ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

ROAD GULLY

Evopipes SIA

EPD HUB, EPD number HUB-4894
Published on 20.01.2026, last updated on 20.01.2026, valid until 19.01.2031

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	Evopipes SIA
Address	Langervaldes street 2a, Jelgava, Latvia, LV-3002
Contact details	info@evopipes.lv
Website	www.evopipes.lv

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	Inese Meldere, Alise Dude; Evopipes SIA
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Sarah Curpen, 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	ROAD GULLY
Additional labels	ROAD GULLY
Product reference	All products from group No.903 (product number starts with 903).
Place(s) of raw material origin	Latvia, Estonia, Netherlands, Germany, Macedonia
Place of production	Latvia
Place(s) of installation and use	Europe
Period for data	Calendar year 2024
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	<3%
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	84,1

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg of road gully
Declared unit mass	1 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	2,17
GWP-total, A1-A3 ($kgCO_2e$)	2,02
Secondary material, inputs (%)	0,79
Secondary material, outputs (%)	22,1
Total energy use, A1-A3 (kWh)	9,86
Net freshwater use, A1-A3 (m^3)	0,01

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Evopipes is manufacturer of plastic pipe systems for electricity, telecom, water, wastewater and gas. Our production is based in Latvia, and we supply client's requests around the world.
Our main strategy is to design advanced pipeline products that increase work efficiency in the field of installing and exploiting pipe systems. We are certified according to EN ISO 9001 Quality Management system, EN ISO 14001 Environmental Management system and EN ISO 50001 Energy Management system.

PRODUCT DESCRIPTION

Road gullies are designed to collect surface water from roads and direct it into the underground drainage or sewer system. They play a crucial role in preventing water from pooling on road surfaces, which can cause flooding or damage. Assembled with a specific gully top they are applicable for installations in vehicle storage areas, road construction (with heavy transport loads) and yards of multi-story dwellings, parking places etc.
Evopipes produces road gullies in different nominal sizes from 400 to 1000 [mm] and various lengths. These gullies support different connection sizes and can be assembled with sediment trap or without one.

Parameter	Value
DN [mm]	OD/ID 315, 400, 600, 800, 1000
Colour	Brown, black

Further information can be found at www.evopipes.com

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0,997	Estonia
Minerals	0,094	Spain
Fossil materials	98,726	Netherlands, Germany, Macedonia
Bio-based materials	0,183	Latvia

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0,0034
Biogenic carbon content in packaging, kg C	0,0381

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg of road gully
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		
×	×	×	×	×	ND	ND	ND	ND	ND	ND	ND	×	×	×	×	×		
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 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.

Manufacturing materials (A1)
The first module includes extraction and production of raw materials used in manufacturing process, mainly polyethylene or polypropylene granulates, as well as additives used in small amounts. Environmental impact for production of packaging materials is also included in this module.

Transport for manufacturing materials (A2)
Transport distances of materials to manufacturing site was modeled taking account location of suppliers and transportation routes. Raw materials are transported by lorry. Packaging materials are transported by lorry on road.

Manufacturing process (A3)
1. Raw Materials conveying / dosing / mixing
Polyethylene and additives as finished compounds are supplied (in either plastic bags or bulk form) and filled into silos and storage bins. From silos raw materials are carried to each pipe extruder through vacuum pressure transfer system, then dosed by volumetric or gravimetric weighing system and mixed to compose a running formulation.

2. Extrusion
The raw materials melt at high temperature in the extruders and pushed through a die-head to form a sleeve-in-sleeve structure / future double-layer pipe.

3. Pipe profile corrugation
During the extrusion process the resultant sleeve-in-sleeve structure is moved into the forming channel between the rotating mould blocks of the corrugator. The corrugated pipe profile is formed on a cooling mandrel by pressing the outer sleeve (layer) to the inner sleeve (layer) with vacuum

acting through the slits of the mould blocks. Process of forming corrugated profile of the pipe is continuous / non-stop.

4. Cooling of the corrugated pipes is done in a tank positioned after the corrugator, via water spraying nozzles. At the cooling stage there is stabilization of the product dimensions.

5. Marking
Printing Ink-jet (or thermal ink-jet) printer marks the pipes at regular intervals with identification according to product name, size, strengths, class, perforation guideline and standard number.

6. Cutting
The pipes are being cut in required length

7.Surface Preparation
Welding surfaces are mechanically cleaned and roughened using an angle grinder to ensure adequate surface texture and adhesion. No chemical treatments are applied.

8.Welding (Extrusion Process)
Extrusion welding is performed using a handheld extruder equipped with an integrated plastic feed mechanism. The extruder pulls in a plastic welding rod, melts it, and deposits the molten material onto the prepared joint surface. The operator guides the tool manually to ensure a homogeneous weld seam is formed. Heating of the joint area is achieved by hot air during welding, without prior preheating of the base material.

9.Cooling
The welded area is cooled naturally under ambient conditions. No active cooling systems are used during standard production. Compressed air may be used in some cases to accelerate the cooling process.

10.Product Inspection
Each product undergoes a visual inspection to ensure proper welding quality. No pressure or leak testing is performed unless specifically required.

11.Packaging
For custom-made chambers, no packaging is applied. For serial production, units are placed on wooden pallets and secured with LDPE stretch.

12.Storage and Dispatch
After inspection, the products are transferred to warehouse storage until delivery.

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.

Transportation from factory to construction site (A4)
Transportation from EVOPIPES factory to construction site creates impact to the environment and is calculated in product LCA. Products are delivered by lorry and ferry with average distance of 702km; therefore, emissions are caused by fuel. During transportation there is no product or packaging loss.

Construction process (A5)
Gullies are installed underground using excavator (diesel energy) and sand-gravel mix to strengthen the product in trench. No waste from product during installation. Other waste occurs from packaging that goes to recycling/incineration. 40% of plastic packaging gets recycled, 37% incinerated, 23% landfilled. 32% of wood packaging gets recycled, 30% incinerated, 38% landfilled.

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)

Deconstruction (C1)

End of Life stage for product occurs when gully needs to be replaced. Since the consumption of energy and resources is negligible for disassembling of the end-of-life product, the impacts of demolition are assumed to be zero (this scenario is based on TEPPFA's calculations).

Transportation (C2)

At the end-of-life product assumed to be collected form demolition site and sent to recycling, incineration or landfill causing transportation emissions.

Recycling (C3)

23,5% of the end-of-life product assumed to be collected from demolition site and sent to recycling, 49,5% sent to incineration.

Disposal (C4)

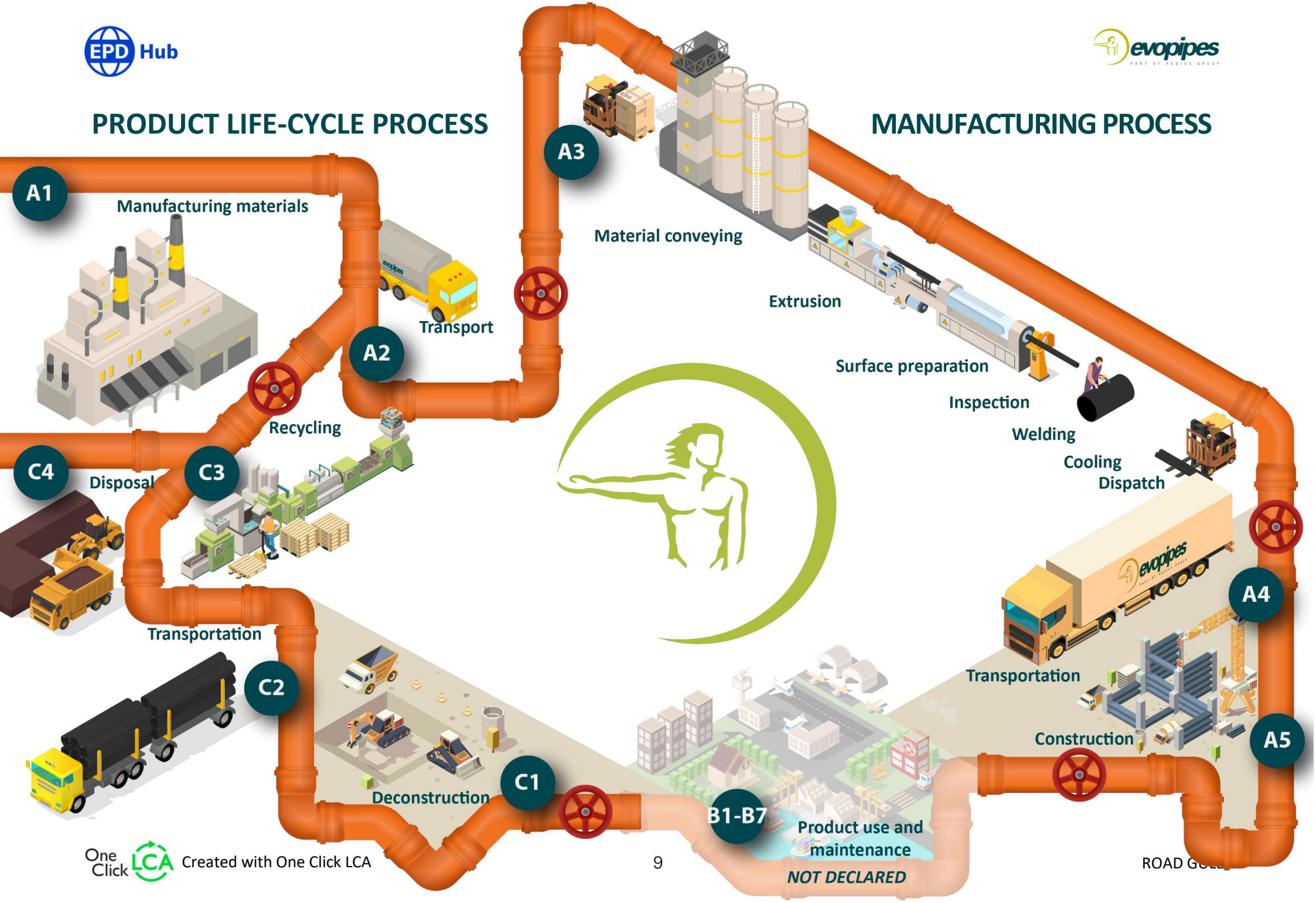
27% of products are assumed to be landfilled at the end-of-life.

Benefits and loads beyond system boundary (D)

Looking at benefits outside system boundaries, recycled packaging material can be processed into granules, used as a secondary raw material, and incinerated products (wooden pallets) are being converted to energy.

PRODUCT LIFE-CYCLE PROCESS

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 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.

The study does not exclude any modules or processes that are defined as mandatory according to EN 15804A1:2012+A2:2019 and EPD HUB product category rules (PCR). The study does not exclude any hazardous materials or substances. In product life cycle calculations include all materials and processes from acquisition of raw materials to product end-of-life stages. Only energy that is used for product de-construction at the end-of-life stage is cut-off due to negligible amount usage.
The modules B1-B7 have not been calculated or included in LCA calculations.

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	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 average results of product group - by total mass
Variation in GWP-fossil for A1-A3, %	<3%

This EPD represents an average of three products under product name ROAD GULLY. Flow quantities are weighted by the annual product output from each of them (EVORAIN PE, GIGAPIPE PP and RIGID MULTI PP). EVORAIN GWP fossil in A1-A3 is equal to 2,16 kg CO2e (HUB-0061); GIGAPIPE GWP fossil in A1-A3 is equal to 2,18 kg CO2e (HUB-0088) and RIGID MULTI GWP fossil in A1-A3 is equal to 2,23 kg CO2e (HUB-0118). The declared value for GWP-fossil (A1–A3) is the mass-weighted average of all products: 2.166 kg CO_2e. The individual product values differ from this average by −0.3%, +0.6%, and +3.0%, respectively. Production process, transportation, installation, demolition and waste treatment are the same for all three products.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1 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_2e	2,01E+00	2,46E-02	-2,22E-02	2,02E+00	8,07E-02	2,51E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,56E-02	1,53E+00	3,19E-02	-1,09E+00
GWP – fossil	kg CO_2e	2,14E+00	2,45E-02	9,31E-03	2,17E+00	8,06E-02	2,48E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,56E-02	1,53E+00	3,13E-02	-1,10E+00
GWP – biogenic	kg CO_2e	-1,27E-01	4,97E-06	-3,16E-02	-1,59E-01	1,54E-05	3,32E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,54E-06	1,33E-03	6,07E-04	5,29E-03
GWP – LULUC	kg CO_2e	9,38E-04	9,37E-06	3,12E-05	9,78E-04	3,75E-05	1,24E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,99E-06	2,42E-05	1,96E-06	-1,06E-03
Ozone depletion pot.	kg $CFC\text{-}_{11}$e	7,33E-08	4,03E-10	2,16E-10	7,39E-08	1,18E-09	3,24E-08	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,31E-10	3,31E-10	7,74E-11	-2,58E-08
Acidification potential	mol H^+e	1,06E-02	1,00E-04	4,93E-05	1,07E-02	1,19E-03	2,01E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,32E-05	2,50E-04	2,14E-05	-5,26E-03
EP-freshwater[2)]	kg Pe	1,36E-04	1,68E-06	2,43E-06	1,40E-04	4,57E-06	3,19E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,22E-06	5,94E-06	3,20E-07	-4,35E-04
EP-marine	kg Ne	2,11E-03	3,69E-05	1,46E-05	2,16E-03	3,12E-04	8,30E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,75E-05	1,27E-04	1,11E-04	-8,34E-04
EP-terrestrial	mol Ne	2,32E-02	4,03E-04	1,59E-04	2,37E-02	3,45E-03	9,15E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,90E-04	1,15E-03	8,72E-05	-8,53E-03
POCP ("smog")[3)]	kg NMVOCe	9,46E-03	1,52E-04	6,71E-05	9,68E-03	1,01E-03	2,73E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,85E-05	2,95E-04	3,76E-05	-4,30E-03
ADP-minerals & metals[4)]	kg Sbe	1,99E-05	6,10E-08	4,58E-08	2,00E-05	1,59E-07	5,32E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,36E-08	1,86E-07	6,75E-09	-4,87E-06
ADP-fossil resources	MJ	7,03E+01	3,51E-01	1,75E-01	7,09E+01	1,09E+00	3,16E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,27E-01	2,63E-01	6,66E-02	-2,48E+01
Water use[5)]	m^3e depr.	1,21E+00	1,65E-03	4,33E-03	1,21E+00	4,39E-03	2,15E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,12E-03	4,61E-02	3,36E-04	-3,05E-01

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterization 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	1,80E-08	2,93E-09	9,21E-10	2,19E-08	5,60E-09	5,11E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,56E-09	1,84E-09	4,82E-10	-4,39E-08
Ionizing radiation[6)]	kBq U235e	5,10E-02	3,25E-04	8,09E-04	5,21E-02	7,53E-04	7,46E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,97E-04	1,19E-03	6,65E-05	-1,89E-01
Ecotoxicity (freshwater)	CTUe	6,82E+00	4,38E-02	1,60E-01	7,02E+00	1,24E-01	3,39E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,21E-02	6,84E-01	1,67E-01	-3,96E+00
Human toxicity, cancer	CTUh	1,15E-10	3,86E-12	3,56E-11	1,55E-10	1,47E-11	4,04E-10	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,58E-12	5,70E-11	1,68E-12	-1,73E-10
Human tox. non-cancer	CTUh	2,97E-09	2,06E-10	9,25E-11	3,27E-09	5,32E-10	1,00E-08	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,47E-10	2,21E-09	3,31E-10	-8,33E-09
SQP[7)]	-	1,66E+00	3,13E-01	2,73E+00	4,70E+00	7,03E-01	1,63E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,28E-01	2,49E-01	1,55E-01	-4,48E+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	3,80E+00	4,80E-03	2,61E+00	6,42E+00	1,21E-02	7,68E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,11E-03	3,67E-03	-6,41E-03	-2,07E+00
Renew. PER as material	MJ	1,15E+00	0,00E+00	3,14E-01	1,46E+00	0,00E+00	-3,14E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-8,46E-01	-3,04E-01	5,31E-02
Total use of renew. PER	MJ	4,95E+00	4,80E-03	2,93E+00	7,88E+00	1,21E-02	4,54E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,11E-03	-8,42E-01	-3,11E-01	-2,02E+00
Non-re. PER as energy	MJ	2,86E+01	3,51E-01	1,06E-01	2,91E+01	1,09E+00	3,16E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,27E-01	-2,79E+01	-1,03E+01	-2,55E+01
Non-re. PER as material	MJ	4,17E+01	0,00E+00	3,02E-02	4,17E+01	0,00E+00	-3,02E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-3,04E+01	-1,13E+01	8,99E+00
Total use of non-re. PER	MJ	7,03E+01	3,51E-01	1,36E-01	7,08E+01	1,09E+00	3,16E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,27E-01	-5,83E+01	-2,16E+01	-1,66E+01
Secondary materials	kg	7,90E-03	1,50E-04	1,83E-03	9,88E-03	4,69E-04	2,06E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	9,65E-05	9,40E-04	2,41E-05	2,29E-01
Renew. secondary fuels	MJ	2,00E-03	1,73E-06	1,06E-02	1,26E-02	4,01E-06	8,57E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,23E-06	7,68E-06	4,51E-07	-5,13E-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	8,81E-03	4,85E-05	1,03E-04	8,96E-03	1,25E-04	3,20E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,35E-05	4,93E-04	-9,86E-04	-9,99E-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	6,37E-02	5,46E-04	8,57E-04	6,51E-02	1,65E-03	9,63E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,84E-04	1,87E-02	1,17E-04	-7,07E-02
Non-hazardous waste	kg	2,32E+00	1,01E-02	2,03E-02	2,35E+00	2,78E-02	1,86E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,10E-03	6,13E-01	1,33E+00	-4,58E+00
Radioactive waste	kg	5,26E-05	7,98E-08	2,09E-07	5,29E-05	1,84E-07	1,83E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,83E-08	3,04E-07	1,63E-08	-4,82E-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	7,06E-04	0,00E+00	0,00E+00	7,06E-04	0,00E+00	6,76E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	2,21E-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	3,54E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy – Electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,50E-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	2,04E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+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	2,00E+00	2,44E-02	9,31E-03	2,03E+00	8,02E-02	2,46E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,55E-02	1,53E+00	3,00E-02	-1,08E+00
Ozone depletion Pot.	kg CFC_{-11}e	6,53E-08	3,21E-10	1,75E-10	6,58E-08	9,38E-10	2,60E-08	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,84E-10	2,79E-10	6,19E-11	-2,11E-08
Acidification	kg SO_2e	8,64E-03	7,45E-05	3,80E-05	8,76E-03	9,40E-04	1,45E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,07E-05	1,80E-04	1,59E-05	-4,44E-03
Eutrophication	kg PO_4^3e	3,58E-03	1,81E-05	2,69E-04	3,86E-03	1,20E-04	3,20E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	9,91E-06	5,48E-05	1,18E-05	-6,77E-03
POCP (“smog”)	kg C_2H_4e	5,00E-04	6,45E-06	5,48E-06	5,12E-04	5,14E-05	1,18E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,62E-06	1,31E-05	5,82E-06	-3,49E-04
ADP-elements	kg Sbe	1,99E-05	5,95E-08	4,26E-08	2,00E-05	1,55E-07	5,25E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,25E-08	1,72E-07	6,55E-09	-4,81E-06
ADP-fossil	MJ	6,95E+01	3,46E-01	1,61E-01	7,00E+01	1,08E+00	3,04E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,23E-01	2,43E-01	6,55E-02	-2,15E+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	2,14E+00	2,46E-02	9,34E-03	2,18E+00	8,07E-02	2,48E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,56E-02	1,53E+00	3,13E-02	-1,10E+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, Latvia, Ecoinvent, 0.0044 kgCO2e/kWh
2. Liquefied petroleum gas, import from RoW, Albania, Ecoinvent, 1.08 kgCO2e/kg

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry >32 metric ton, EURO5, 418 km
2. Transport, freight, sea, ferry, 285 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

1. Gravel and sand quarry operation, Ecoinvent, 226.0 kg
2. Diesel, burned in building machine, Ecoinvent, 15.0 MJ

Installation scenario documentation - A5 (Installation waste)

1. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 1.6E-4 kg
2. Treatment of waste polyethylene, municipal incineration, Ecoinvent, 1.5E-4 kg
3. Exported Energy: Electricity, Ecoinvent, 0.001 MJ
4. Exported Energy: Electricity, Ecoinvent, 0.014 MJ
5. Exported Energy: Thermal, Ecoinvent, 0.0014 MJ
6. Exported Energy: Thermal, Ecoinvent, 0.019 MJ
7. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 9.4E-5 kg
8. Treatment of waste wood, post-consumer, sorting and shredding, Ecoinvent, Materials for recycling, 0.0066 kg
9. Treatment of waste wood, untreated, municipal incineration, Ecoinvent, 0.0062 kg
10. Treatment of waste wood, untreated, sanitary landfill, Ecoinvent, 0.0079 kg

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

1. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 0.13 kg
2. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 0.063 kg
3. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 5.1E-4 kg
4. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 0.0041 kg
5. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 0.014 kg
6. Treatment of waste polyethylene, municipal incineration, Ecoinvent, 0.27 kg
7. Exported Energy: Electricity, Ecoinvent, 1.85 MJ
8. Exported Energy: Electricity, Ecoinvent, 0.71 MJ
9. Exported Energy: Electricity, Ecoinvent, 0.0058 MJ
10. Exported Energy: Electricity, Ecoinvent, 0.047 MJ
11. Exported Energy: Electricity, Ecoinvent, 0.15 MJ
12. Exported Energy: Electricity, Ecoinvent, 0.25 MJ
13. Exported Energy: Electricity, Ecoinvent, 0.0018 MJ
14. Exported Energy: Thermal, Ecoinvent, 2.55 MJ
15. Exported Energy: Thermal, Ecoinvent, 0.98 MJ
16. Exported Energy: Thermal, Ecoinvent, 0.008 MJ
17. Exported Energy: Thermal, Ecoinvent, 0.064 MJ
18. Exported Energy: Thermal, Ecoinvent, 0.21 MJ
19. Exported Energy: Thermal, Ecoinvent, 0.34 MJ
20. Exported Energy: Thermal, Ecoinvent, 0.0025 MJ
21. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 0.15 kg
22. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 0.073 kg
23. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 6.0E-4 kg
24. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 0.0048 kg
25. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 0.016 kg

26. Treatment of waste polypropylene, municipal incineration, Ecoinvent, 0.14 kg
27. Treatment of waste polypropylene, municipal incineration, Ecoinvent, 0.0011 kg
28. Treatment of waste polypropylene, municipal incineration, Ecoinvent, 0.009 kg
29. Treatment of waste polypropylene, municipal incineration, Ecoinvent, 0.03 kg
30. Diesel, burned in building machine, Ecoinvent, 0.0 kWh
31. Treatment of waste rubber, unspecified, municipal incineration, Ecoinvent, 0.059 kg
32. Treatment of waste plastic, mixture, sanitary landfill, Ecoinvent, 0.022 kg
33. Wood chipping, industrial residual wood, stationary electric chipper, Ecoinvent, Materials for recycling, 4.8E-4 kg
34. Treatment of waste wood, untreated, municipal incineration, Ecoinvent, 9.2E-4 kg
35. Treatment of waste wood, untreated, sanitary landfill, Ecoinvent, 4.4E-4 kg
36. Sorting and pressing of iron scrap, Ecoinvent, Materials for recycling, 0.0085 kg
37. Treatment of waste steel, inert material landfill, Ecoinvent, 0.0015 kg

Scenario information	Value
Scenario assumptions e.g. transportation	Transport to recycling site: 250km, to incineration site: 150km, to 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 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

Sarah Curpen, as authorized verifier acting for EPD HUB Limited
20.01.2026

VERIFIED ISO 14025