD covers the 6111-1 range, the A500-11 range, the A500-15 range, as well as configurations with and without an integrated check valve in the 260mm installation length. All covered products fulfil the same intended function, comply with the same performance requirements, and share equivalent technical properties. Variations between articles are limited to size and configuration and therefore do not constitute differences in function, performance, or intended use.

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

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	95,3	EU, China
Minerals	0	-
Fossil materials	4,7	EU
Bio-based materials	0	-

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	0,0164

1 kg of biogenic carbon is equivalent to 44/12 kg of CO_2

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1kg installation kit
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

A5 is not fully declared. Waste processing (from collection through to end-of-waste or final disposal) and full energy and biogenic carbon balancing are accounted for. Storage, product wastage, and installation into the building are excluded.

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 Beulco water meter bracket complete installation kit consists of a stainless-steel water meter bracket, brass ball valves, a plastic pipe section and in some configurations a stainless-steel check valve. The components are manufactured in China, Germany, Italy and Sweden and delivered to the manufacturer's site.
Transport within Europe is assumed to be mainly carried out using Euro 6 trucks and RoRo-ferry where necessary. For components sourced from China, the main mode of transportation is sea freight by container ship, with the final leg from the port to the manufacturing site being carried out by a Euro 6 truck. Transport distances are based on data provided by transport companies and range from 26000 km to 3,2 km. Where direct data is unavailable, estimated distances from suppliers' production sites are used for modeling.
The manufacturing process at the production site consists entirely of manual assembly and packaging. Measured energy data from the site's electricity and district heating suppliers is used in the modelling. Electricity is modelled using a medium voltage residual mix for Sweden and heating as district heating according to Ecoinvent datasets. No ancillary materials are used in the assembly.
No material losses occur during the manufacturing process at the production site as all required components arrive as finished parts ready for assembly.
A cardboard box is typically used as packaging material for delivering the finished product. Packaging corresponds to approximately 0.042 kg per kg of product.

TRANSPORT AND INSTALLATION (A4-A5)

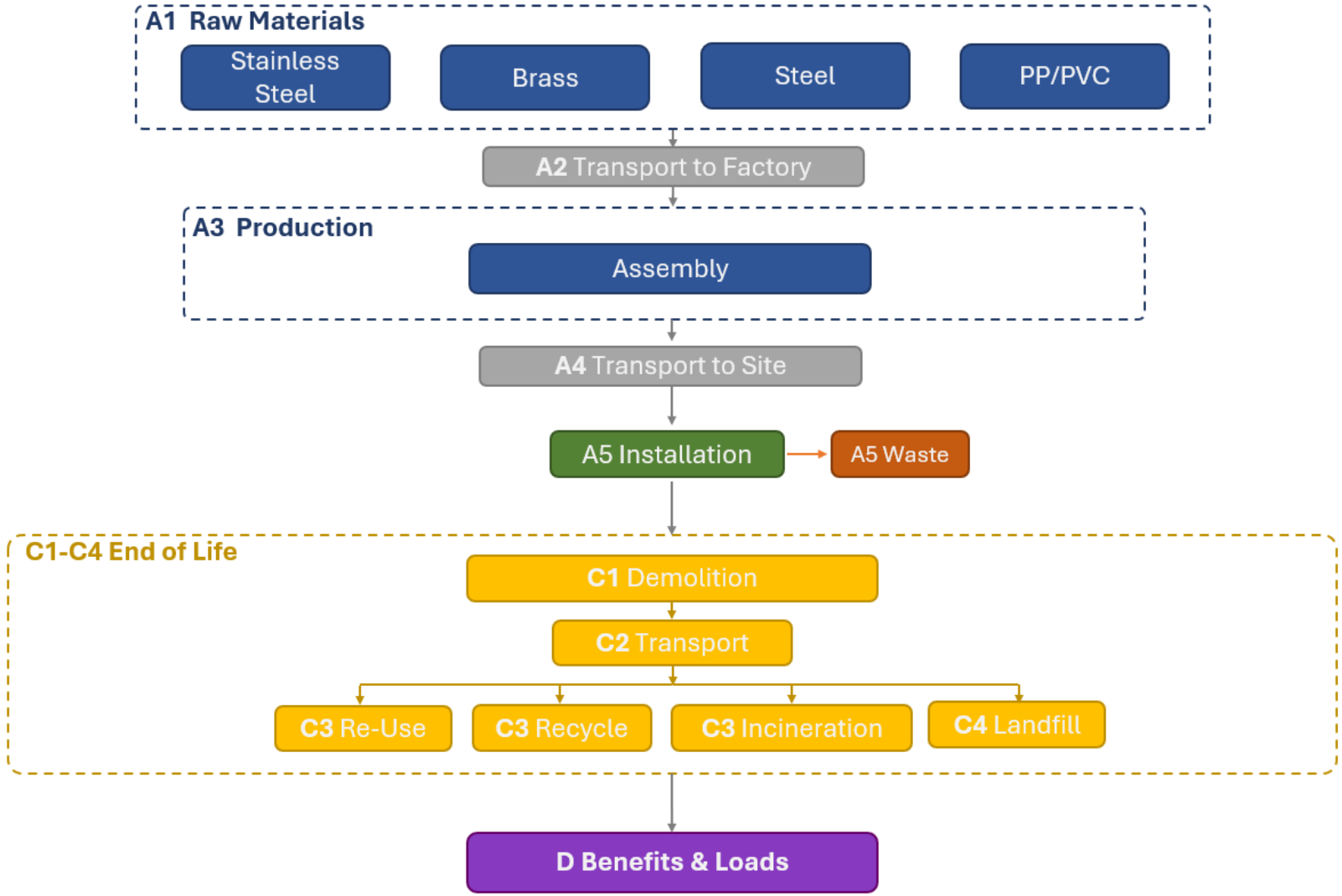
Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.
A5 is not in scope. Only packaging waste is accounted for in this module.

Average distance of transportation from production plant to customer is assumed as 455,2 km and the transportation method is assumed to be lorry. The transportation distance is defined by combining the distance to each customer's location with the number of deliveries to that location. The total transported distance per location was calculated and then used to compute a weighted average. Vehicle capacity utilization volume factor is assumed to be 1 which means full load. In reality, it may vary but as role of transportation emissions in total results is small, the variety in load is assumed to be negligible. To be conservative, empty returns are included in this study as implemented through an average load factor in the Ecoinvent transport datapoints. Transportation does not cause losses as product is packaged properly. Environmental impacts from installation into the building are limited to the generation of waste packaging materials (A5) and the release of biogenic carbon dioxide from wood pallets and cardboard boxes. The impacts related to the production, processing and end-of-life treatment of this packaging waste are included. The packaging waste is transported 50 km to the nearest waste treatment facility, where recycling rates applied are: 62% for wood packaging and 91% for cardboard packaging. The remaining fractions are sent to landfill (Eurostat). No installation losses of the product itself occur, as it is a prefabricated and fully assembled unit delivered installation-ready. Only on-site mounting is required, which does not affect the product's material flows.

PRODUCT END OF LIFE (C1-C4, D)

The product is dismantled manually at end of life, and therefore no energy use is included in C1. Valves and certain fittings may be considered for reuse after cleaning and inspection. All remaining materials are collected separately and transported to the appropriate waste treatment facilities, with 250 km assumed for recycling and 50 km for landfill (C2).
Metals, primarily stainless steel, steel, brass and aluminium, follow established recycling routes supported by worldstainless, Worldsteel, the Copper Alliance and European aluminum, while plastics follow the treatment pathways described by Plastics Europe. PTFE components are assumed to be disposed of via landfill at end of life. Materials destined for recycling are sorted and processed in C3. Recycled metal fractions are considered to have reached end-of-waste status following sorting and treatment and are subsequently available as secondary raw materials for use in new production systems.
Module C3 includes the energy and resource inputs associated with sorting, separation and treatment of material streams destined for recycling.
Module C4 includes disposal of PTFE and other non-recyclable fractions via landfill. Minor material fractions without established recycling routes are assumed to be landfilled.
Due to the material recovery potential of the end-of-life product and packaging, recycled materials contribute to avoided virgin material production and energy recovered from incineration displaces electricity and heat generation. These benefits and associated loads are reported in Module D using a conservative substitution approach based on established recycling routes.

LIFE CYCLE FLOW DIAGRAM



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.

This LCA study includes the provision of all relevant materials, transportation, energy and emission flows, and end-of-life processing of the product. The use phase is not covered, assuming no emissions or replacements occur during use. All industrial processes from raw material acquisition and pre-processing, production, product distribution and installation, and end-of-life management are included.
Based on the applied cut-off criteria for easier modelling, the following inputs and processes are excluded due to their very small contribution overall and the lack of representative data:
- Paper labels
- Rubber gaskets
The production of capital equipment, construction activities and infrastructure, maintenance and operation of capital equipment, personnel-related activities, and administrative energy and water use are excluded. No hazardous substances 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	No allocation
Manufacturing energy and waste	Physical Properties

All estimations and assumptions regarding the cut off criteria and the allocation are declared in the part "Cut-off Criteria except the estimations/assumptions below:
Proxy data is used for certain materials due to their unavailability in the database.
- Module A2, A4 & C2: Vehicle capacity utilization volume factor is assumed to be 1 which means full load. It may vary but as the role of transportation

emission in total results is small, the variety in load is assumed to be negligible. To be conservative, empty returns are included in this study as implemented through an average load factor in the Ecoinvent transport datapoints.
- Module A4: Transportation does not cause losses as products are packaged properly. Also, volume capacity utilization factor is assumed to be 1 for the nested packaged products. Additionally, transportation distances are assumed based on a particular scenario of customer's premises in Helsingborg and a lorry is the assumed vehicle type used.
- Module A5: Packaging waste is declared as installation waste.
- Module C2: Transportation distance to waste handling facility is estimated as 250 km (recycling), 150 km (incineration) and 50 km (landfill) and the transportation method is assumed as lorry.
- Module C3, C4, D: The product undergoes separate collection and a certain percentage of each material is assumed to be recycled, incinerated and landfilled. Ash from incineration processes is assumed negligible. The recycled end-of-life materials are assumed to serve as secondary raw materials in manufacturing while the materials incinerated displace electricity and heat production.

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on a representative product
Variation in GWP-fossil for A1-A3, %	+0.6% to +10.5%

This EPD covers several configurations of the same product. The selected representative product is based on the configuration that is most prevalent and accounts for the highest share of overall sales. This is then complemented by a best- and worst-case variant to reflect the complete product range and are considered fully representative of the products' environmental performance. All products are manufactured at the same site using identical processes.
The declared results and content are representative of the entire product group, as all included configurations fulfil the same function, meet identical performance requirements, and do not differ in intended use or technical properties. The modelling approach reflects the complete span of configurations to ensure that the declared results capture the realistic variation in material composition and environmental impacts within the product group.
The geographical representativeness corresponds to the single manufacturing site where all products are produced. Averaging and modelling are therefore applicable only to the production stage, where conditions are identical for all configurations. Modules influenced by geographical differences, such as transport to customer, are not averaged and are modelled separately.

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'.

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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	7,91E+00	1,15E-01	2,81E-02	8,06E+00	5,08E-02	6,44E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,06E-02	7,25E-02	3,06E-03	-2,24E+00
GWP – fossil	kg CO_2e	7,83E+00	1,15E-01	8,67E-02	8,03E+00	5,08E-02	1,36E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,06E-02	7,27E-02	3,05E-03	-2,19E+00
GWP – biogenic	kg CO_2e	7,12E-02	2,81E-05	-6,08E-02	1,05E-02	1,25E-05	6,30E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,67E-06	-2,19E-04	1,75E-07	-4,80E-02
GWP – LULUC	kg CO_2e	1,31E-02	5,33E-05	2,19E-03	1,54E-02	2,35E-05	9,43E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	9,22E-06	2,02E-05	1,07E-06	-7,39E-03
Ozone depletion pot.	kg CFC-$_{11}$e	9,89E-08	1,82E-09	3,01E-09	1,04E-07	8,05E-10	1,41E-11	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,04E-10	2,17E-10	4,99E-11	-2,06E-08
Acidification potential	mol H^+e	3,44E-01	3,61E-04	4,13E-04	3,45E-01	1,34E-04	6,84E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,03E-05	1,95E-04	1,27E-05	-1,14E-01
EP-freshwater[2)]	kg Pe	2,77E-02	1,26E-05	2,75E-05	2,78E-02	5,64E-06	3,61E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,60E-06	1,05E-05	1,63E-07	-9,61E-03
EP-marine	kg Ne	2,03E-02	9,40E-05	1,74E-04	2,06E-02	3,51E-05	7,06E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,31E-05	4,62E-05	7,55E-06	-6,58E-03
EP-terrestrial	mol Ne	2,66E-01	1,01E-03	1,49E-03	2,68E-01	3,76E-04	2,17E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,51E-04	5,08E-04	5,30E-05	-8,74E-02
POCP ("smog")[3)]	kg NMVOCe	7,64E-02	4,96E-04	3,54E-04	7,72E-02	2,02E-04	8,46E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,04E-04	1,49E-04	1,94E-05	-2,50E-02
ADP-minerals & metals[4)]	kg Sbe	4,56E-03	3,36E-07	4,17E-07	4,56E-03	1,50E-07	9,97E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,75E-08	1,10E-06	2,83E-09	-1,57E-03
ADP-fossil resources	MJ	1,02E+02	1,69E+00	6,62E+00	1,10E+02	7,51E-01	1,39E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,99E-01	2,20E-01	4,39E-02	-2,79E+01
Water use[5)]	m^3e depr.	5,07E+00	9,77E-03	9,49E-02	5,17E+00	4,37E-03	3,81E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,48E-03	5,71E-03	1,82E-03	-1,88E+00

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	9,74E-07	1,09E-08	5,59E-09	9,91E-07	4,88E-09	2,88E-10	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,06E-09	2,61E-09	2,91E-10	-3,11E-07
Ionizing radiation[6)]	kBq U235e	9,37E-01	1,40E-03	4,24E-01	1,36E+00	6,28E-04	4,18E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,60E-04	1,81E-03	2,80E-05	-2,19E-01
Ecotoxicity (freshwater)	CTUe	4,72E+02	3,43E-01	4,95E-01	4,73E+02	1,54E-01	5,24E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,23E-02	1,01E+00	2,10E+01	-1,09E+03
Human toxicity, cancer	CTUh	3,94E-08	1,83E-11	3,21E-11	3,95E-08	8,05E-12	2,04E-12	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,40E-12	1,61E-11	3,87E-13	-1,26E-08
Human tox. non-cancer	CTUh	3,51E-06	1,04E-09	9,62E-10	3,52E-06	4,64E-10	9,42E-11	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,94E-10	1,03E-09	2,40E-11	-1,18E-06
SQP[7)]	-	1,26E+02	1,66E+00	4,12E+00	1,32E+02	7,49E-01	1,05E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,01E-01	4,12E-01	8,72E-02	-4,38E+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	2,40E+01	2,33E-02	1,09E+00	2,51E+01	1,04E-02	-6,67E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,10E-03	3,89E-02	4,38E-04	-8,40E+00
Renew. PER as material	MJ	0,00E+00	0,00E+00	5,38E-01	5,38E-01	0,00E+00	-5,38E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,85E-01
Total use of renew. PER	MJ	2,40E+01	2,33E-02	1,62E+00	2,57E+01	1,04E-02	-1,21E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,10E-03	3,89E-02	4,38E-04	-7,92E+00
Non-re. PER as energy	MJ	1,00E+02	1,69E+00	6,64E+00	1,09E+02	7,51E-01	1,39E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,99E-01	-1,02E+00	-4,04E-01	-2,80E+01
Non-re. PER as material	MJ	1,39E+00	0,00E+00	1,76E-03	1,39E+00	0,00E+00	-1,76E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-1,01E+00	-3,75E-01	3,24E-01
Total use of non-re. PER	MJ	1,02E+02	1,69E+00	6,64E+00	1,10E+02	7,51E-01	1,21E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,99E-01	-2,03E+00	-7,80E-01	-2,77E+01
Secondary materials	kg	4,30E-01	7,08E-04	4,17E-02	4,72E-01	3,14E-04	2,26E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,27E-04	2,96E-04	1,13E-05	3,73E-01
Renew. secondary fuels	MJ	3,13E-03	9,13E-06	3,90E-03	7,04E-03	4,10E-06	1,32E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,62E-06	1,22E-05	2,33E-07	-9,51E-04
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	1,59E-01	2,44E-04	2,69E-03	1,62E-01	1,09E-04	-8,36E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,42E-05	1,07E-04	-9,43E-06	-5,53E-02

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	9,04E+01	1,06E-02	7,04E-03	9,04E+01	4,78E-03	2,37E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,07E-04	1,95E-03	5,45E-05	-1,06E+00
Non-hazardous waste	kg	1,23E+02	2,10E-01	1,06E-01	1,24E+02	9,46E-02	1,65E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	9,37E-03	7,95E-02	6,46E-02	-3,80E+01
Radioactive waste	kg	2,41E-04	3,36E-07	9,34E-05	3,35E-04	1,50E-07	1,02E-08	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,37E-08	4,63E-07	6,84E-09	-5,68E-05

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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,49E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	6,98E-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	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
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,64E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	2,63E-01	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	6,72E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	1,11E-01	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	9,66E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	1,52E-01	0,00E+00	0,00E+00

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	7,84E+00	1,15E-01	8,89E-02	8,04E+00	5,08E-02	1,36E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,06E-02	7,27E-02	3,06E-03	-2,20E+00

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. District heat, Helsinborg, Sweden, 2023, Sweden, One Click LCA, 0.0199 kgCO2e/kWh
2. Electricity, medium voltage, residual mix, Sweden, Ecoinvent, 0.0512 kgCO2e/kWh
3. Electricity voltage transformation, residual mix, from high to medium voltage, Sweden, Ecoinvent, 0.11 kgCO2e/kWh

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry, >32 metric ton, diesel, EURO 6, 455.2 km

Transport to the building site (A4) - Scenario documentation

Scenario parameter	Value
Capacity utilization (including empty return) %	50
Bulk density of transported products	868
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)	-
Ancillary materials: type and mass (kg)	-
Waste materials: type and mass (kg)	0,042kg of cardboard.
Waste materials: output routes	Cardboard, 0,034kg recycling, 0,0033kg incineration, 0,0037kg landfill.
Direct emissions (kg)	-

End of life (C1-C4) - Scenario documentation

Scenario information	Value
Collection process: collected separately (kg)	-
Collection process: Mixed waste (kg)	1kg
Recovery: re-use (kg)	0
Recovery: recycling (kg)	0,7
Recovery: energy recovery (kg)	0
Disposal (kg)	0
Scenario assumptions e.g. transportation (mode, km) & other	Transported 250 km (recycling), 150 km (incineration) and 50 km (landfill) by lorry

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

Elena Antuña-Bernardo as an authorized verifier for EPD Hub Limited
20.10.2026

