



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Tulvari Kannakointilevy
Tulvari Oy



EPD HUB, HUB-7749

Published on 08.10.2026, last updated on 08.10.2026, valid until 07.10.2031

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

tulvari

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Tulvari Oy
Address	Mäntäkuja 4, 90440 Kempele, Finland
Contact details	asiakaspalvelu@tulvari.fi
Website	www.tulvari.fi

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	Ossi Karhumaa, Vastos
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 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	Tulvari Kannakointilevy
Additional labels	
Product reference	2410000600
Place(s) of raw material origin	Finland, Belgium, Taiwan, Italy
Place of production	Finland, Kempele
Place(s) of installation and use	Finland
Period for data	Calendar year 2025
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	-
GTIN (Global Trade Item Number)	6429810838124
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	18,3

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg
Declared unit mass	1 kg
Mass of packaging	0,21 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	2,51
GWP-total, A1-A3 (kgCO ₂ e)	2,2
Secondary material, inputs (%)	89,8
Total energy use, A1-A3 (kWh)	3,76
Net freshwater use, A1-A3 (m ³)	0,03

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Tulvari Oy is a Finnish manufacturer specializing in moisture-safe HVAC distribution solutions and underfloor heating manifold cabinets. Tulvari Oy's product range includes recessed and surface-mounted manifold cabinets, mounting systems, and accessories designed to ensure safe, durable and moisture-controlled installations. The products are engineered to support heating systems and comply with building regulations. More detailed information about the company and its products can be found at the company's website: www.tulvari.fi

PRODUCT DESCRIPTION

Tulvari support bracket is designed for organising the pipe support of HVAC and electrical cables inside cabinets. It provides a reliable and neat way to support pipes, hoses and cables through cabinet structures, keeping the installation tidy and professional. The bracket is adjustable to fit the cabinet width from 300mm to 800mm, making it suitable for a wide range of cabinet types without the need for separate customisation. Multiple pipe clips can be attached side by side on a single bracket, allowing simultaneous support of water, drain and electrical wires at the same level. The product is manufactured from recycled plastic, reducing the environmental impact of the product.

Further information can be found at: www.tulvari.fi

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	8	Taiwan
Minerals	0	
Fossil materials	92	Finland, Belgium, Italy
Bio-based materials	0	

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0,09

1 kg of biogenic carbon is equivalent to 44/12 kg of CO₂

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg
Mass per declared unit	1 kg
Functional unit	
Reference service life	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	ND	ND	ND	ND	ND	ND	ND	x	x	x	x	x	Recycling	Recovery
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse		

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 product is assembled at the company's production facility in Finland. Primary raw material is post-consumer recycled polypropylene (PP). The products are injection moulded into the plastic components at a subcontractors facility and subsequently transported to the assembly facility. Additional materials include stainless steel for fastening of the final product, polyethylene foam tape for fastening and polyamide components for pipes, hoses and cables. The products are individually packed in an LDPE bags. A batch of 10 products is then placed in a corrugated cardboard box. The cardboard boxes are consolidated on EUR-pallets together with other products and dispatched in larger quantities to customers.

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.

Installation consists of manual fitting into the cabinet — electricity consumption during installation is assumed to be 0,01 kWh per kg of the product (Source Bozdağ, Ö & Seçer, M. 2007). The electricity mix is based on the medium-voltage market group dataset.

Transport from manufacturing facility to distribution centre is freight by >32 ton EURO 6 and are calculated from calendar year 2025 as a weighted average as 511km. Delivery distance from distribution centre to end customer is assumed to be 50km by freight, light commercial vehicle, fleet average. Value based on commonly applied default data in construction product in the absence of product-specific data.

PRODUCT USE AND MAINTENANCE (B1-B7)

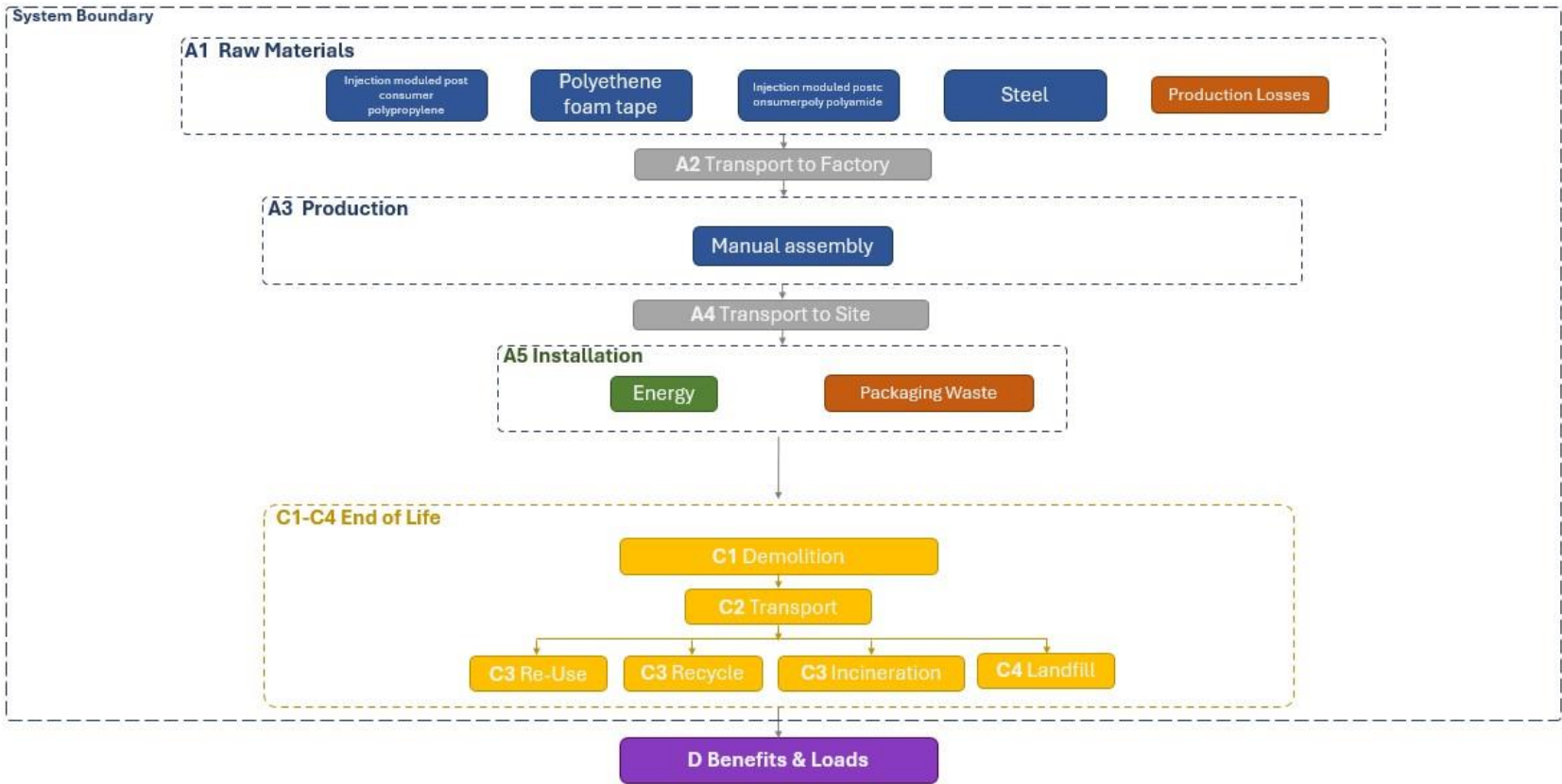
This stage is not included in the scope

PRODUCT END OF LIFE (C1-C4, D)

At end of life, the product is removed manually during renovation or demolition (C1), electricity consumption during demolition is assumed to be 0,01 kWh per kg of the product (Source Bozdağ, Ö & Seçer, M. 2007). Transport to waste treatment facility assumed to be by truck (C2). All materials are directed to waste processing (C3) or waste disposal (C4) based on default scenarios. Waste treatment fractions are following: PP: Recycling 23%, Incineration 50% & Landfill 27% Plastic: Recycling 0%, Incineration 75% & Landfill 25% Steel: Recycling 85%, Incineration 0% & Landfill 15%

In module D benefits are declared for materials recovery.

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.

Adhesive tape used for sealing corrugated cardboard packaging boxes has been excluded from the system boundary. The mass of the tape is below 1% of the total mass of packaging materials per declared unit and does not exceed the 5% cumulative cut-off threshold defined in EN 15804+A2. The exclusion is therefore consistent with the cut-off criteria of the applied reference standard.

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	No allocation

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	-

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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'.

Bozdağ, Ö & Seçer, M. 2007

Nylon granulate compound, 1420 kg/m³, PA6 G35 OPE NAT NEVIECO

(Settef)

Polyethylene foam edge strip with adhesive tape for vertical sound insulation at screed layers in prefabricated buildings, 0.16 kg/m², 23 kg/m³, GERA Edge Strip Type TSK (Gera-TDZ ApS)

ENVIRONMENTAL IMPACT DATA

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	2,06E+00	5,12E-02	9,24E-02	2,20E+00	6,92E-02	4,36E-01	ND	ND	ND	ND	ND	ND	ND	4,99E-03	1,69E-02	1,23E+00	8,25E-02	-1,85E-01
GWP – fossil	kg CO ₂ e	2,05E+00	5,12E-02	4,13E-01	2,51E+00	6,92E-02	8,70E-02	ND	ND	ND	ND	ND	ND	ND	4,98E-03	1,69E-02	1,23E+00	8,25E-02	-1,78E-01
GWP – biogenic	kg CO ₂ e	5,26E-03	2,20E-05	-3,34E-01	-3,29E-01	3,71E-05	3,49E-01	ND	ND	ND	ND	ND	ND	ND	1,48E-05	1,05E-05	-1,67E-05	-9,65E-06	-6,85E-03
GWP – LULUC	kg CO ₂ e	2,51E-03	1,86E-05	1,28E-02	1,53E-02	2,52E-05	7,26E-06	ND	ND	ND	ND	ND	ND	ND	1,60E-06	2,19E-05	2,34E-05	2,25E-06	-7,29E-05
Ozone depletion pot.	kg CFC-11e	4,83E-08	1,21E-09	1,16E-08	6,11E-08	1,63E-09	2,00E-10	ND	ND	ND	ND	ND	ND	ND	8,09E-11	2,56E-10	2,89E-10	9,01E-11	-2,90E-09
Acidification potential	mol H ⁺ e	9,54E-03	1,21E-04	1,91E-03	1,16E-02	1,63E-04	6,57E-05	ND	ND	ND	ND	ND	ND	ND	1,68E-05	5,72E-05	2,32E-04	3,24E-05	-7,23E-04
EP-freshwater ²⁾	kg Pe	8,84E-04	3,78E-06	1,71E-04	1,06E-03	5,11E-06	5,50E-06	ND	ND	ND	ND	ND	ND	ND	2,51E-06	1,32E-06	6,06E-06	4,72E-07	-1,03E-04
EP-marine	kg Ne	2,01E-03	3,35E-05	6,79E-04	2,72E-03	4,52E-05	7,00E-05	ND	ND	ND	ND	ND	ND	ND	3,76E-06	1,89E-05	1,17E-04	1,13E-04	-1,46E-04
EP-terrestrial	mol Ne	2,07E-02	3,61E-04	5,68E-03	2,67E-02	4,88E-04	2,34E-04	ND	ND	ND	ND	ND	ND	ND	3,82E-05	2,05E-04	1,03E-03	1,41E-04	-1,56E-03
POCP (“smog”) ³⁾	kg NMVOCe	7,48E-03	2,13E-04	1,74E-03	9,43E-03	2,88E-04	7,14E-05	ND	ND	ND	ND	ND	ND	ND	1,05E-05	8,36E-05	2,67E-04	5,02E-05	-6,78E-04
ADP-minerals & metals ⁴⁾	kg Sbe	1,51E-05	1,54E-07	1,89E-06	1,71E-05	2,08E-07	9,25E-08	ND	ND	ND	ND	ND	ND	ND	4,31E-08	4,90E-08	2,59E-07	9,97E-09	-1,45E-06
ADP-fossil resources	MJ	3,14E+01	7,72E-01	7,79E+00	4,00E+01	1,04E+00	1,89E-01	ND	ND	ND	ND	ND	ND	ND	9,72E-02	2,43E-01	2,44E-01	7,30E-02	-2,89E+00
Water use ⁵⁾	m ³ e depr.	1,55E+01	4,45E-03	3,74E-01	1,58E+01	6,01E-03	5,94E-03	ND	ND	ND	ND	ND	ND	ND	9,94E-04	1,20E-03	3,98E-02	4,07E-03	-4,44E-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	1,10E-07	5,08E-09	1,60E-08	1,31E-07	6,86E-09	6,90E-10	ND	ND	ND	ND	ND	ND	ND	8,65E-11	1,63E-09	1,90E-09	5,19E-10	-9,66E-09
Ionizing radiation ⁶⁾	kBq 11235e	1,44E-01	8,31E-04	4,76E-02	1,93E-01	1,12E-03	3,31E-03	ND	ND	ND	ND	ND	ND	ND	2,90E-03	2,09E-04	1,16E-03	7,83E-05	-7,67E-03
Ecotoxicity (freshwater)	CTUe	1,25E+01	1,04E-01	1,47E+01	2,73E+01	1,41E-01	2,43E-01	ND	ND	ND	ND	ND	ND	ND	1,12E-02	3,64E-02	5,71E-01	2,96E-01	-5,63E+00
Human toxicity, cancer	CTUh	6,88E-10	8,17E-12	5,14E-10	1,21E-09	1,10E-11	1,12E-11	ND	ND	ND	ND	ND	ND	ND	9,46E-13	2,82E-12	5,74E-11	6,03E-12	-1,93E-11
Human tox. non-cancer	CTUh	1,78E-08	4,78E-10	8,35E-09	2,66E-08	6,46E-10	5,08E-10	ND	ND	ND	ND	ND	ND	ND	5,32E-11	1,57E-10	2,21E-09	4,43E-10	-1,13E-09
SQP ⁷⁾	-	1,33E+01	7,80E-01	9,47E+00	2,36E+01	1,05E+00	1,03E-01	ND	ND	ND	ND	ND	ND	ND	2,36E-02	2,28E-01	2,57E-01	1,49E-01	-5,86E-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	4,31E+00	1,20E-02	1,38E+00	5,70E+00	1,62E-02	-2,33E+00	ND	ND	ND	ND	ND	ND	ND	8,67E-03	3,38E-03	2,01E-02	1,38E-03	-1,79E-01
Renew. PER as material	MJ	6,88E-02	0,00E+00	1,69E+00	1,76E+00	0,00E+00	-1,69E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	-6,88E-02	5,00E-02
Total use of renew. PER	MJ	4,38E+00	1,20E-02	3,07E+00	7,46E+00	1,62E-02	-4,02E+00	ND	ND	ND	ND	ND	ND	ND	8,67E-03	3,38E-03	2,01E-02	-6,74E-02	-1,29E-01
Non-re. PER as energy	MJ	1,33E+00	7,72E-01	5,70E+00	7,80E+00	1,04E+00	-2,07E+00	ND	ND	ND	ND	ND	ND	ND	9,72E-02	2,44E-01	-2,56E+01	-1,03E+01	-2,89E+00
Non-re. PER as material	MJ	3,00E+01	0,00E+00	2,14E+00	3,22E+01	0,00E+00	-2,14E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-6,45E+00	-2,36E+01	8,52E-01
Total use of non-re. PER	MJ	3,14E+01	7,72E-01	7,84E+00	4,00E+01	1,04E+00	-4,21E+00	ND	ND	ND	ND	ND	ND	ND	9,72E-02	2,44E-01	-3,20E+01	-3,39E+01	-2,03E+00
Secondary materials	kg	8,98E-01	3,27E-04	1,20E-01	1,02E+00	4,42E-04	1,76E-04	ND	ND	ND	ND	ND	ND	ND	1,19E-05	1,05E-04	8,62E-04	3,19E-05	8,66E-02
Renew. secondary fuels	MJ	2,56E-02	4,33E-06	1,80E-02	4,36E-02	5,85E-06	1,37E-06	ND	ND	ND	ND	ND	ND	ND	1,01E-07	1,33E-06	7,70E-06	7,31E-07	2,67E-06
Non-ren. secondary fuels	MJ	3,65E-03	0,00E+00	0,00E+00	3,65E-03	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	1,70E-02	1,02E-04	9,40E-03	2,65E-02	1,38E-04	-1,22E-05	ND	ND	ND	ND	ND	ND	ND	2,42E-05	3,59E-05	3,98E-04	-8,49E-04	-8,50E-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	1,82E+00	4,36E-03	3,31E-02	1,86E+00	5,89E-03	4,74E-03	ND	ND	ND	ND	ND	ND	ND	1,52E-03	4,44E-04	1,27E-02	9,35E-04	-3,90E-02
Non-hazardous waste	kg	3,69E+00	9,06E-02	1,57E+00	5,35E+00	1,22E-01	2,46E-01	ND	ND	ND	ND	ND	ND	ND	1,29E-02	8,30E-03	5,53E-01	1,20E+00	-9,43E-01
Radioactive waste	kg	4,10E-05	2,00E-07	1,17E-05	5,29E-05	2,71E-07	7,68E-07	ND	ND	ND	ND	ND	ND	ND	6,64E-07	5,12E-08	2,96E-07	1,93E-08	-1,96E-06

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	9,56E-04	0,00E+00	0,00E+00	9,56E-04	0,00E+00	1,23E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	2,59E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	4,28E-09	0,00E+00	0,00E+00	4,28E-09	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	1,91E-04	0,00E+00	0,00E+00	1,91E-04	0,00E+00	3,62E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	5,67E+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	1,52E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	2,39E+00	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	2,10E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	3,29E+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	2,05E+00	5,12E-02	4,26E-01	2,53E+00	6,92E-02	8,70E-02	ND	ND	ND	ND	ND	ND	ND	4,98E-03	1,69E-02	1,23E+00	8,25E-02	-1,78E-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. Electricity, medium voltage, residual mix, Finland, Ecoinvent, 0.71 kgCO₂e/kWh

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry, >32 metric ton, diesel, EURO 6, 561.0 km

Transport to the building site (A4) - Scenario documentation

Scenario parameter	Value
Capacity utilization (including empty return) %	85
Bulk density of transported products	151
Volume capacity utilization factor	<1

Installation at the building site (A5) - Scenario documentation

Scenario parameter	Value
Energy: type and consumption (MJ or kWh)	0,01 kWh / kg Electricity, medium voltage, residual mix. Manual installation, source : Bozdağ, Ö & Seçer, M. 2007
Water use (m ³)	-
Ancillary materials: type and mass (kg)	-
Waste materials: type and mass (kg)	Wood 0,01kg Plastic 0,05kg Cardboard 0,12kg
Waste materials: output routes	Wood: Recycling 0,0032kg, Incineration 0,003kg & Landfill 0,0038kg Plastic: Recycling 0,02kg, Incineration 0,018kg & Landfill 0,011kg Cardboard: Recycling 0,1kg, Incineration 0,0096kg & Landfill 0,0108kg
Direct emissions (kg)	-

End of life (C1-C4) - Scenario documentation

Scenario information	Value
Collection process: collected separately (kg)	-
Collection process: Mixed waste (kg)	1
Recovery: re-use (kg)	0
Recovery: recycling (kg)	0,26
Recovery: energy recovery (kg)	0
Disposal (kg)	0,74
Scenario assumptions e.g. transportation (mode, km) & other	Transport distances for end-of-life waste collection: PP: Recycling 250km, Incineration 150km & Landfill 50km Plastic: Recycling 0km, Incineration 50km & Landfill 50km Steel: Recycling 250km, Incineration 0km & Landfill 50km

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 08.10.2026

