ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Steel rainwater system
Vesivek Tuotteet Oy

EPD HUB, HUB-4400
Published on 07.11.2025, last updated on 07.11.2025, valid until 06.11.2030

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	Vesivek Tuotteet Oy
Address	Teollisuustie 8, 16300, Orimattila, FI
Contact details	jukka.viljamaa@vesivek.fi
Website	www.vesivek.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	Jukka Viljamaa Vesivek Tuotteet Oy
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Vera Durão, as an authorised 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	Steel rainwater system
Additional labels	-
Product reference	-
Place(s) of raw material origin	EU
Place of production	Finland
Place(s) of installation and use	EU
Period for data	1.2.2024-31.1.2025
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	<1
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	94,8

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg
Declared unit mass	1 kg
Mass of packaging	0,014 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	2,8
GWP-total, A1-A3 ($kgCO_2e$)	2,7
Secondary material, inputs (%)	2,72
Secondary material, outputs (%)	81
Total energy use, A1-A3 (kWh)	11,7
Net freshwater use, A1-A3 (m^3)	0,01

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Vesivek Tuotteet is Finland’s leading manufacturer of rainwater systems and roof safety products.

Vesivek Tuotteet is part of the Vesivek Group. The product range of Vesivek Tuotteet includes solutions for the needs of residential, commercial, and industrial construction. The product categories of Vesivek Tuotteet include rainwater systems, roof safety products, balcony rainwater systems, solar panel mounting brackets, and industrial penetrations. More detailed information about the company and its products can be found on the company’s website: www.vesivek.fi

PRODUCT DESCRIPTION

Vesivek's rainwater system efficiently directs roof runoff away from the building to protect its structural integrity. It is custom-manufactured on-site to match the dimensions of the eaves, minimizing the risk of leaks. External brackets facilitate cleaning and are engineered to withstand Nordic snow loads. The system features a durable finish with powder coating and Nova/Nova-coated galvanized steel, ensuring reliable performance in demanding weather conditions.

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

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	-0,46194

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	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

Modules not declared = ND. 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.

Vesivek's rainwater systems are produced at the Orimattila factory, where gutters and downpipes are manufactured. Patented brackets are used for fastening, meeting heavy-duty durability standards (SFS-EN 612). Pop rivets with stainless steel mandrels are the primary fastening method 1. Packaging uses recyclable materials such as plastic and wood. Packaging solutions protect components during transport and storage. Vesivek sources materials from domestic and European suppliers to ensure quality and responsibility.

A1: Raw materials come from specific factories and mostly from direct transport. Transport distances are so ca 100 km for each raw material.

A3: Production loss is ca 3%

A3 Energy: Factory use nuclear power produce energy and liquefied petroleum gas for heating

A3: waste scenario: metals and cardboard are recycled; plastic and order solid waste are incinerated to energy. Hazardous waste is incinerated to energy. Transport distance is assumed to be 67 km to waste sorting.

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.

Finished products are mainly transported by truck and, if necessary, by ferry. Transport to buildings (A4) has been calculated using a weighted average. Installation (A5) is carried out using battery-powered tools, enabling fast and clean fastening. Connections are made with screws or pop rivets, and fastening points are protected from the inside of the system when necessary. Waste scenarios of packaging material are based on Eurostat data. Plastic 40% is recycled, 37% is incinerated and 23% is landfilled. Cardboard 83% is recycled 8% is recycled and 9% is landfilled. Wooden pallets: 32% is recycled 30% is incinerated and 38% is landfilled. Transport distance to landfill is 50 km, to incineration 150 km and to recycling 250 km

PRODUCT USE AND MAINTENANCE (B1-B7)

The use phase (B) has been excluded from this EPD because Vesivek rainwater system products require minimal maintenance during their lifecycle. No emissions to air, water, or soil have been observed during the use phase in this case.

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

PRODUCT END OF LIFE (C1-C4, D)

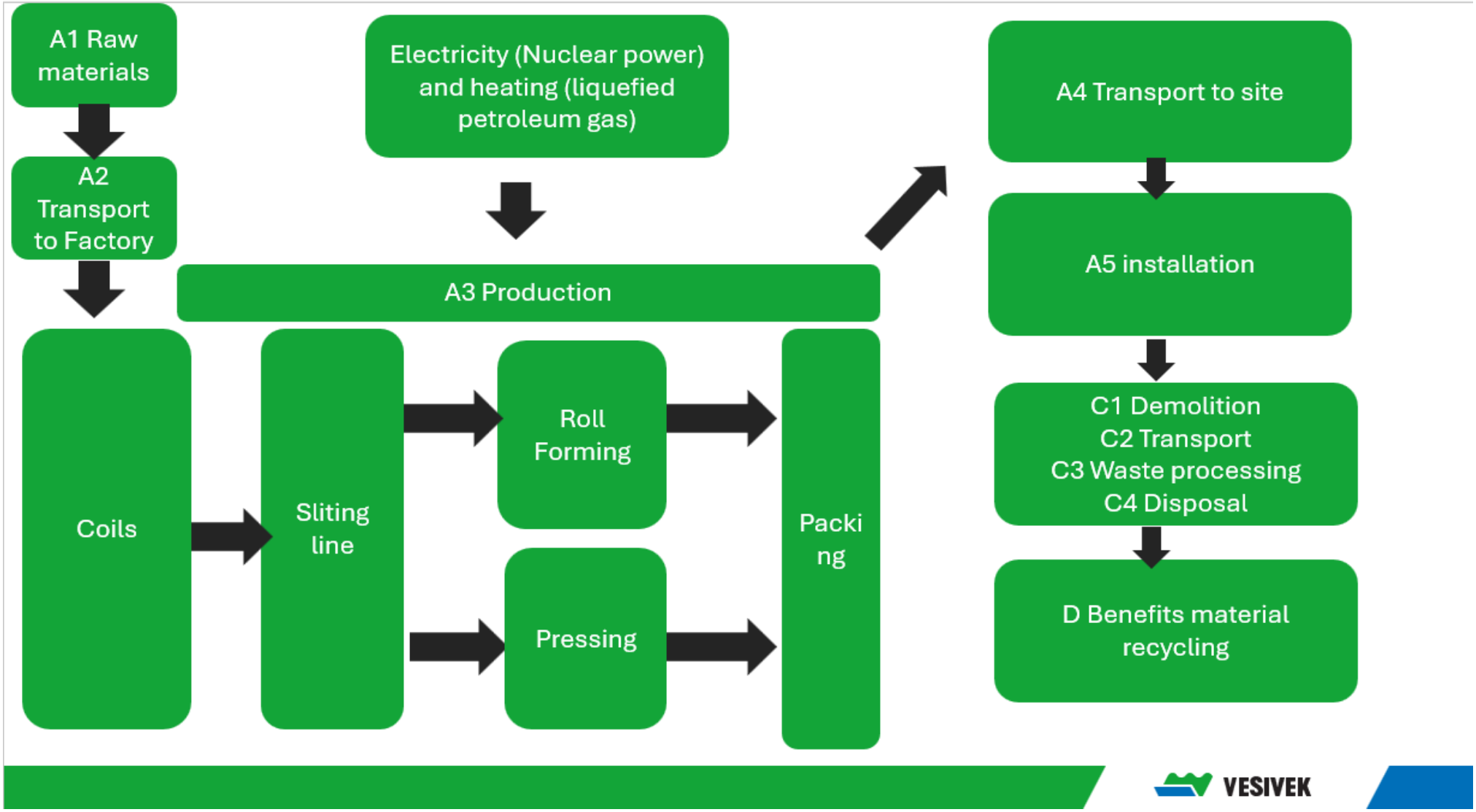
C1: Decommissioning is mainly done by hand tools or battery powered machines.

C2: It is estimated that the products are transported to a waste treatment facility to sort different materials. The assumed transport distance is 50 km by EURO 5 emission truck.

C3-C4. The materials of roof safety products are mostly recyclable. In this scenario:
Steel construction: 85% is recycled and 15% is landfilled.
Stainless steel: 95% is recycled and 5% is landfilled.

D. Benefits and burdens are declared for steel recycling and avoidance of raw material

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	Partly allocated by mass or volume
Packaging material	Allocated by mass or volume
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	No allocation

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on average results of product group - by total mass
Variation in GWP-fossil for A1-A3, %	<1

Raw materials do not differ in the system; the proportions of the components may vary

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. 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‘.

Specific EPD's from suppliers are used and those are third party verified and compliant with EN15804+A2 requirements. In other stages there is used generic data sets.

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	2,72E+00	1,06E-02	-3,43E-02	2,70E+00	1,45E-01	2,30E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,10E-02	1,83E-02	8,74E-04	-1,30E+00
GWP – fossil	kg CO_2e	2,72E+00	1,06E-02	6,81E-02	2,80E+00	1,45E-01	1,22E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,09E-02	1,83E-02	8,74E-04	-1,30E+00
GWP – biogenic	kg CO_2e	1,09E-03	2,36E-06	-1,03E-01	-1,02E-01	2,26E-05	1,08E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,94E-06	-3,89E-05	-2,78E-07	-5,62E-04
GWP – LULUC	kg CO_2e	1,05E-03	4,73E-06	6,17E-04	1,67E-03	6,97E-05	7,42E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,81E-05	2,26E-05	5,00E-07	-2,11E-03
Ozone depletion pot.	kg $CFC\text{-}_{11}$e	3,78E-09	1,56E-10	1,42E-09	5,36E-09	2,09E-09	3,52E-10	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,72E-10	2,46E-10	2,53E-11	-4,74E-09
Acidification potential	mol H^+e	1,44E-02	3,72E-05	3,26E-04	1,48E-02	3,71E-03	7,65E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,36E-04	2,18E-04	6,20E-06	-6,33E-03
EP-freshwater[2)]	kg Pe	5,56E-05	8,21E-07	2,18E-05	7,81E-05	5,23E-06	4,58E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,18E-06	1,18E-05	7,19E-08	-6,31E-04
EP-marine	kg Ne	2,08E-03	1,21E-05	1,10E-04	2,20E-03	9,43E-04	1,43E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,42E-05	4,82E-05	2,36E-06	-1,20E-03
EP-terrestrial	mol Ne	5,10E-02	1,32E-04	9,02E-04	5,20E-02	1,05E-02	2,58E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,81E-04	5,45E-04	2,58E-05	-1,32E-02
POCP ("smog")[3)]	kg NMVOCe	5,69E-03	5,39E-05	3,65E-04	6,11E-03	2,86E-03	3,85E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,90E-04	1,62E-04	9,24E-06	-4,47E-03
ADP-minerals & metals[4)]	kg Sbe	1,86E-04	2,94E-08	4,14E-07	1,86E-04	1,70E-07	7,52E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,34E-07	1,30E-06	1,39E-09	-8,94E-05
ADP-fossil resources	MJ	3,37E+01	1,53E-01	5,63E+00	3,95E+01	1,82E+00	1,70E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,74E-01	2,46E-01	2,14E-02	-1,19E+01
Water use[5)]	m^3e depr.	2,94E-01	7,56E-04	7,25E-02	3,68E-01	5,45E-03	1,60E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,66E-03	4,42E-03	6,19E-05	-3,75E-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	7,04E-08	1,06E-09	6,11E-09	7,75E-08	5,76E-09	3,73E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,25E-09	2,96E-09	1,41E-10	-8,56E-08
Ionizing radiation[6)]	kBq U235e	1,35E-02	1,33E-04	3,59E-01	3,73E-01	8,87E-04	1,51E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,65E-04	2,08E-03	1,35E-05	4,68E-02
Ecotoxicity (freshwater)	CTUe	6,68E+00	2,17E-02	4,50E-01	7,15E+00	1,52E-01	3,23E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	9,08E-02	1,43E-01	1,80E-03	-2,40E+01
Human toxicity, cancer	CTUh	2,07E-10	1,75E-12	1,39E-10	3,48E-10	2,89E-11	1,72E-11	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,96E-12	1,63E-11	1,61E-13	-7,38E-10
Human tox. non-cancer	CTUh	4,84E-09	9,91E-11	7,07E-10	5,65E-09	5,62E-10	3,76E-10	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,59E-10	1,11E-09	3,70E-12	-2,37E-08
SQP[7)]	-	3,41E-01	1,54E-01	1,24E+01	1,29E+01	4,35E-01	5,89E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,43E-01	4,78E-01	4,22E-02	-3,98E+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	2,36E+00	2,10E-03	6,95E-01	3,05E+00	1,47E-02	-9,49E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,87E-03	4,58E-02	2,07E-04	-1,44E+00
Renew. PER as material	MJ	0,00E+00	0,00E+00	9,45E-01	9,45E-01	0,00E+00	-9,45E-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	2,36E+00	2,10E-03	1,64E+00	4,00E+00	1,47E-02	-1,89E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,87E-03	4,58E-02	2,07E-04	-1,44E+00
Non-re. PER as energy	MJ	3,37E+01	1,53E-01	5,23E+00	3,91E+01	1,82E+00	1,68E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,74E-01	2,46E-01	2,15E-02	-1,19E+01
Non-re. PER as material	MJ	0,00E+00	0,00E+00	5,62E-02	5,62E-02	0,00E+00	-5,62E-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	3,37E+01	1,53E-01	5,29E+00	3,92E+01	1,82E+00	1,63E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,74E-01	2,46E-01	2,15E-02	-1,19E+01
Secondary materials	kg	2,72E-02	6,53E-05	1,50E-02	4,23E-02	7,91E-04	1,77E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,58E-04	3,00E-04	5,39E-06	7,43E-01
Renew. secondary fuels	MJ	4,88E-05	8,27E-07	2,25E-02	2,26E-02	3,17E-06	9,03E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,28E-06	1,39E-05	1,12E-07	-1,04E-04
Non-ren. secondary fuels	MJ	1,88E-05	0,00E+00	0,00E+00	1,88E-05	0,00E+00	7,53E-07	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	4,03E-03	2,26E-05	1,70E-03	5,75E-03	1,43E-04	1,64E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,61E-05	1,30E-04	2,23E-05	-6,53E-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	6,90E-02	2,60E-04	6,13E-03	7,54E-02	2,37E-03	3,44E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,00E-03	1,61E-03	2,37E-05	-4,06E-01
Non-hazardous waste	kg	2,67E-01	4,80E-03	2,35E-01	5,07E-01	3,46E-02	1,66E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,88E-02	5,80E-02	5,42E-04	-3,38E+00
Radioactive waste	kg	1,09E-03	3,26E-08	7,63E-05	1,17E-03	2,16E-07	4,68E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,14E-07	5,34E-07	3,29E-09	1,20E-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	5,10E-05	0,00E+00	0,00E+00	5,10E-05	0,00E+00	2,04E-06	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	2,80E-04	0,00E+00	3,65E-02	3,67E-02	0,00E+00	3,10E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	8,10E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	2,42E-06	0,00E+00	0,00E+00	2,42E-06	0,00E+00	9,66E-08	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	4,37E-05	0,00E+00	0,00E+00	4,37E-05	0,00E+00	1,02E-01	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	4,30E-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	0,00E+00	5,88E-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_2e	2,72E+00	1,06E-02	6,87E-02	2,80E+00	1,45E-01	1,22E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,09E-02	1,83E-02	8,75E-04	-1,30E+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. Electricity production, nuclear, boiling water reactor, Finland, Ecoinvent, 0.0077 kgCO2e/kWh
2. Electricity production, nuclear, boiling water reactor, Finland, Ecoinvent, 0.0077 kgCO2e/kWh
3. Liquified petroleum gas, World, One Click LCA
4. Liquified petroleum gas, World, One Click LCA
5. Liquified petroleum gas, World, One Click LCA

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry >32 metric ton, EURO5, 200 km
2. Market for transport, freight, sea, ferry, 1000 km

Transport scenario documentation A4

Scenario parameter	Value
Capacity utilization (including empty return) %	100
Bulk density of transported products	0,00E+00
Volume capacity utilization factor	<1

Installation scenario documentation - A5 (Installation waste)

1. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 2.7E-5 kg
2. Treatment of waste polyethylene, municipal incineration, Ecoinvent, 2.5E-5 kg
3. Exported Energy: Electricity, Ecoinvent, 1.7E-4 MJ
4. Exported Energy: Electricity, Ecoinvent, 0.0018 MJ
5. Exported Energy: Electricity, Ecoinvent, 0.041 MJ
6. Exported Energy: Thermal, Ecoinvent, 2.3E-4 MJ
7. Exported Energy: Thermal, Ecoinvent, 0.0026 MJ
8. Exported Energy: Thermal, Ecoinvent, 0.056 MJ
9. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 1.5E-5 kg
10. Treatment of waste paperboard, unsorted, sorting, Ecoinvent, Materials for recycling, 0.0095 kg
11. Treatment of waste packaging paper, municipal incineration, Ecoinvent, 9.1E-4 kg
12. Treatment of waste packaging paper, sanitary landfill, Ecoinvent, 0.001 kg
13. Treatment of waste wood, post-consumer, sorting and shredding, Ecoinvent, Materials for recycling, 0.02 kg
14. Treatment of waste wood, untreated, municipal incineration, Ecoinvent, 0.018 kg
15. Treatment of waste wood, untreated, sanitary landfill, Ecoinvent, 0.023 kg
16. Sorting and pressing of iron scrap, Ecoinvent, 0.04 kg

Use stages scenario documentation - B2 Maintenance

Scenario information	Value
Maintenance process / Description or source where description can be found	n/a
Maintenance cycle / Number per RSL or year *(Not applicable if only B2 is declared)*	n/a

Use stages scenario documentation - B3 Repair

Scenario information	Value
Repair process / Description or source where description can be found	n/a
Inspection Process / Description or source where description can be found	n/a
Repair cycle / Number per RSL or year	n/a

Use stages scenario documentation - B4 Replacement

Scenario information	Value
Replacement cycle / Number per RSL or year	n/a

Use stages scenario documentation - B5 Refurbishment

Scenario information	Value
Refurbishment process / Description or source where description can be found	n/a
Refurbishment cycle / Number per RSL or year	n/a
Further assumptions for scenario development, e.g., frequency and time period of use, number of occupants / Units as appropriate	n/a

Use stages scenario documentation - B6-B7 Use of energy and use of water

Scenario information	Value
Ancillary materials specified by material / kg or units as appropriate	n/a
Characteristic performance, e.g., energy efficiency, emissions, variation of performance with capacity utilization, etc.	n/a
Further assumptions for scenario development, e.g., frequency and period of use, number of occupants	n/a

End-of-Life scenario documentation - C1-C4 (Data source)

1. Sorting and pressing of iron scrap, Ecoinvent, Materials for recycling, 0.81 kg
2. Sorting and pressing of iron scrap, Ecoinvent, Materials for recycling, 2.7E-4 kg
3. Treatment of scrap steel, inert material landfill, Ecoinvent, 0.14 kg
4. Treatment of scrap steel, inert material landfill, Ecoinvent, 1.4E-5 kg
5. Treatment of waste emulsion paint, hazardous waste incineration, Ecoinvent, 5.1E-4 kg

Scenario information	Value
Scenario assumptions e.g. transportation	Transport to landfill 50 km, to recycling 250 and incineration to energy 150

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 15802+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

Vera Durão, as an authorised verifier acting for EPD Hub Limited

07.11.2025

ANNEX 1.

GUTTERS WEIGHT/M

Product	kg/m	GWP total kg CO2e/m	GWP fossil kg CO2e/m	GWP biogenic kg CO2e/m	GWP LULUC kg CO2e/m
P125	1,53	4,13E+00	4,28E+00	-1,56E-01	2,56E-03
P13	1,52	4,10E+00	4,26E+00	-1,55E-01	2,54E-03
P15	1,53	4,13E+00	4,28E+00	-1,56E-01	2,56E-03
K13	1,52	4,10E+00	4,26E+00	-1,55E-01	2,54E-03
K15	2,231	6,02E+00	6,25E+00	-2,28E-01	3,73E-03

DOWNPIPES WEIGHT/M

Product	kg/m	GWP total kg CO2e/m	GWP fossil kg CO2e/m	GWP biogenic kg CO2e/m	GWP LULUC kg CO2e/m
P87	1,74	4,70E+00	4,87E+00	-1,77E-01	2,91E-03
P100	1,93	5,21E+00	5,40E+00	-1,97E-01	3,22E-03
P120	2,24	6,05E+00	6,27E+00	-2,28E-01	3,74E-03
P150	2,99	8,07E+00	8,37E+00	-3,05E-01	4,99E-03
K7*10	1,91	5,16E+00	5,35E+00	-1,95E-01	3,19E-03