

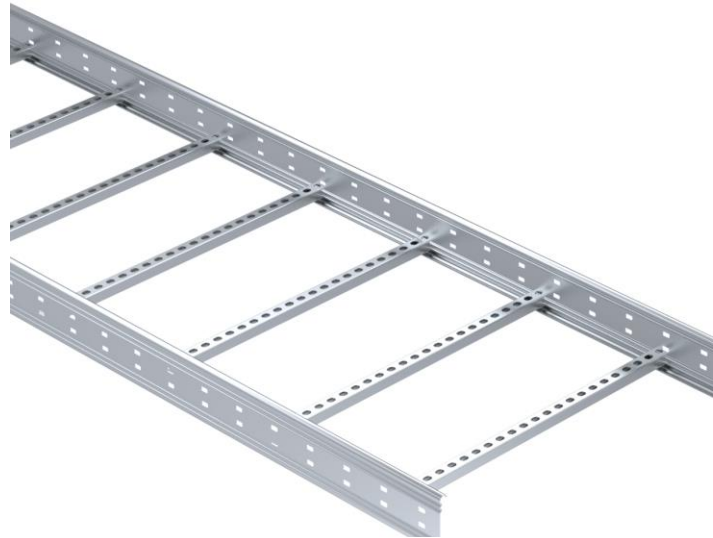


ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Cable support and solar systems with HST steel

Meka Pro Oy



EPD HUB, HUB-6679

Published on 18.06.2026, last updated on 18.06.2026, valid until 17.06.2031

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	Meka Pro Oy
Address	Konetie 25, 90620 Oulu, Finland
Contact details	quality@meka.eu
Website	www.meka.eu

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
Scope of the EPD	Cradle to gate with options, A4-A5, C1-C4, D
EPD author	Oskari Ylimaula, Meka Pro Oy
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☒ External verification
EPD verifier	Haiha Nguyen as an authorized verifier for EPD Hub

This EPD is intended for business-to-business and/or business-to-consumer communication. The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs

of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	Cable support and solar systems with HST steel
Place(s) of raw material origin	Finland
Place of production	Oulu, Finland
Place(s) of installation and use	Finland
Period for data	1.1.2024 - 31.12.2024
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	0
A1-A3 Specific data (%)	99,5

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg of of HST steel product
Declared unit mass	1 kg
Mass of packaging	1 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	2,2
GWP-total, A1-A3 (kgCO ₂ e)	2,21
Secondary material, inputs (%)	0
Secondary material, outputs (%)	95
Total energy use, A1-A3 (kWh)	2,37
Net freshwater use, A1-A3 (m ³)	0,2

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Meka Pro Oy is a Finnish family-owned business, which manufactures long life cycle cable management systems. The company has nine sales offices and a certified testing laboratory. It directly employs around 100 professionals. Meka now has employees in 6 countries and Meka has already delivered its products to its partners and customers in more than 80 countries. Fulfilling customer needs has always been a matter of honour for Meka. We keep, what we promise. This applies to both our products and our operations.

PRODUCT DESCRIPTION

Acid-proof stainless steel products (HST) are made of acid-proof steel according to standard EN 10088. Products are intended to use in atmospheric-corrosivity category C1–CX.

Further information can be found at <https://www.meka.eu>.

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www.meka.eu

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	100	Finland
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	0
Biogenic carbon content in packaging, kg C	0,0098

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg of Cable Support Product made of HST steel
Mass per declared unit	1 kg
Functional unit	-
Reference service life	25 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		
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.

Final products consist of HST steel purchased in coils and sheets. Distance between Meka Pro manufacturing unit and each supplier has been calculated with truck freight. Manufacturing consist of several different stages like rollforming, cutting, punching and resistance welding of steel.

During manufacturing 2% of scrap is considered. Used electricity and central heating is measured and calculated per kg of final product. Packaging is done with plastic binding tape and wooden pallets. Steel bolts and fasteners are included in the model.

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.

Average distance of transportation is based on actual delivery data from the freight supplier. 0,01kWh of electricity use is estimated for assembly of 1kg of HDG product. Packaging material waste is considered 95% recycled and 5% landfill.

PRODUCT USE AND MAINTENANCE (B1-B7)

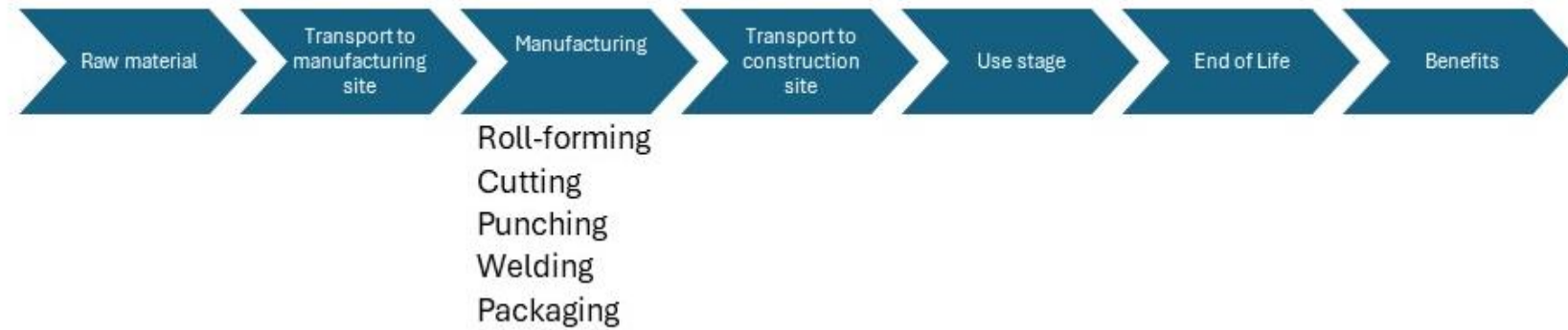
This EPD does not cover the use phase.

Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

Disassembling is assumed to consume 0,01 kWh/kg of product. Small hand drill has been considered same as mounting of the product. Transportation distance to treatment is assumed as 50 km and the transportation method is assumed to be lorry (C2). Approximately 95% of steel is assumed to be recycled based on World Steel Association, 2020 (C3). It is assumed that the remaining 5 % of steel is taken to landfill for final disposal (C4). Due to the recycling process, the end-of-life product is converted into recycled steel, while the wooden pallet is incinerated for energy recovery (D).

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	Allocated by mass or volume
Packaging material	Allocated by mass or volume
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on a representative product
Variation in GWP-fossil for A1-A3, %	0

This EPD represents products that are produced with same raw material and same plant so no variation can be seen. Final products varies in shape and weight but are all made with same raw materials and similar process.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification v3.2.3. 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 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	1,90E+00	1,66E-01	1,37E-01	2,21E+00	6,08E-02	3,79E-02	ND	ND	ND	ND	ND	ND	ND	1,55E-03	5,39E-03	2,15E-02	3,12E-04	-1,56E+00
GWP – fossil	kg CO ₂ e	1,87E+00	1,66E-01	1,65E-01	2,20E+00	6,07E-02	1,95E-03	ND	ND	ND	ND	ND	ND	ND	1,51E-03	5,38E-03	2,15E-02	3,12E-04	-1,56E+00
GWP – biogenic	kg CO ₂ e	3,46E-02	3,73E-05	-2,74E-02	7,22E-03	1,38E-05	3,59E-02	ND	ND	ND	ND	ND	ND	ND	5,54E-06	1,22E-06	-4,56E-05	-9,93E-08	0,00E+00
GWP – LULUC	kg CO ₂ e	1,54E-03	7,43E-05	5,17E-05	1,66E-03	2,72E-05	2,96E-05	ND	ND	ND	ND	ND	ND	ND	2,94E-05	2,41E-06	2,65E-05	1,78E-07	-2,11E-04
Ozone depletion pot.	kg CFC ₋₁₁ e	2,27E-05	2,45E-09	2,82E-09	2,27E-05	8,97E-10	3,20E-11	ND	ND	ND	ND	ND	ND	ND	2,92E-11	7,95E-11	2,89E-10	9,04E-12	-5,24E-09
Acidification potential	mol H ⁺ e	5,90E-03	5,66E-04	6,42E-04	7,11E-03	2,07E-04	8,69E-06	ND	ND	ND	ND	ND	ND	ND	7,83E-06	1,84E-05	2,55E-04	2,21E-06	-6,17E-03
EP-freshwater ²⁾	kg Pe	5,77E-04	1,29E-05	7,33E-05	6,63E-04	4,73E-06	6,16E-07	ND	ND	ND	ND	ND	ND	ND	5,84E-07	4,19E-07	1,38E-05	2,57E-08	-6,67E-04
EP-marine	kg Ne	1,22E-03	1,86E-04	1,52E-04	1,56E-03	6,80E-05	1,94E-06	ND	ND	ND	ND	ND	ND	ND	1,37E-06	6,03E-06	5,66E-05	8,44E-07	-1,37E-03
EP-terrestrial	mol Ne	1,34E-02	2,02E-03	1,75E-03	1,72E-02	7,40E-04	1,76E-05	ND	ND	ND	ND	ND	ND	ND	1,47E-05	6,56E-05	6,39E-04	9,21E-06	-1,51E-02
POCP (“smog”) ³⁾	kg NMVOce	4,49E-03	8,35E-04	4,84E-04	5,81E-03	3,05E-04	5,48E-06	ND	ND	ND	ND	ND	ND	ND	4,37E-06	2,70E-05	1,89E-04	3,30E-06	-5,13E-03
ADP-minerals & metals ⁴⁾	kg Sbe	4,07E-05	4,63E-07	2,55E-07	4,14E-05	1,69E-07	4,16E-08	ND	ND	ND	ND	ND	ND	ND	4,05E-08	1,50E-08	1,52E-06	4,96E-10	-1,51E-05
ADP-fossil resources	MJ	1,55E+01	2,41E+00	2,37E+00	2,03E+01	8,81E-01	6,97E-02	ND	ND	ND	ND	ND	ND	ND	6,69E-02	7,81E-02	2,88E-01	7,66E-03	-1,42E+01
Water use ⁵⁾	m ³ e depr.	7,49E-01	1,19E-02	3,16E-02	7,92E-01	4,35E-03	1,89E-03	ND	ND	ND	ND	ND	ND	ND	1,85E-03	3,86E-04	5,18E-03	2,21E-05	-2,62E-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.

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	1,65E-01	3,30E-02	3,12E-01	5,10E-01	1,21E-02	2,40E-02	ND	ND	ND	ND	ND	ND	ND	2,39E-02	1,07E-03	5,37E-02	7,39E-05	-1,19E+00
Renew. PER as material	MJ	0,00E+00	0,00E+00	3,14E-01	3,14E-01	0,00E+00	-3,14E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	1,65E-01	3,30E-02	6,28E-01	8,24E-01	1,21E-02	-2,90E-01	ND	ND	ND	ND	ND	ND	ND	2,39E-02	1,07E-03	5,37E-02	7,39E-05	-1,19E+00
Non-re. PER as energy	MJ	3,33E+00	2,41E+00	2,27E+00	8,00E+00	8,81E-01	-1,26E-02	ND	ND	ND	ND	ND	ND	ND	6,69E-02	7,81E-02	2,88E-01	7,66E-03	-1,42E+01
Non-re. PER as material	MJ	0,00E+00	0,00E+00	1,06E-01	1,06E-01	0,00E+00	-7,44E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of non-re. PER	MJ	3,33E+00	2,41E+00	2,37E+00	8,11E+00	8,81E-01	-8,69E-02	ND	ND	ND	ND	ND	ND	ND	6,69E-02	7,81E-02	2,88E-01	7,66E-03	-1,42E+01
Secondary materials	kg	0,00E+00	1,03E-03	1,46E-03	2,48E-03	3,75E-04	1,52E-05	ND	ND	ND	ND	ND	ND	ND	1,02E-05	3,32E-05	3,52E-04	1,93E-06	8,55E-01
Renew. secondary fuels	MJ	0,00E+00	1,30E-05	1,07E-02	1,07E-02	4,77E-06	8,37E-08	ND	ND	ND	ND	ND	ND	ND	3,90E-08	4,22E-07	1,63E-05	3,99E-08	-1,07E-02
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	2,02E-01	3,56E-04	5,77E-04	2,03E-01	1,30E-04	5,64E-05	ND	ND	ND	ND	ND	ND	ND	5,86E-05	1,15E-05	1,53E-04	7,97E-06	-3,49E-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	3,47E-01	4,08E-03	1,41E-02	3,66E-01	1,49E-03	1,19E-04	ND	ND	ND	ND	ND	ND	ND	1,03E-04	1,32E-04	1,88E-03	8,46E-06	-5,13E-01
Non-hazardous waste	kg	3,63E-01	7,56E-02	4,34E-01	8,72E-01	2,76E-02	7,37E-03	ND	ND	ND	ND	ND	ND	ND	2,94E-03	2,45E-03	6,80E-02	1,93E-04	-4,00E+00
Radioactive waste	kg	5,11E-05	5,14E-07	6,52E-06	5,81E-05	1,88E-07	8,23E-07	ND	ND	ND	ND	ND	ND	ND	8,21E-07	1,67E-08	6,26E-07	1,17E-09	1,50E-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	2,40E-02	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	3,94E-04	0,00E+00	2,00E-02	2,04E-02	0,00E+00	1,20E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	9,50E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	6,86E-08	0,00E+00	0,00E+00	6,86E-08	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	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 – Electricity	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
Exported energy – Heat	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

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	1,87E+00	1,66E-01	1,67E-01	2,20E+00	6,08E-02	1,98E-03	ND	ND	ND	ND	ND	ND	ND	1,54E-03	5,38E-03	2,15E-02	3,12E-04	-1,56E+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	Electricity, medium voltage, residual mix (Reference product: electricity, medium voltage)
Electricity CO2e / kWh	0.71
District heating data source and quality	District heat, Finland, 2022 (One Click LCA)
District heating CO2e / kWh	0,0934

Transport scenario documentation A4

Scenario parameter	Value
Fuel type, consumption, and vehicle type. Eg, electric truck, diesel powered truck	Diesel powered truck
Average transport distance, km	550

Capacity utilization (including empty return) %	75
Bulk density of transported products	2000
Volume capacity utilization factor	<1

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	-
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	PE: 0.002 kg Wood: 0.024 kg
Output materials (specified by type) as result of waste processing at the building	PE for recycling 95 %

site e.g. collection for recycling, for energy recovery, disposal (specified by route) / kg	PE for landfill 5 % Wood for recycling (EUR Pallets) 100 %
Direct emissions to ambient air, soil and water / kg	-

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	0.95
Recovery process – kg for energy recovery	0
Disposal (total) – kg for final deposition	0,05
Scenario assumptions e.g. transportation	Truck 50 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

Haiha Nguyen as an authorized verifier for EPD Hub Limited 18.06.2026

