



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Symotic Fasteners

Symotic Oy



EPD HUB, HUB-5849

Published on 26.03.2026, last updated on 26.03.2026, valid until 25.03.2031

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	Symotic Oy
Address	Koivistontie 421140 Rymättylä, Finland
Contact details	sales@symotic.com
Website	www.symotic.com

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 17662 Execution of steel structures and aluminium structures
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	
Scope of the EPD	Cradle to gate with options, A5, and modules C1-C4, D
EPD author	Akseli Romppainen, LCA Point
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 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	Symotic Fasteners
Place(s) of raw material origin	IN
Place of production	Rymättylä, Finland
Place(s) of installation and use	EU
Period for data	Calendar Year 2024
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	-
A1-A3 Specific data (%)	97,9

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg
Declared unit mass	1 kg
Mass of packaging	0,053 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	3,58
GWP-total, A1-A3 (kgCO ₂ e)	3,46
Secondary material, inputs (%)	10,9
Secondary material, outputs (%)	95
Total energy use, A1-A3 (kWh)	3,3
Net freshwater use, A1-A3 (m ³)	27,2

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Symotic Oy is a Finnish wire products manufacturer and importer established in 1999. We design, manufacture and assemble wire products and complete packages. Because wire products have several different uses our customers come from many different industries. Our factory is located near Turku in Rymättylä.

PRODUCT DESCRIPTION

Symotic fasteners for masonry and plastering

Symotic Oy manufactures high-quality wall ties for the concrete element industry and for stationary construction. Our comprehensive range of wall ties can be found in various building solutions.

The fasteners considered in this EPD are suitable for several different applications and vary in shape and size. There is no significant difference in their emissions per 1 kg, due to similar processes and raw material input.

CE marked wall ties

According to the Act that entered in 2013, the construction fasteners should be CE-marked. The purpose of the law is to harmonize practices and to increase the quality of construction. All our masonry fastenings are CE-marked, and their use is approved throughout the EU.

Plaster Brackets

We manufacture high quality plaster mesh brackets for the concrete element industry and for renovation. Most of our masonry and plastering brackets are made of stainless or acid-resistant stainless-steel wire.

Tailored bracket meets your requirements

With our customers, we have developed new fixing solutions for stationary and element manufacturing. Taking into account the customer's needs, we are able to implement and manufacture the right solution to the desired destination.

Further information can be found at: www.symotic.com

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	100	IN
Minerals	-	-
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	0,01

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	MND	x	MND	MND	MND	MND	MND	MND	MND	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

Modules not declared = MND. Modules not relevant = MNR

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.

Raw materials for the steel products are delivered to the production facility in the form of steel coils. The raw material consists primarily of AISI 304 and AISI 316 stainless steels, selected according to the intended application. Both grades undergo identical cutting and bending processes.

Transport of steel coils to the production site occurs by road using a >32-tonne truck and by container ship for overseas transport.

At the production facility, sections intended for fasteners are cut from the coils and mechanically formed into the required shape. Cutting operations generate steel scrap, which is sent for metal recycling. Additional waste arises from incoming packaging materials; these are directed to energy recovery.

The production process uses electricity certified with a Guarantee of Origin. Finished products are packed in cardboard boxes, placed on wooden pallets, and wrapped in packaging film containing 50% recycled plastic. The use of green energy in manufacturing is demonstrated through contractual instruments (GOs, RECs), and its use is ensured throughout the validity period of this EPD.

TRANSPORT AND INSTALLATION (A4-A5)

The impacts of transportation in module A4 have been left unassessed because the product may be delivered to numerous different locations depending on the situation, and it has not been possible to determine a representative average.

The fasteners are installed using hand tools, whose electricity consumption has been taken into account in the LCA model. The end-of-life treatment of the packaging materials has been modelled using the average EU scenario.

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.

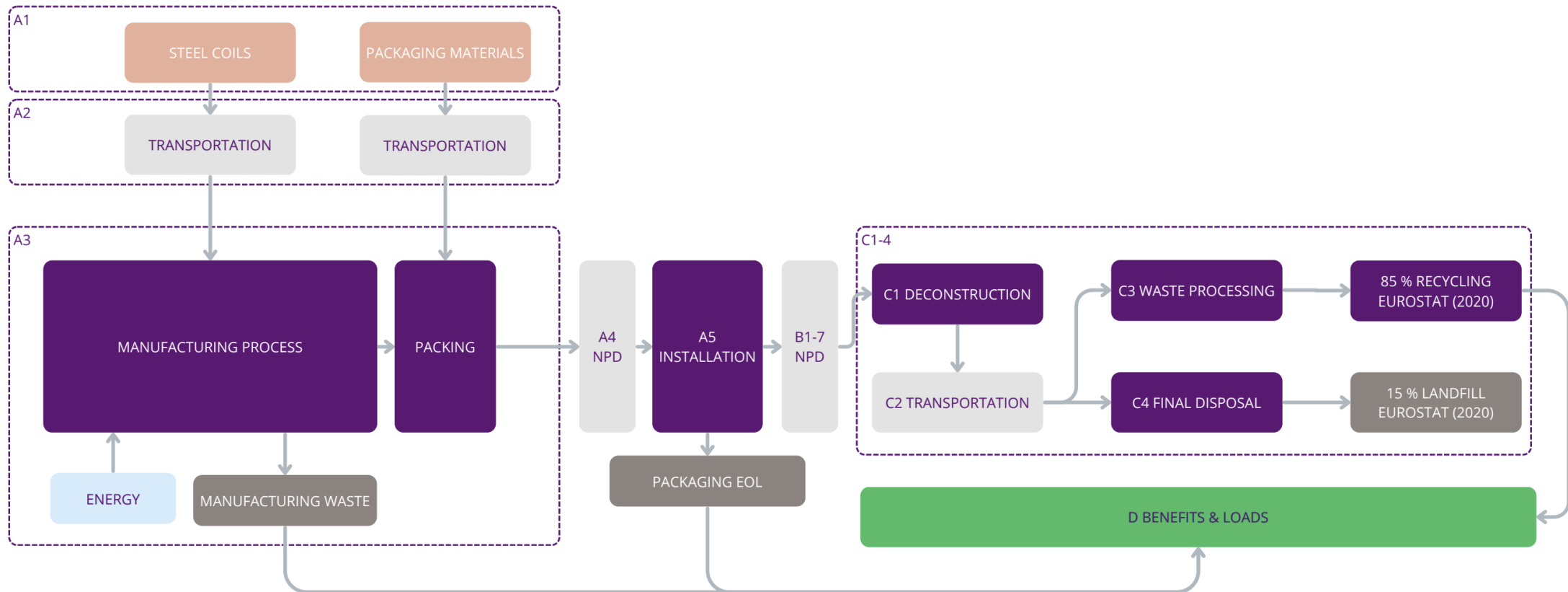
PRODUCT END OF LIFE (C1-C4, D)

At the end of the life cycle, the metal products are assumed to be separable from demolition waste and recyclable into new steel products, thereby substituting primary steel production. A European-wide end-of-life recycling rate of 85% (EUROSTAT) has been assumed. The recycled content of the raw material has been considered when calculating benefits beyond the system boundary (Module D).

The energy consumption for dismantling has been estimated according to Bozdağ, Ö & Seçer, M. 2007. A transport distance of 150 km to the recycling facility has been assumed, with a truck type of 16–32 tonnes.

Module D accounts for benefits and loads beyond the system boundary, considering impacts from stages C3, A3, and A5.

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 System Verification v3.2.3. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044, EPD Hub Core PCR Version 1.2, 24 Mar 2025 and EN 17662 Execution of steel structures and aluminium structures. The EPD Generator uses Ecoinvent v3.10.1/3.11 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11 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 ₂ e	3,02E+00	8,68E-02	4,39E-01	3,55E+00	ND	1,30E-01	ND	ND	ND	ND	ND	ND	ND	3,61E-03	4,30E-02	1,92E-02	9,37E-04	-1,27E+00
GWP – fossil	kg CO ₂ e	3,02E+00	8,68E-02	5,30E-01	3,64E+00	ND	3,79E-02	ND	ND	ND	ND	ND	ND	ND	3,60E-03	4,30E-02	1,92E-02	9,36E-04	-1,23E+00
GWP – biogenic	kg CO ₂ e	0,00E+00	1,75E-09	-9,19E-02	-9,19E-02	ND	9,21E-02	ND	ND	ND	ND	ND	ND	ND	3,68E-07	9,38E-06	-4,08E-05	-2,98E-07	-4,20E-02
GWP – LULUC	kg CO ₂ e	2,50E-03	4,55E-05	1,34E-03	3,89E-03	ND	9,99E-05	ND	ND	ND	ND	ND	ND	ND	3,69E-07	1,90E-05	2,37E-05	5,35E-07	2,55E-06
Ozone depletion pot.	kg CFC ₋₁₁ e	1,52E-08	1,26E-09	7,37E-09	2,38E-08	ND	6,92E-10	ND	ND	ND	ND	ND	ND	ND	5,52E-11	6,01E-10	2,58E-10	2,71E-11	-3,93E-09
Acidification potential	mol H ⁺ e	3,67E-02	2,20E-03	2,36E-03	4,13E-02	ND	2,03E-04	ND	ND	ND	ND	ND	ND	ND	3,25E-05	1,43E-04	2,29E-04	6,64E-06	-4,99E-03
EP-freshwater ²⁾	kg Pe	7,61E-04	3,32E-06	1,81E-04	9,45E-04	ND	3,22E-05	ND	ND	ND	ND	ND	ND	ND	1,04E-07	3,34E-06	1,24E-05	7,70E-08	-9,10E-04
EP-marine	kg Ne	3,59E-03	5,51E-04	9,12E-04	5,05E-03	ND	4,28E-05	ND	ND	ND	ND	ND	ND	ND	1,51E-05	4,64E-05	5,06E-05	2,53E-06	-1,13E-03
EP-terrestrial	mol Ne	3,76E-02	6,12E-03	9,14E-03	5,29E-02	ND	3,10E-04	ND	ND	ND	ND	ND	ND	ND	1,65E-04	5,05E-04	5,72E-04	2,76E-05	-1,23E-02
POCP (“smog”) ³⁾	kg NMVOCe	1,22E-02	1,68E-03	2,68E-03	1,65E-02	ND	1,05E-04	ND	ND	ND	ND	ND	ND	ND	4,93E-05	1,99E-04	1,69E-04	9,90E-06	-4,16E-03
ADP-minerals & metals ⁴⁾	kg Sbe	6,52E-05	1,10E-07	5,46E-07	6,59E-05	ND	4,65E-07	ND	ND	ND	ND	ND	ND	ND	1,29E-09	1,41E-07	1,36E-06	1,49E-09	-1,35E-05
ADP-fossil resources	MJ	3,31E+01	1,09E+00	6,74E+00	4,10E+01	ND	8,20E-01	ND	ND	ND	ND	ND	ND	ND	4,72E-02	6,03E-01	2,58E-01	2,30E-02	-1,12E+01
Water use ⁵⁾	m ³ e depr.	7,99E+02	3,46E-03	6,78E-02	7,99E+02	ND	2,21E-02	ND	ND	ND	ND	ND	ND	ND	1,18E-04	2,80E-03	4,64E-03	6,63E-05	-2,56E-01

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

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

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	3,61E-07	3,44E-09	4,03E-08	4,05E-07	ND	9,80E-10	ND	ND	ND	ND	ND	ND	ND	9,25E-10	3,41E-09	3,10E-09	1,51E-10	-9,11E-08
Ionizing radiation ⁶⁾	kBq 11235e	7,51E-02	5,87E-04	6,27E-02	1,38E-01	ND	2,14E-02	ND	ND	ND	ND	ND	ND	ND	2,09E-05	4,88E-04	2,19E-03	1,44E-05	5,07E-02
Ecotoxicity (freshwater)	CTUe	3,63E+02	9,35E-02	9,57E+00	3,73E+02	ND	1,10E+00	ND	ND	ND	ND	ND	ND	ND	2,60E-03	9,53E-02	1,50E-01	1,93E-03	-5,67E+01
Human toxicity, cancer	CTUh	5,51E-09	1,78E-11	1,20E-10	5,65E-09	ND	1,14E-11	ND	ND	ND	ND	ND	ND	ND	3,71E-13	7,31E-12	1,72E-11	1,73E-13	-1,81E-10
Human tox. non-cancer	CTUh	3,43E-07	3,42E-10	2,46E-09	3,46E-07	ND	6,20E-10	ND	ND	ND	ND	ND	ND	ND	5,87E-12	3,77E-10	1,17E-09	3,97E-12	-8,34E-09
SQP ⁷⁾	-	8,23E+00	2,52E-01	6,29E+00	1,48E+01	ND	1,86E-01	ND	ND	ND	ND	ND	ND	ND	3,30E-03	3,60E-01	5,02E-01	4,52E-02	-6,99E+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	5,66E+00	9,64E-03	-3,62E-01	5,31E+00	ND	-6,05E-01	ND	ND	ND	ND	ND	ND	ND	2,99E-04	8,27E-03	4,81E-02	2,22E-04	-1,46E+00
Renew. PER as material	MJ	0,00E+00	0,00E+00	8,54E-01	8,54E-01	ND	-8,54E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,94E-02
Total use of renew. PER	MJ	5,66E+00	9,64E-03	4,92E-01	6,16E+00	ND	-1,46E+00	ND	ND	ND	ND	ND	ND	ND	2,99E-04	8,27E-03	4,81E-02	2,22E-04	-1,37E+00
Non-re. PER as energy	MJ	3,31E+01	1,09E+00	6,22E+00	4,05E+01	ND	8,13E-01	ND	ND	ND	ND	ND	ND	ND	4,72E-02	6,03E-01	2,58E-01	2,30E-02	-1,12E+01
Non-re. PER as material	MJ	0,00E+00	0,00E+00	4,76E-02	4,76E-02	ND	-4,76E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-03
Total use of non-re. PER	MJ	3,31E+01	1,09E+00	6,27E+00	4,05E+01	ND	7,65E-01	ND	ND	ND	ND	ND	ND	ND	4,72E-02	6,03E-01	2,58E-01	2,30E-02	-1,12E+01
Secondary materials	kg	1,09E-01	5,11E-04	3,26E-02	1,42E-01	ND	1,63E-04	ND	ND	ND	ND	ND	ND	ND	1,96E-05	2,71E-04	3,15E-04	5,78E-06	7,14E-01
Renew. secondary fuels	MJ	2,17E-03	1,95E-06	1,87E-02	2,09E-02	ND	1,39E-06	ND	ND	ND	ND	ND	ND	ND	5,12E-08	3,45E-06	1,46E-05	1,20E-07	-1,11E-04
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	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	2,72E+01	8,93E-05	1,59E-03	2,72E+01	ND	4,65E-04	ND	ND	ND	ND	ND	ND	ND	3,12E-06	7,99E-05	1,37E-04	2,39E-05	-3,92E-03

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	2,72E-03	1,51E-03	3,83E-02	4,25E-02	ND	2,13E-03	ND	ND	ND	ND	ND	ND	ND	5,25E-05	1,05E-03	1,69E-03	2,54E-05	-4,09E-01
Non-hazardous waste	kg	2,72E-03	2,21E-02	2,71E+00	2,73E+00	ND	2,06E-01	ND	ND	ND	ND	ND	ND	ND	7,15E-04	1,97E-02	6,09E-02	5,80E-04	-4,94E+00
Radioactive waste	kg	1,11E+00	1,43E-07	1,48E-05	1,11E+00	ND	5,49E-06	ND	ND	ND	ND	ND	ND	ND	5,12E-09	1,20E-07	5,60E-07	3,52E-09	1,30E-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	ND	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	1,71E+00	1,71E+00	ND	3,23E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	8,50E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	7,92E-02	7,92E-02	ND	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	ND	4,88E-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	ND	2,03E-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 – Heat	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	2,85E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	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 ₂ e	3,02E+00	8,68E-02	5,31E-01	3,64E+00	ND	3,80E-02	ND	ND	ND	ND	ND	ND	ND	3,61E-03	4,30E-02	1,92E-02	9,37E-04	-1,23E+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

Scenario parameter	Value
Electricity data source and quality	No GOs available for electricity Modelled with <i>Electricity, medium voltage, residual mix, Finland, Ecoinvent</i>
Electricity CO2e / kWh	0,71
District heating data source and quality	-
District heating CO2e / kWh	-

Installation scenario documentation A5

Scenario information	Value
Ancillary materials for installation (specified by material) / kg or other units as appropriate	-
Water use / m ³	-

Other resource use / kg	0
Quantitative description of energy type (regional mix) and consumption during the installation process / kWh or MJ	Electrical hand tools, 0.1 kWh/ DU, EU market average, low voltage
Waste materials on the building site before waste processing, generated by the product's installation (specified by type) / kg	- Wood: 0,0226 kg - Plastic: 0,0001795 kg - Cardboard: 0,0301 kg
Output materials (specified by type) as result of waste processing at the building site e.g. collection for recycling, for energy recovery, disposal (specified by route) / kg	- Cardboard for recycling, 0.025 kg - Cardboard for incineration with energy recovery, 0.0024 kg - Cardboard landfill, 0.0027 kg - Wood chipped for recycling: 0.0072 kg - Wood incineration with energy recovery: 0.0068 kg - Wood landfill: 0.0086 kg - PE recycling: 7.2E-5 kg - PE incineration with energy recovery: 6.6E-5 kg - PE landfill: 4.1E-5 kg - Hazardous disposed: 0
Direct emissions to ambient air, soil and water / kg	0

End of life scenario documentation

Scenario information	Value
Collection process – kg collected separately	1
Collection process – kg collected with mixed waste	0
Recovery process – kg for re-use	0
Recovery process – kg for recycling	0,85
Recovery process – kg for energy recovery	0
Disposal (total) – kg for final deposition	0,15
Scenario assumptions e.g. transportation	150 km truck transportation to 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 acting for EPD Hub Limited
26.03.2026

