ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Electric domestic fan E-EXTRA series EET
SIA EIROPLASTS

EPD HUB, HUB-5521
Published on 25.02.2026, last updated on 25.02.2026, valid until 24.02.2031

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	SIA EIROPLASTS
Address	32/6 Granīta Street, Acone, Salaspils municipality, LV-2119, Latvia
Contact details	europlast@europlast.lv
Website	http://www.europlast.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	HUB-5121
Scope of the EPD	Cradle to gate with options, A4-B7, and modules C1-C4, D
EPD author	Laura Šalme, SIA EIROPLASTS
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 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	Electric domestic fan E-EXTRA series EET
Additional labels	electric fan E-EXTRA, Ø100mm square shaped with cover, equipped with a front panel
Product reference	EET100
Place(s) of raw material origin	EU
Place of production	Acone, Salaspils municipality, Latvia
Place(s) of installation and use	Europe, Middle East & Central Asia (incl. Sweden, Norway, UK, EU, Caucasus, Israel, Qatar, Lebanon)
Period for data	01/01/2024 - 31/12/2024
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	
GTIN (Global Trade Item Number)	4750492008805
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	60,3

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 unit of ventilation exhaust fan including all packaging
Declared unit mass	0,4495 kg
Mass of packaging	0,1820 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	2,07
GWP-total, A1-A3 ($kgCO_2e$)	1,75
Secondary material, inputs (%)	3,04
Secondary material, outputs (%)	62,4
Total energy use, A1-A3 (kWh)	9,7
Net freshwater use, A1-A3 (m^3)	0,02

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

EUROPLAST - a producer of ventilation systems and elements since 1998.

PRODUCT DESCRIPTION

This Environmental Product Declaration covers the EUROPLAST EET100 domestic exhaust fan (Ø100), designed for residential ventilation applications (RVU). EUROPLAST EET series domestic exhaust fans are equipped with a decorative front panel. The unit provides mechanical air extraction by replacing indoor air with outdoor air, supporting adequate air exchange in residential and light-commercial interiors. It is intended for indoor wall installation and connects directly to Ø100 ventilation shafts or round duct systems.

The housing, propeller, front cover and decorative front panel are manufactured from acrylonitrile-butadiene-styrene (ABS) and recycled polystyrene (rPS), providing durability, dimensional stability, and resistance to temperature variations and UV exposure. The lightweight and robust construction supports quick installation, stable operation, and low maintenance. The EET100 is designed to maintain efficient air exchange and support a healthy indoor environment throughout its service life. The use of recyclable plastic materials and essential safety features contributes to lower environmental impact and user comfort.

Technical characteristics (EET100 - Ø100):

- Axial fan;
- Electrical connection: ~220-240 V, 50 Hz;
- Power consumption: 15 W;
- Airflow rate: 100 m^3/h;
- Fan speed: 2550 RPM;
- Noise level at 3 m: 32 dB(A);
- Protection rating: IPX4;
- Insulation class: B;
- Operating temperature range: +5 °C to +40 °C;
- Duct diameter: 100 mm;
- Product weight: 0.42 kg.

Further information can be found at:
http://www.europlast.lv

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	36,5%	Asia
Minerals	0	-
Fossil materials	63,5%	EU, Asia
Bio-based materials	0	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0,091

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 unit of ventilation exhaust fan including all packaging
Mass per declared unit	0,4495 kg
Functional unit	Providing mechanical exhaust ventilation by extracting 100 m^3/h of air under free-air conditions using a wall-mounted ventilation fan with an electrical input of 15 W, operated according to the use-stage scenario applied in Module B6 over a 17-year reference service life, for one installed product including all components and packaging.
Reference service life	17 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	x	x	x	x	x	x	x	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.
Manufacturing begins with the production of plastic parts, utilizing materials such as ABS and recycled polystyrene (rPS), followed by injection molding and subsequent assembly. During assembly, components are inspected and combined with electric motors, connectors, and fasteners. Manufacturing electricity consumption includes the operation of plastic molding machines and manual assembly and testing tools. All manufacturing activities are carried out under controlled conditions with the aim of ensuring consistent product quality. Manufacturing material losses and production waste are accounted for in the LCA. Polymers, paper, electronics, and other production wastes are sorted on-site and handed over to certified recycling partners in Latvia for mechanical recycling, while no recycling credits are claimed in the assessment.
Finished products are labeled and tested for basic performance and safety prior to packaging. Product packaging is calculated per one unit and includes the individual product box and wooden pallets, normalized to one unit, as well as self-adhesive labels and sealing tape. The packaging system is designed to provide adequate protection during handling and transport, while efforts are made to limit unnecessary material use.

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.

Transport to construction sites is modeled according to actual logistics and distribution patterns. Products are delivered mainly by road using fully loaded trucks to minimize environmental impact. Return trips are not included, as carriers typically use them for other shipments. Environmental impacts in this stage include fuel combustion emissions and indirect effects related to packaging handling. Both the transported product and its packaging are considered.
The average transport distance from Acone, Salaspils municipality, Latvia to store and then to customers, weighted by total sales across all destinations, 2103 km by track and 18km by ship.
Transport is calculated for one declared unit and includes both product and packaging mass.
Installation of the ventilation unit is mainly manual and requires only simple hand tools. Four steel screws per declared unit are required for installation and are modelled as ancillary installation materials in module A5, they are not part of the product packaging. In new buildings, new screws are used, while in renovation or replacement scenarios existing screws may be reused. No material losses occur during installation. No electricity, fuel, or water consumption is considered relevant. Packaging waste consists exclusively of packaging materials (wood, paper and cardboard, sealing tape, and paper instruction). Direct emissions to air, soil, or water during installation are negligible.

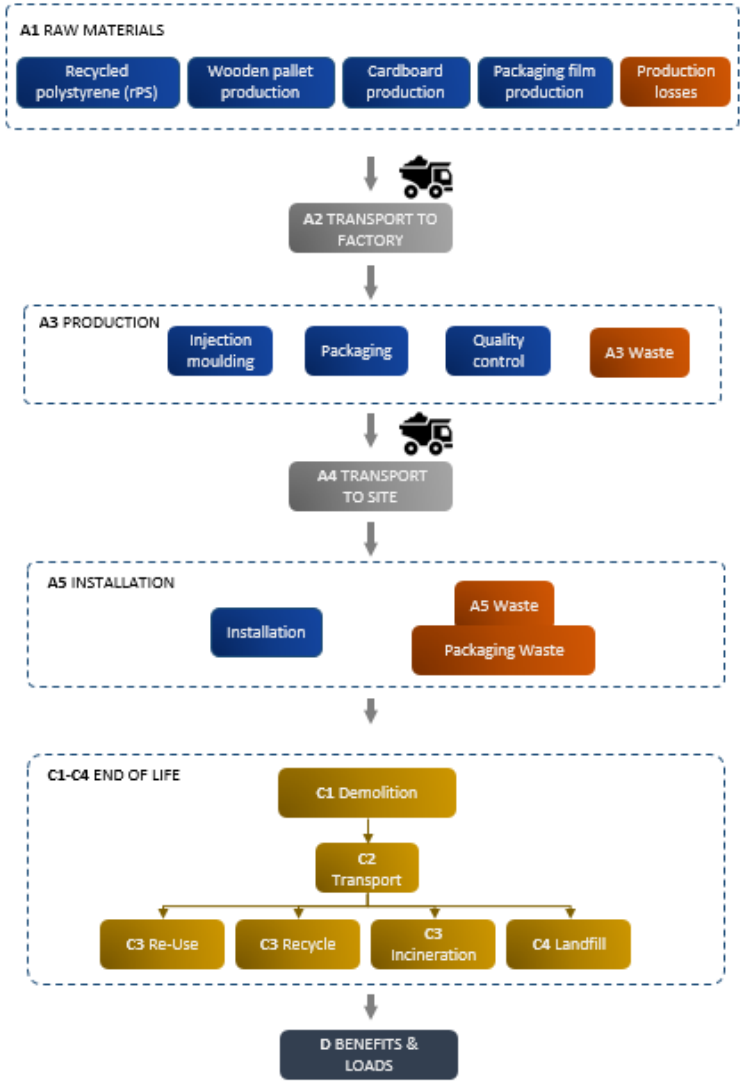
PRODUCT USE AND MAINTENANCE (B1-B7)

During the use phase, the product consumes electricity from the regional electricity grid mix, representative of EU-average conditions (B6). Operational energy use is calculated in accordance with Commission Delegated Regulation (EU) No 1254/2014 for residential ventilation units, assuming continuous operation under standard EU conditions (8760 hours per year). The reference service life of the product is assumed to be 17 years. During normal use, the product does not generate direct emissions to air, soil, or water (B1). Routine maintenance (B2) is limited to occasional dry surface cleaning and does not require water or cleaning chemicals. No repair (B3), replacement (B4), or refurbishment (B5) activities are foreseen during the reference service life. Operational water use is not applicable (B7).
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

At end of life, the product is dismantled manually using a hand screwdriver, no electricity or fuel consumption is required in module C1. After dismantling, product components are collected separately and transported to appropriate waste treatment facilities. Transport to treatment is modelled in module C2 using representative European lorry transport distances, based on the reference year sales distribution, as approximately 90% of the products are sold within the EU, this scenario is considered representative for the majority of the market. Modules C2–C4 include the treatment of electrical and electronic waste and material-specific waste streams (e.g. plastics) in accordance with applicable waste treatment routes. Module C3 covers the processing of recyclable material fractions and incineration with energy recovery for non-recyclable combustible materials, while module C4 includes final disposal of materials sent to landfill. Module D reports the potential benefits associated with material and energy recovery from the product and its packaging at end of life. Recyclable materials are assumed to substitute the production of corresponding virgin raw materials based on European average substitution scenarios. Combustible plastic fractions are not recycled are assumed to be incinerated with energy recovery, and the recovered energy is credited as substitution of European average electricity and heat production. Packaging materials (wood, paper and plastic) are treated according to European end-of-life scenarios, with recycling or energy recovery where applicable. All credits reported in Module D are calculated after the end-of-waste state and are presented separately from modules A–C, in accordance with the modularity and polluter-pays principles of EN 15804. Modules C2–C4 include the treatment of electrical and electronic waste and material-specific waste streams (e.g. plastics) in accordance with applicable waste treatment routes in EN 50693, Table G.4.

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

Excluded flows (cut-off) – quantitative justification
In accordance with EN 15804:2012+A2:2019 cut-off criteria, certain ancillary materials used in very small quantities during manufacturing have been excluded from the LCA model. These exclusions are based on a quantitative assessment demonstrating that their contribution remains below the cut-off thresholds for mass, energy, and environmental relevance. The excluded flows include machine cleaning solutions, lubricants and grease used for molds/forms release and equipment operation, cleaning cloths and absorbent materials, protective gloves, and minor auxiliary materials such as adhesives, inks, and markers. Annual consumption data for 2024 were collected and allocated to the total annual production volume. When expressed per declared unit, each excluded flow contributes only micro- or milligram-level quantities (e.g. in the order of 10^{-6}–10^{-4} kg or liters per unit). The combined mass of all excluded flows represents significantly less than 1% of the total product mass and remains well below the maximum 5% cut-off limit per module defined in EN 15804. Welding consumables are not used and therefore not applicable. No excluded flow contains substances that are expected to cause disproportionately high environmental impacts relative to their mass share.
All excluded materials are limited to ancillary manufacturing inputs and do not affect the function, performance, or durability of the product. Their exclusion does not alter the overall conclusions of the LCA and is considered

compliant with the cut-off rules and data quality requirements of EN 15804 and ISO 14044.

Reference service life (RSL) assumption

The reference service life applied in the LCA is an uncertain and generic value. The actual lifetime of the product is highly sensitive to the actual use conditions, installation quality, operating regime, and maintenance practices of the unit. The selected RSL is applied consistently for comparative and modelling purposes only. The LCA follows the Eurovent Recommendation on complementary Product Category Rules for ventilation units, published in February 2025.

PRODUCT & MANUFACTURING SITES GROUPING

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

This EPD is product and factory specific.

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_2e	7,04E-01	6,52E-01	3,90E-01	1,75E+00	2,53E-01	3,50E-01	0,0	0,0	0,0	0,0	0,0	1,07E+01	0,0	0,00E+00	9,42E-03	2,14E-01	9,72E-02	-3,88E-01
GWP – fossil	kg CO_2e	7,02E-01	6,51E-01	7,21E-01	2,07E+00	2,53E-01	1,45E-02	0,0	0,0	0,0	0,0	0,0	1,06E+01	0,0	0,00E+00	9,42E-03	2,15E-01	9,70E-02	-2,26E-01
GWP – biogenic	kg CO_2e	1,18E-03	1,44E-04	-3,33E-01	-3,32E-01	5,09E-05	3,35E-01	0,0	0,0	0,0	0,0	0,0	6,22E-02	0,0	0,00E+00	1,96E-06	-5,84E-04	1,80E-04	-1,63E-01
GWP – LULUC	kg CO_2e	7,27E-05	2,98E-04	2,45E-03	2,82E-03	9,10E-05	5,90E-06	0,0	0,0	0,0	0,0	0,0	2,24E-02	0,0	0,00E+00	3,75E-06	3,05E-05	1,06E-06	2,72E-04
Ozone depletion pot.	kg CFC_{-11}e	7,56E-09	9,67E-09	1,36E-08	3,08E-08	5,03E-09	1,56E-10	0,0	0,0	0,0	0,0	0,0	6,67E-08	0,0	0,00E+00	1,59E-10	1,64E-10	4,72E-11	-3,89E-10
Acidification potential	mol H^+e	2,72E-03	3,71E-03	2,36E-03	8,79E-03	5,29E-04	4,93E-05	0,0	0,0	0,0	0,0	0,0	5,27E-02	0,0	0,00E+00	3,04E-05	1,22E-04	2,49E-05	-1,53E-03
EP-freshwater[2)]	kg Pe	7,01E-05	4,84E-05	2,98E-04	4,16E-04	1,71E-05	3,51E-05	0,0	0,0	0,0	0,0	0,0	5,10E-03	0,0	0,00E+00	6,79E-07	7,28E-06	3,45E-07	-1,27E-04
EP-marine	kg Ne	1,60E-04	1,10E-03	6,16E-04	1,87E-03	1,27E-04	6,44E-05	0,0	0,0	0,0	0,0	0,0	1,07E-02	0,0	0,00E+00	1,01E-05	4,70E-05	9,53E-05	-3,28E-04
EP-terrestrial	mol Ne	1,05E-03	1,20E-02	6,01E-03	1,91E-02	1,37E-03	1,51E-04	0,0	0,0	0,0	0,0	0,0	1,07E-01	0,0	0,00E+00	1,09E-04	3,84E-04	1,18E-04	-3,20E-03
POCP ("smog")[3)]	kg NMVOCe	8,79E-04	4,28E-03	1,99E-03	7,14E-03	8,79E-04	5,53E-05	0,0	0,0	0,0	0,0	0,0	3,16E-02	0,0	0,00E+00	4,50E-05	1,03E-04	3,18E-05	-8,89E-04
ADP-minerals & metals[4)]	kg Sbe	2,99E-06	1,74E-06	1,43E-06	6,16E-06	8,43E-07	1,00E-07	0,0	0,0	0,0	0,0	0,0	1,06E-05	0,0	0,00E+00	3,08E-08	1,52E-07	7,80E-09	2,74E-08
ADP-fossil resources	MJ	9,90E+00	9,31E+00	1,08E+01	3,00E+01	3,56E+00	1,62E-01	0,0	0,0	0,0	0,0	0,0	1,42E+02	0,0	0,00E+00	1,32E-01	2,12E-01	2,92E-02	-2,09E+00
Water use[5)]	m^3e depr.	2,34E-02	4,49E-02	1,78E-01	2,47E-01	1,77E-02	3,08E-02	0,0	0,0	0,0	0,0	0,0	2,69E+00	0,0	0,00E+00	6,32E-04	1,63E-02	6,17E-03	5,30E-02

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	1,84E-08	6,11E-08	1,73E-08	9,67E-08	1,87E-08	5,44E-10	0,0	0,0	0,0	0,0	0,0	4,87E-07	0,0	0,00E+00	7,48E-10	1,29E-09	1,90E-10	-2,28E-08
Ionizing radiation[6)]	kBq U235e	3,40E-02	8,13E-03	1,16E-01	1,59E-01	4,59E-03	6,51E-04	0,0	0,0	0,0	0,0	0,0	1,49E+00	0,0	0,00E+00	1,38E-04	1,69E-03	4,44E-05	9,60E-04
Ecotoxicity (freshwater)	CTUe	4,81E+00	1,28E+00	1,62E+01	2,23E+01	4,74E-01	1,66E-01	0,0	0,0	0,0	0,0	0,0	2,93E+02	0,0	0,00E+00	1,91E-02	8,46E-01	3,19E-01	1,58E+00
Human toxicity, cancer	CTUh	6,74E-10	1,13E-10	2,71E-10	1,06E-09	4,25E-11	2,90E-11	0,0	0,0	0,0	0,0	0,0	1,20E-09	0,0	0,00E+00	1,60E-12	2,65E-11	8,38E-12	-2,71E-11
Human tox. non-cancer	CTUh	2,22E-09	5,77E-09	4,11E-09	1,21E-08	2,26E-09	2,60E-10	0,0	0,0	0,0	0,0	0,0	6,20E-08	0,0	0,00E+00	8,30E-11	1,01E-09	3,71E-10	-1,02E-09
SQP[7)]	-	5,79E-01	8,60E+00	3,38E+01	4,29E+01	2,16E+00	5,68E-02	0,0	0,0	0,0	0,0	0,0	1,99E+01	0,0	0,00E+00	8,00E-02	9,77E-02	3,09E-02	-1,35E+01

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	2,19E-01	1,27E-01	4,21E+00	4,56E+00	6,23E-02	-2,60E+00	0,0	0,0	0,0	0,0	0,0	1,89E+01	0,0	0,00E+00	2,05E-03	2,60E-02	9,27E-04	-2,07E+00
Renew. PER as material	MJ	2,44E-03	0,00E+00	2,78E+00	2,79E+00	0,00E+00	-2,78E+00	0,0	0,0	0,0	0,0	0,0	0,00E+00	0,0	0,00E+00	0,00E+00	0,00E+00	-2,37E-03	1,63E+00
Total use of renew. PER	MJ	2,21E-01	1,27E-01	7,00E+00	7,35E+00	6,23E-02	-5,39E+00	0,0	0,0	0,0	0,0	0,0	1,89E+01	0,0	0,00E+00	2,05E-03	2,60E-02	-1,44E-03	-4,39E-01
Non-re. PER as energy	MJ	1,08E+01	9,31E+00	1,02E+01	3,03E+01	3,56E+00	1,61E-01	0,0	0,0	0,0	0,0	0,0	1,42E+02	0,0	0,00E+00	1,32E-01	-4,61E+00	-3,02E+00	-2,11E+00
Non-re. PER as material	MJ	4,66E-04	0,00E+00	1,38E-01	1,38E-01	0,00E+00	-1,34E-01	0,0	0,0	0,0	0,0	0,0	0,00E+00	0,0	0,00E+00	0,00E+00	0,00E+00	-4,53E-04	2,44E-02
Total use of non-re. PER	MJ	1,08E+01	9,31E+00	1,03E+01	3,04E+01	3,56E+00	2,64E-02	0,0	0,0	0,0	0,0	0,0	1,42E+02	0,0	0,00E+00	1,32E-01	-4,61E+00	-3,02E+00	-2,09E+00
Secondary materials	kg	1,36E-02	4,06E-03	3,99E-02	5,76E-02	1,65E-03	8,69E-05	0,0	0,0	0,0	0,0	0,0	1,49E-02	0,0	0,00E+00	5,99E-05	2,09E-04	2,05E-05	7,34E-02
Renew. secondary fuels	MJ	5,22E-06	4,74E-05	5,04E-02	5,05E-02	2,09E-05	5,81E-07	0,0	0,0	0,0	0,0	0,0	7,25E-05	0,0	0,00E+00	7,60E-07	9,12E-06	6,15E-07	-1,21E-03
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,0	0,0	0,0	0,0	0,0	0,00E+00	0,0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	1,25E-02	1,33E-03	4,05E-03	1,79E-02	4,86E-04	-8,22E-05	0,0	0,0	0,0	0,0	0,0	6,29E-02	0,0	0,00E+00	1,77E-05	2,96E-04	-5,98E-05	-1,12E-04

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	1,02E-01	1,56E-02	5,76E-02	1,75E-01	5,18E-03	1,13E-03	0,0	0,0	0,0	0,0	0,0	1,00E+00	0,0	0,00E+00	2,10E-04	4,86E-03	1,62E-03	-1,42E-02
Non-hazardous waste	kg	7,50E-01	2,86E-01	1,49E+00	2,53E+00	1,09E-01	2,09E-01	0,0	0,0	0,0	0,0	0,0	2,47E+01	0,0	0,00E+00	4,16E-03	1,30E-01	2,64E-01	-7,95E-01
Radioactive waste	kg	7,83E-05	1,99E-06	2,84E-05	1,09E-04	1,14E-06	1,62E-07	0,0	0,0	0,0	0,0	0,0	3,62E-04	0,0	0,00E+00	3,40E-08	4,13E-07	1,12E-08	5,10E-07

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	0,0	0,0	0,0	0,0	0,0	0,00E+00	0,0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	5,40E-05	0,00E+00	0,00E+00	5,40E-05	0,00E+00	1,19E-01	0,0	0,0	0,0	0,0	0,0	0,00E+00	0,0	0,00E+00	0,00E+00	2,82E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	1,35E-02	1,35E-02	0,00E+00	3,84E-21	0,0	0,0	0,0	0,0	0,0	0,00E+00	0,0	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	1,48E-01	0,0	0,0	0,0	0,0	0,0	0,00E+00	0,0	0,00E+00	0,00E+00	1,12E+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	6,22E-02	0,0	0,0	0,0	0,0	0,0	0,00E+00	0,0	0,00E+00	0,00E+00	4,69E-01	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	8,53E-02	0,0	0,0	0,0	0,0	0,0	0,00E+00	0,0	0,00E+00	0,00E+00	6,50E-01	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	6,67E-01	6,48E-01	7,20E-01	2,03E+00	2,52E-01	2,82E-02	0,0	0,0	0,0	0,0	0,0	1,06E+01	0,0	0,00E+00	9,36E-03	2,15E-01	9,68E-02	-2,24E-01
Ozone depletion Pot.	kg CFC_{-11}e	1,29E-09	7,71E-09	1,10E-08	2,00E-08	4,01E-09	1,49E-10	0,0	0,0	0,0	0,0	0,0	5,65E-08	0,0	0,00E+00	1,27E-10	1,44E-10	4,08E-11	-3,46E-10
Acidification	kg SO_2e	2,25E-03	2,89E-03	1,89E-03	7,02E-03	4,24E-04	3,84E-05	0,0	0,0	0,0	0,0	0,0	4,37E-02	0,0	0,00E+00	2,32E-05	9,51E-05	1,78E-05	-1,26E-03
Eutrophication	kg PO_4^3e	2,96E-04	5,29E-04	1,71E-03	2,53E-03	1,07E-04	2,51E-05	0,0	0,0	0,0	0,0	0,0	5,46E-03	0,0	0,00E+00	5,77E-06	2,18E-05	9,69E-06	-1,27E-04
POCP (“smog”)	kg C_2H_4e	3,47E-04	2,05E-04	1,49E-04	7,01E-04	4,49E-05	7,47E-06	0,0	0,0	0,0	0,0	0,0	2,35E-03	0,0	0,00E+00	2,14E-06	6,47E-06	1,80E-06	-7,76E-05
ADP-elements	kg Sbe	2,89E-06	1,70E-06	1,35E-06	5,94E-06	8,24E-07	9,92E-08	0,0	0,0	0,0	0,0	0,0	1,04E-05	0,0	0,00E+00	3,01E-08	1,47E-07	5,73E-09	2,38E-08
ADP-fossil	MJ	1,83E+01	9,18E+00	8,90E+00	3,64E+01	3,49E+00	1,53E-01	0,0	0,0	0,0	0,0	0,0	1,18E+02	0,0	0,00E+00	1,30E-01	1,85E-01	2,85E-02	-2,14E+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	7,03E-01	6,52E-01	7,23E-01	2,08E+00	2,53E-01	1,45E-02	0,0	0,0	0,0	0,0	0,0	1,06E+01	0,0	0,00E+00	9,42E-03	2,15E-01	9,70E-02	-2,25E-01

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. In addition, the characterisation factors for the flows – CH4 fossil, CH4 biogenic and Dinitrogen monoxide – were updated. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterisation factor for biogenic CO2 is set to zero.

SCENARIO DOCUMENTATION

DATA SOURCES

Manufacturing energy scenario documentation – A3

Scenario parameter	Value
Electricity data source and quality	Electricity, medium voltage, residual mix, Latvia, Ecoinvent 3.11
Electricity CO2e / kWh	0.69 kg CO2e/kWh

Transport scenario documentation - A4

Scenario parameter	Value
Fuel type, consumption, and vehicle type	· EURO 6 lorry (16–32 t, diesel), 0.33 L/km · Sea ferry (RoRo), 0.02 L/tkm
Average transport distance, km	· lorry 2103,16 km · ferry 17,98 km
Capacity utilization (including empty return) %	75
Bulk density of transported products	3,01E+01
Volume capacity utilization factor	1

Installation scenario documentation - A5

Scenario parameter	Value
Ancillary materials for installation (specified by material) / kg or other units as appropriate	Steel screw: 0.003 kg
Water use / m^3	0 kg
Other resource use / kg	0 kg
Quantitative description of energy type (regional mix) and consumption during the installation process / kWh or MJ	No energy consumption (manual installation only)
Waste materials on the building site before waste processing, generated by the product's installation (specified by type) / kg	· PE 0.000092 kg · Wood waste 0.059kg · Paper waste 0.1209 kg
Output materials (specified by type) as result of waste processing at the building site e.g. collection for recycling, for energy recovery, disposal (specified by route) / kg	· Exported electricity 0.06223MJ · Exported thermal energy 0.08532MJ · Polyethylene recycling 0.000037kg · Polyethylene incineration with energy recovery: 0.000034kg · Polyethylene landfill 0.000021kg · Wood recycling (sorting and shredding) 0.019kg · Wood incineration with energy recovery: 0.0180kg · Wood landfill: 0.0220kg · Paper recycling (sorting): 0.1kg · Paper incineration with energy recovery: 0.0099kg · Paper landfill: 0.0110kg
Direct emissions to ambient air, soil and water / kg	0

Use stages scenario documentation - B2 Maintenance

Scenario information	Value
Maintenance process / Description or source where description can be found	Maintenance of the product consists of occasional dry surface cleaning only, performed using a dry paper cloth or similar material. No water, detergents, or cleaning chemicals are required during normal use. Consequently, water use and cleaning agents are excluded from the LCA based on the cut-off criteria, as their use is not expected and their potential environmental impact would be negligible.
Maintenance cycle / Number per RSL or year *(Not applicable if only B2 is declared)*	1 per year

Use stages scenario documentation - B3 Repair

Scenario information	Value
Repair process / Description or source where description can be found	No repair activities are foreseen during the reference service life under normal use conditions. The product is designed for maintenance-free operation, and no replacement of parts or repair processes are required. Therefore, Module B3 is not declared and no environmental impacts are assigned to this module.

Inspection Process / Description or source where description can be found	No regular inspection activities are required during the reference service life under normal use conditions. Visual checks, if performed, do not require additional materials, energy, or transport and are therefore excluded from the LCA based on the cut-off criteria.
Repair cycle / Number per RSL or year	0 per RSL

Use stages scenario documentation - B4 Replacement

Scenario information	Value
Replacement cycle / Number per RSL or year	0 (no replacement during RSL)

Use stages scenario documentation - B5 Refurbishment

Scenario information	Value
Refurbishment process / Description or source where description can be found	No refurbishment activities are foreseen during the reference service life under normal use conditions. The product is not designed to be refurbished (e.g., reconditioned, repainted, or overhauled) as part of its intended use. Therefore, Module B5 is not declared and no environmental impacts are assigned to this module.
Refurbishment cycle / Number per RSL or year	0 (no refurbishment during RSL)

Use stages scenario documentation - B6 (Energy data source)

Scenario parameter	Value
Electricity data source and quality	Electricity, medium voltage, World, Ecoinvent 3.11,
Electricity CO2e / kWh	15.6 kWh kgCO2e/kWh

Use stages scenario documentation - B7 (Water data source)

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	No ancillary materials are required during the operational energy use (B6) or operational water use (B7) stages. The product does not require consumables, auxiliary materials, or additional resources during normal operation. Therefore, no ancillary materials are included in these modules.
Characteristic performance, e.g., energy efficiency, emissions, variation of performance with capacity utilization, etc.	The product consumes electricity during operation. Operational energy use is calculated in accordance with Commission Delegated Regulation (EU) No 1254/2014 for residential ventilation units, using standard EU operating conditions. The calculation is based on continuous operation (8760 hours per year), a rated electrical power of 15 W at an airflow of 100 m^3/h, and a specific input power (SPI) of 0.15 $W/(m^3/h)$. Over the 17-year reference service life, the total operational electricity consumption amounts to 15.6 kWh per declared unit.

	No operational water use occurs during normal use conditions.
Further assumptions for scenario development, e.g., frequency and period of use, number of occupants	Continuous operation under standard EU conditions. No operational water use.

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

Scenario parameter	Value
Collection process – kg collected separately	0.449455 kg
Collection process – kg collected with mixed waste	0 kg
Recovery process – kg for re-use	0 kg
Recovery process – kg for recycling	0.28245kg
Recovery process – kg for energy recovery	0.1225kg
Disposal (total) – kg for final deposition	0.0445kg
Output materials (energy)	· Exported electricity: 0.469 MJ · Exported thermal energy: 0.65 MJ
Scenario assumptions e.g. transportation	Separately collected EoL waste is treated with EU-average processes. Waste is transported by EURO 6 truck to treatment/disposal. Typical transport distances applied: 50-250 km depending on route (recycling/incineration/landfill).

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

#SIGNATURE#