ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Telescopic sewer chambers, 400- and 560-mm chamber diameter

Meltex Oy Plastics

EPD HUB, HUB-4722

Published on 18.12.2025, last updated on 18.12.2030

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	Meltex Oy Plastics
Address	Puuppolantie 111, 40270 Jyväskylä, Finland
Contact details	meltex@meltex.fi
Website	www.meltex.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	Johannes Hakala, Meltex Oy Plastics
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Elma Avdyli, as 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	Telescopic sewer chambers, 400- and 560-mm chamber diameter
Additional labels	-
Product reference	124730, 124740, 124750 and 124760
Place(s) of raw material origin	Europe, Asia and North America
Place of production	Finland
Place(s) of installation and use	Finland
Period for data	2024
Averaging in EPD	Multiple products and multiple factories
Variation in GWP-fossil for A1-A3 (%)	±5
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	4,3

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg of product
Declared unit mass	1 kg
Mass of packaging	0,048 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	2,58
GWP-total, A1-A3 ($kgCO_2e$)	2,51
Secondary material, inputs (%)	20,9
Secondary material, outputs (%)	55,1
Total energy use, A1-A3 (kWh)	9,69
Net freshwater use, A1-A3 (m^3)	0,02

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Established in 1993, Meltex is a Finnish manufacturer, importer, and retailer of plastic products for the construction industry. Meltex offers a wide range of products and special expertise in the building materials sector, and fast deliveries throughout Finland. We are a specialist in civil engineering and HVAC supplies, especially pipes, drains, chambers, and geotextiles.

PRODUCT DESCRIPTION

This EPD represents four similar telescopic sewer chamber products with chamber diameters of 400 or 560 mm. These products are typically used in sewage management. Each chamber consists of an HDPE chamber pipe and an HDPE or PP riser pipe manufactured by Meltex. They are assembled with additional components, including a PP base plate, synthetic rubber gaskets and a cast iron frame and cover. For the 560 mm model, the base plate is manufactured from LLDPE by Meltex.

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

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	52	Europe, Asia
Minerals	-	-
Fossil materials	48	Europe, Asia and North America
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	0,020

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg of product
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.

Meltex assembles the final product from several components, and manufactures two major components in Kuhmoinen, Finland: the chamber pipe and the telescopic riser pipe. The chamber pipe's manufacturing process begins with the melting of the raw materials: polyethylene granules. These are extruded into a pipe that is cooled by water in a closed loop system. The pipe is cut to the required length. The riser pipe is manufactured similarly from polyethylene or polypropylene. The 560 mm product's base plate is manufactured by Meltex in Keuruu, Finland out of LLDPE.

Assembly of the final product from these pipes and other components is done at multiple locations in Finland. Multiple products are typically packaged together using a wooden pallet and plastic film. By-products from the manufacturing process are processed back into raw materials. The electricity used in production is renewable and generated by hydroelectric power, and distribution and transmission losses are considered.

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.

A4: The average transportation distance from the manufacturing site to the construction site is 228 km by lorry (typically >32 metric ton, EURO5), based on sales data. No product-specific data was available for vehicle capacity

utilization, and it is assumed to be 50 %. There is similarly assumed to be no loss during transport.

A5: The product is typically installed in conjunction with excavation, infrastructure, or building activities. No primary or product-specific data or scenario was available on the environmental impact of installation. The environmental impact of fuel used by machinery during installation has therefore been estimated using One Click LCA (2024) data. No loss is assumed during installation. Waste packaging material handling, transport, recycling and incineration are included.

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.

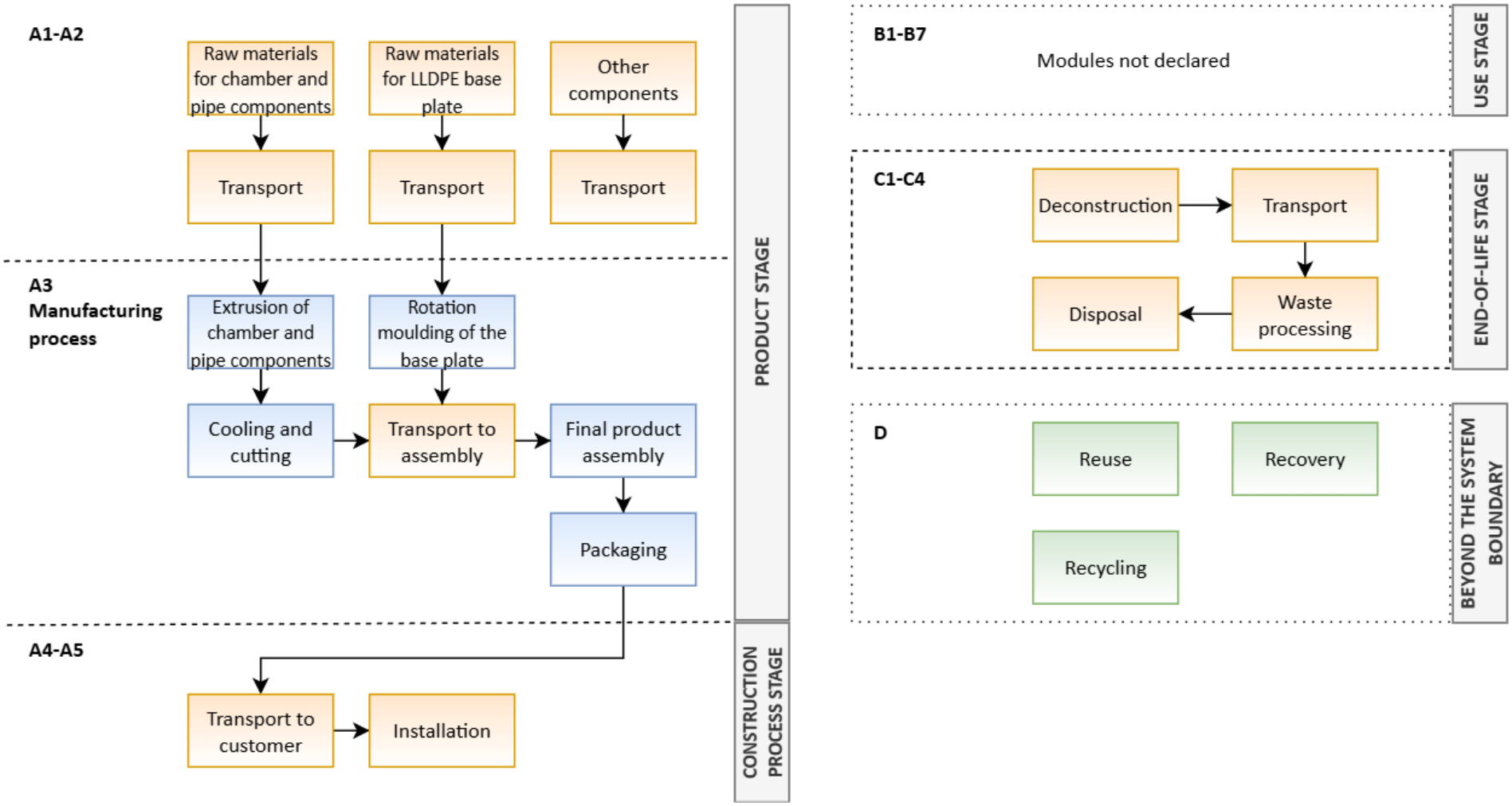
PRODUCT END OF LIFE (C1-C4, D)

C1: The product is typically excavated from the ground. No primary or product-specific data or scenario was available on the environmental impact of demolition. The environmental impact of fuel used by machinery during demolition has therefore been estimated using One Click LCA (2024) data.

C2–C4: The end-of-life product is assumed to be transported by lorry to the nearest facility and can typically be disassembled into materials. For end-of-life scenarios, One Click LCA (2025) groupings are used: Plastics Europe (2020) data is used for plastics, World Steel Association (2022) data is used for metals, and EN 50693 is used for rubber. Provided transport distances and methods are used.

D: The benefits and loads of the end-of-life product, its packaging and installation loss are considered, including recycling and the heat and energy produced by the incineration of waste.

SYSTEM 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 that is 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.

Some materials, typically used for plastic welding or machinery lubrication, have been excluded from the study because their flows and impacts are considered negligible. The packaging of raw materials and components has likewise been considered negligible.

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 made according to 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	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products and multiple factories
Grouping method	Based on average results of product group - by total mass
Variation in GWP-fossil for A1-A3, %	±5

The primary data represents four similar sewer chamber products, assembled from components at eight locations in Finland. The plastic chamber pipes and riser pipes are manufactured by Meltex at a separate facility in Kuhmoinen, Finland. One product has a base plate manufactured by Meltex in Keuruu, Finland. Similar raw materials and processes are used in manufacturing the

products, and the variation in their environmental impact is small. A product's environmental impact is similar between manufacturing locations, and differences are typically limited to the environmental impact created by transportation within Finland. This EPD represents an average of the four products and eight manufacturing locations by total mass.

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‘.

One Click LCA (2024): Installation and demolition fuel use.
One Click LCA (2025): scenarios for end-of-life transportation and treatment:
Plastics Europe (2020): HDPE, LLDPE, PP. https://plasticseurope.org/wp-content/uploads/2021/10/BC_Table.pdf
World Steel Association (2022): Steel and cast iron.
https://worldsteel.org/wp-content/uploads/Life-cycle-inventory-LCI-study-2020-data-release.pdf
EN 50693: Rubber.

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	2,45E+00	1,10E-01	-5,25E-02	2,51E+00	2,56E-02	7,87E-02	ND	ND	ND	ND	ND	ND	ND	3,61E-03	3,01E-02	7,40E-01	2,69E-02	-1,30E+00
GWP – fossil	kg CO_2e	2,45E+00	1,10E-01	2,03E-02	2,58E+00	2,56E-02	5,78E-03	ND	ND	ND	ND	ND	ND	ND	3,60E-03	3,00E-02	7,40E-01	2,70E-02	-1,31E+00
GWP – biogenic	kg CO_2e	1,58E-03	2,01E-05	-7,29E-02	-7,13E-02	5,40E-06	7,29E-02	ND	ND	ND	ND	ND	ND	ND	3,68E-07	6,62E-06	-3,44E-05	-8,88E-06	1,09E-02
GWP – LULUC	kg CO_2e	1,45E-03	5,47E-05	7,24E-05	1,58E-03	9,62E-06	2,82E-06	ND	ND	ND	ND	ND	ND	ND	3,69E-07	1,33E-05	2,45E-05	1,31E-06	-6,18E-04
Ozone depletion pot.	kg $CFC\text{-}_{11}$e	4,87E-08	1,64E-09	7,21E-10	5,10E-08	5,15E-10	8,19E-11	ND	ND	ND	ND	ND	ND	ND	5,52E-11	4,26E-10	2,83E-10	5,46E-11	-1,64E-08
Acidification potential	mol H^+e	8,66E-03	2,05E-03	9,97E-05	1,08E-02	8,26E-05	4,15E-05	ND	ND	ND	ND	ND	ND	ND	3,25E-05	1,01E-04	2,38E-04	1,54E-05	-5,55E-03
EP-freshwater[2)]	kg Pe	6,04E-04	5,48E-06	5,31E-06	6,15E-04	1,73E-06	5,34E-07	ND	ND	ND	ND	ND	ND	ND	1,04E-07	2,34E-06	9,26E-06	2,27E-07	-5,36E-04
EP-marine	kg Ne	1,81E-03	5,24E-04	2,84E-05	2,36E-03	2,81E-05	2,47E-05	ND	ND	ND	ND	ND	ND	ND	1,51E-05	3,27E-05	8,86E-05	4,27E-05	-1,07E-03
EP-terrestrial	mol Ne	1,91E-02	5,81E-03	3,10E-04	2,52E-02	3,05E-04	2,02E-04	ND	ND	ND	ND	ND	ND	ND	1,65E-04	3,56E-04	8,52E-04	6,33E-05	-1,14E-02
POCP ("smog")[3)]	kg NMVOCe	9,61E-03	1,65E-03	1,55E-03	1,28E-02	1,35E-04	6,13E-05	ND	ND	ND	ND	ND	ND	ND	4,93E-05	1,42E-04	2,30E-04	2,52E-05	-4,68E-03
ADP-minerals & metals[4)]	kg Sbe	1,13E-05	1,89E-07	1,29E-07	1,16E-05	7,07E-08	5,75E-09	ND	ND	ND	ND	ND	ND	ND	1,29E-09	9,49E-08	7,90E-07	4,81E-09	-9,83E-06
ADP-fossil resources	MJ	4,95E+01	1,45E+00	5,42E-01	5,15E+01	3,71E-01	7,02E-02	ND	ND	ND	ND	ND	ND	ND	4,72E-02	4,25E-01	2,59E-01	4,56E-02	-2,00E+01
Water use[5)]	m^3e depr.	5,51E-01	5,48E-03	9,90E-03	5,67E-01	1,90E-03	7,44E-04	ND	ND	ND	ND	ND	ND	ND	1,18E-04	2,00E-03	2,25E-02	7,71E-04	-2,86E-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	1,56E-07	6,46E-09	1,65E-09	1,64E-07	2,55E-09	1,08E-09	ND	ND	ND	ND	ND	ND	ND	9,25E-10	2,54E-09	2,50E-09	3,21E-10	-6,95E-08
Ionizing radiation[6)]	kBq U235e	9,45E-02	9,69E-04	1,66E-03	9,72E-02	4,47E-04	8,11E-05	ND	ND	ND	ND	ND	ND	ND	2,09E-05	3,51E-04	1,69E-03	4,29E-05	-6,95E-02
Ecotoxicity (freshwater)	CTUe	1,27E+01	1,49E-01	3,77E-01	1,32E+01	4,37E-02	1,04E-02	ND	ND	ND	ND	ND	ND	ND	2,60E-03	6,54E-02	3,06E-01	7,81E-02	-4,04E+00
Human toxicity, cancer	CTUh	3,26E-09	2,12E-11	8,02E-11	3,36E-09	4,22E-12	1,18E-12	ND	ND	ND	ND	ND	ND	ND	3,71E-13	5,07E-12	3,79E-11	9,98E-13	-2,07E-10
Human tox. non-cancer	CTUh	1,65E-07	6,19E-10	2,10E-10	1,66E-07	2,41E-10	4,97E-11	ND	ND	ND	ND	ND	ND	ND	5,87E-12	2,68E-10	1,74E-09	1,59E-10	-1,01E-08
SQP[7)]	-	6,21E+00	7,25E-01	6,31E+00	1,32E+01	3,74E-01	2,49E-02	ND	ND	ND	ND	ND	ND	ND	3,30E-03	2,98E-01	3,84E-01	9,92E-02	-4,40E+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	1,45E+00	1,54E-02	9,00E-01	2,37E+00	6,04E-03	-6,91E-01	ND	ND	ND	ND	ND	ND	ND	2,99E-04	5,83E-03	3,41E-02	6,98E-04	-1,38E+00
Renew. PER as material	MJ	0,00E+00	0,00E+00	7,26E-01	7,26E-01	0,00E+00	-7,26E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,01E-02
Total use of renew. PER	MJ	1,45E+00	1,54E-02	1,63E+00	3,09E+00	6,04E-03	-1,42E+00	ND	ND	ND	ND	ND	ND	ND	2,99E-04	5,83E-03	3,41E-02	6,98E-04	-1,34E+00
Non-re. PER as energy	MJ	3,08E+01	1,45E+00	2,56E-01	3,25E+01	3,71E-01	5,16E-02	ND	ND	ND	ND	ND	ND	ND	4,72E-02	4,25E-01	-1,38E+01	-5,11E+00	-2,03E+01
Non-re. PER as material	MJ	1,91E+01	0,00E+00	2,85E-01	1,94E+01	0,00E+00	-6,75E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-1,38E+01	-5,24E+00	5,07E+00
Total use of non-re. PER	MJ	4,99E+01	1,45E+00	5,42E-01	5,19E+01	3,71E-01	-1,59E-02	ND	ND	ND	ND	ND	ND	ND	4,72E-02	4,25E-01	-2,76E+01	-1,03E+01	-1,53E+01
Secondary materials	kg	2,09E-01	6,58E-04	2,78E-03	2,12E-01	1,61E-04	3,54E-05	ND	ND	ND	ND	ND	ND	ND	1,96E-05	1,88E-04	6,42E-04	1,63E-05	5,34E-01
Renew. secondary fuels	MJ	5,61E-04	4,39E-06	2,45E-02	2,51E-02	2,02E-06	2,11E-07	ND	ND	ND	ND	ND	ND	ND	5,12E-08	2,40E-06	1,11E-05	3,34E-07	-7,71E-05
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	1,50E-02	1,51E-04	2,17E-04	1,54E-02	5,48E-05	-5,73E-05	ND	ND	ND	ND	ND	ND	ND	3,12E-06	5,79E-05	2,56E-04	-4,56E-04	-6,92E-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	2,62E-01	2,13E-03	1,41E-03	2,65E-01	5,37E-04	2,02E-04	ND	ND	ND	ND	ND	ND	ND	5,25E-05	7,35E-04	8,16E-03	3,08E-04	-2,79E-01
Non-hazardous waste	kg	8,96E+00	3,45E-02	4,17E-02	9,04E+00	1,07E-02	1,07E-01	ND	ND	ND	ND	ND	ND	ND	7,15E-04	1,37E-02	3,23E-01	6,48E-01	-4,27E+00
Radioactive waste	kg	2,86E-05	2,37E-07	4,28E-07	2,93E-05	1,11E-07	2,01E-08	ND	ND	ND	ND	ND	ND	ND	5,12E-09	8,59E-08	4,33E-07	1,05E-08	-1,76E-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	1,67E-02	1,67E-02	0,00E+00	1,52E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	5,51E-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	7,88E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	3,50E+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	3,32E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	1,47E+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	4,56E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	2,03E+00	0,00E+00	0,00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	2,43E+00	1,09E-01	2,01E-02	2,56E+00	2,54E-02	6,79E-03	ND	ND	ND	ND	ND	ND	ND	3,59E-03	2,99E-02	7,40E-01	2,63E-02	-1,29E+00
Ozone depletion Pot.	kg CFC_{-11}e	4,00E-08	1,31E-09	5,84E-10	4,19E-08	4,10E-10	6,52E-11	ND	ND	ND	ND	ND	ND	ND	4,37E-11	3,40E-10	2,36E-10	4,39E-11	-1,41E-08
Acidification	kg SO_2e	7,09E-03	1,63E-03	7,72E-05	8,80E-03	6,27E-05	2,96E-05	ND	ND	ND	ND	ND	ND	ND	2,29E-05	7,70E-05	1,81E-04	1,14E-05	-4,57E-03
Eutrophication	kg PO_4^3e	2,14E-02	1,95E-04	6,36E-04	2,23E-02	1,58E-05	7,76E-06	ND	ND	ND	ND	ND	ND	ND	5,34E-06	1,87E-05	4,04E-05	6,36E-06	-4,69E-03
POCP (“smog”)	kg C_2H_4e	8,94E-04	8,57E-05	8,38E-04	1,82E-03	5,89E-06	2,48E-06	ND	ND	ND	ND	ND	ND	ND	1,71E-06	6,89E-06	1,20E-05	3,17E-06	-5,52E-04
ADP-elements	kg Sbe	1,11E-05	1,86E-07	1,26E-07	1,14E-05	6,90E-08	5,53E-09	ND	ND	ND	ND	ND	ND	ND	1,26E-09	9,27E-08	7,83E-07	4,44E-09	-9,78E-06
ADP-fossil	MJ	4,83E+01	1,43E+00	5,13E-01	5,03E+01	3,64E-01	6,89E-02	ND	ND	ND	ND	ND	ND	ND	4,68E-02	4,19E-01	2,30E-01	4,50E-02	-1,88E+01

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	2,45E+00	1,10E-01	2,04E-02	2,58E+00	2,56E-02	5,78E-03	ND	ND	ND	ND	ND	ND	ND	3,61E-03	3,00E-02	7,40E-01	2,70E-02	-1,31E+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, hydro, run-of-river, Finland, Ecoinvent, 0.0044 kgCO2e/kWh

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry >32 metric ton, EURO5, 228 km

Transport scenario documentation A4

Scenario parameter	Value
Capacity utilization (including empty return) %	50
Bulk density of transported products	0,00E+00
Volume capacity utilization factor	<1

Installation scenario documentation - A5 (Installation resources)

1. Diesel, burned in building machine, Ecoinvent, 0.01 kWh

Installation scenario documentation - A5 (Installation waste)

1. Treatment of waste wood, post-consumer, sorting and shredding, Ecoinvent, Materials for recycling, 0.015 kg
2. Treatment of waste wood, untreated, municipal incineration, Ecoinvent, 0.014 kg
3. Exported Energy: Electricity, Ecoinvent, 0.032 MJ
4. Exported Energy: Electricity, Ecoinvent, 0.0012 MJ
5. Exported Energy: Thermal, Ecoinvent, 0.044 MJ
6. Exported Energy: Thermal, Ecoinvent, 0.0016 MJ
7. Treatment of waste wood, untreated, sanitary landfill, Ecoinvent, 0.018 kg
8. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 1.8E-4 kg
9. Treatment of waste polyethylene, municipal incineration, Ecoinvent, 1.7E-4 kg
10. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 1.1E-4 kg

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

1. Diesel, burned in building machine, Ecoinvent, 0.01 kWh
2. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 0.077 kg
3. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 0.034 kg
4. Treatment of waste polyethylene, municipal incineration, Ecoinvent, 0.16 kg
5. Exported Energy: Electricity, Ecoinvent, 1.0622 MJ
6. Exported Energy: Electricity, Ecoinvent, 0.03 MJ
7. Exported Energy: Electricity, Ecoinvent, 0.38 MJ
8. Exported Energy: Thermal, Ecoinvent, 1.4609 MJ
9. Exported Energy: Thermal, Ecoinvent, 0.041 MJ
10. Exported Energy: Thermal, Ecoinvent, 0.53 MJ
11. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 0.086 kg
12. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 0.04 kg
13. Treatment of waste rubber, unspecified, municipal incineration, Ecoinvent, 0.007 kg
14. Treatment of waste rubber, unspecified, municipal incineration, Ecoinvent, 0.0035 kg
15. Treatment of waste plastic, mixture, sanitary landfill, Ecoinvent, 0.0035 kg
16. Sorting and pressing of iron scrap, Ecoinvent, Materials for recycling, 0.44 kg
17. Treatment of scrap steel, inert material landfill, Ecoinvent, 0.078 kg
18. Treatment of waste polypropylene, municipal incineration, Ecoinvent, 0.074 kg

Scenario information	Value
Scenario assumptions e.g. transportation	Typical transport distance 50–250 km depending on material, typical vehicles are >32 or 16–32 metric ton lorries, EURO5.

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 is filed at EPD Hub. EPD Hub PCR and ECO Platform verification checklist are used.

EPD Hub cannot 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

Elma Avdyli, as authorized verifier acting for EPD HUB Limite
18.12.2025