ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Circular ventilation ducts (metal, folded, M1)
SIA EIROPLASTS

EPD HUB, HUB-3840
Published on 19.08.2025, last updated on 19.08.2030

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.1 (5 Dec 2023) and JRC characterization factors EF 3.1.

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	SIA EIROPLASTS
Address	32/6 Granīta Street, Acone, LV-2119, Latvia
Contact details	europlast@europlast.lv
Website	https://www.europlast.lv

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	ISO 14025
PCR	EPD Hub Core PCR Version 1.1, 5 Dec 2023
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with 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	Sarah Curpen, 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	Circular ventilation ducts (metal, folded, M1)
Additional labels	Metal ventilation duct
Product reference	SDM100
Place of production	Latvia
Period for data	01/01/2024 - 31/12/2024
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	−9,6%
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg of spiral duct
Declared unit mass	1 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	2,89E+00
GWP-total, A1-A3 ($kgCO_2e$)	2,41E+00
Secondary material, inputs (%)	2,65
Secondary material, outputs (%)	85
Total energy use, A1-A3 (kWh)	11
Net freshwater use, A1-A3 (m^3)	0

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

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

PRODUCT DESCRIPTION

EUROPLAST ventilation ducts are designed for efficient air distribution in modern building ventilation systems and are manufactured from hot-dip galvanized steel with a Z275 surface coating, ensuring corrosion resistance in accordance with class C3. This makes them particularly suitable for use in buildings with moderate humidity and airborne pollutants, such as urban developments and selected industrial environments. The ducts are produced in standard lengths of 3 meters, with options for other lengths, materials, and thicknesses upon request. Spiral ducts are sealed at both ends with rubber caps, protecting against contamination during transport and storage. This hygienic protection supports the product's M1 cleanliness classification, which guarantees minimal emissions and helps maintain high indoor air quality by preventing the release of harmful gases, odors, or particles into the air handling system. Designed to withstand airflow temperatures up to +120°C, EUROPLAST ducts are also suitable for high-temperature applications such as commercial kitchens and industrial processes. Their durable construction, clean delivery, and ease of installation make them a reliable and environmentally conscious choice for a wide range of commercial and industrial ventilation needs.

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

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	100	Europe

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	0,2778

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg of spiral duct
Mass per declared unit	1 kg
Reference service life	50

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		
×	×	×	×	×	MND	MND	MND	MND	MND	MND	MND	×	×	×	×	×		
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 = MND. 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.

A1: The product is manufactured from high-quality, metal-coated steel sheets, specifically designed for use as hygienic ventilation ducts. The raw materials are processed at the production facility, where steel coils are fed into forming machines that shape the ducts into a spiral configuration and join the seams securely. A small amount of lubrication oil is used in this process, and quality checks ensure dimensional accuracy. Material losses during forming are minimal but are accounted for in the assessment.

A3: Ancillary materials include custom-made wooden packaging with vertical supports to stabilize the product during storage and transport. LDPE (low-density polyethylene) plastic end caps also protect the duct openings and maintain hygiene until installation. All packaging materials are included in the environmental impact assessment. Transport of both raw materials and finished products is conducted by truck, and electricity consumption, including transmission losses, is included in the analysis. Waste generated during the manufacturing and packaging stages is collected and handled by facility waste management protocols.
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 (A4): The transportation impacts from delivering final products to the construction site include direct exhaust emissions from fuel, the environmental impacts of fuel production, and emissions related to transportation infrastructure. Transportation is typically carried out using lorries, the most common method in the region. The vehicle capacity

utilization volume factor is assumed to be moderate. Variations in load are considered negligible due to the minor role of transportation emissions in the overall environmental impact. It is assumed that the transportation company efficiently manages return trips to serve the needs of other clients, and there are no losses during transit as products are securely packaged.

Installation (A5): Environmental impacts during installation involve the management of wood packaging materials. Wooden pallets used in transport are 100% reused, which helps mitigate environmental impact. The analysis excludes the energy and materials used during the product installation itself, focusing instead on the end-of-life treatment of the installation materials.

PRODUCT END OF LIFE (C1-C4, D)

C1: The modeling approach for the deconstruction phase is based on conservative assumptions, as this stage represents less than 1% of the total energy demand. Demolition is assumed to be primarily manual, thereby minimizing the environmental impact related to energy use. No heavy machinery is modeled at this stage.

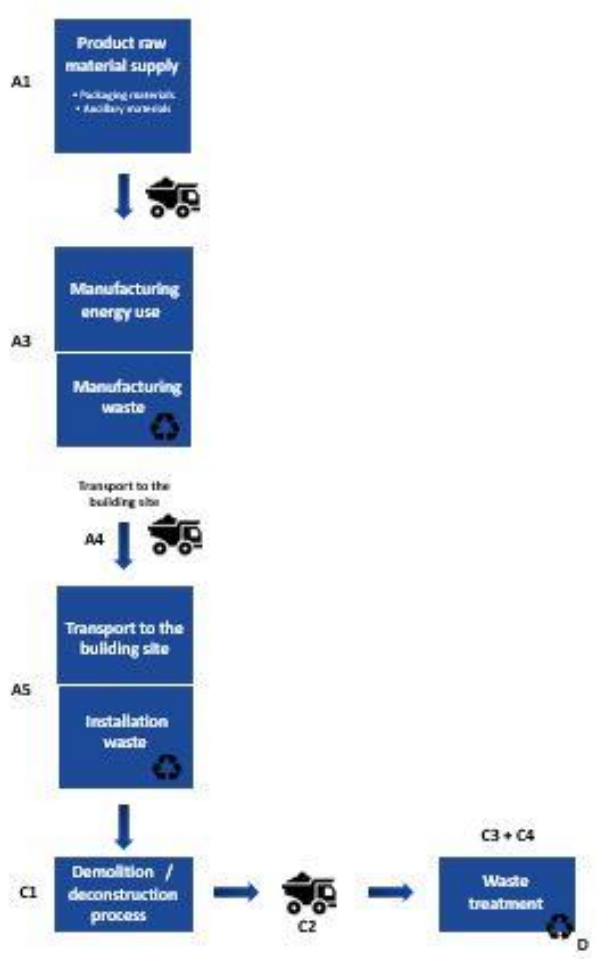
C2: Post-demolition, waste materials are collected and transported by road to appropriate waste treatment facilities. An average transport distance of 150 km is assumed, representative of regional logistics within the EU and Scandinavian context. For steel waste, 85% is recycled while 15% is directed to landfill. Other materials are transported to recycling or incineration facilities as appropriate.

C3: The waste processing phase includes sorting, shredding, and preparing materials such as polyvinyl chloride (PVC) and polyethylene for recycling. Conservative assumptions have been used to avoid overestimation of environmental benefits. Where applicable, materials are modeled using proxy datasets to reflect the treatment process. A portion of the materials is incinerated with energy recovery, modeled using lower heating values (LHV) appropriate to PVC content.

C4: This phase covers the final disposal of materials that are not recycled. Landfilling and incineration with no material recovery are included. Specific quantities of waste are modeled according to their disposal routes, including PVC and polyethylene incineration and landfilling of residual material. Environmental impacts are calculated conservatively to reflect the true end-of-life burden.

Module D accounts for potential environmental benefits from the recycling and energy recovery of materials at end-of-life. Recycled PVC and polyethylene provide credits based on the substitution of virgin materials. Additionally, incineration of waste generates thermal energy and electricity, which are credited based on the displacement of conventional energy sources. Packaging materials (wood, paper, and plastic) are also considered for recycling or energy recovery, and corresponding benefits are included. All credits are calculated under EN 15804, avoiding double counting with Module C3.

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	-
Packaging material	-
Ancillary materials	-
Manufacturing energy and waste	-

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on a representative product
Variation in GWP-fossil for A1-A3, %	-8,2%/+8,9%

The average of minimum and maximum calculations for the representative product is less than 10%.

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	2,54E+00	2,38E-01	-3,68E-01	2,41E+00	1,24E-01	4,92E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,62E-02	5,33E-02	1,21E-02	-1,97E-01
GWP – fossil	kg CO_2e	2,54E+00	2,38E-01	1,12E-01	2,89E+00	1,24E-01	1,11E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,61E-02	5,33E-02	1,21E-02	-6,73E-02
GWP – biogenic	kg CO_2e	0,00E+00	1,95E-08	-4,81E-01	-4,81E-01	0,00E+00	4,81E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,30E-01
GWP – LULUC	kg CO_2e	7,23E-04	1,06E-04	3,92E-04	1,22E-03	5,54E-05	1,46E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,22E-06	5,46E-06	6,09E-06	-5,87E-05
Ozone depletion pot.	kg $CFC\text{-}_{11}$e	1,22E-13	3,51E-09	1,94E-09	5,45E-09	1,83E-09	1,64E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,38E-10	8,16E-10	2,02E-10	-1,33E-08
Acidification potential	mol H^+e	7,15E-03	8,11E-04	5,60E-04	8,52E-03	4,22E-04	5,46E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,51E-05	4,81E-04	9,95E-05	-3,17E-04
EP-freshwater[2)]	kg Pe	2,34E-06	1,85E-05	3,13E-05	5,22E-05	9,64E-06	2,58E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,26E-06	1,54E-06	4,96E-07	-2,44E-05
EP-marine	kg Ne	1,76E-03	2,67E-04	1,53E-04	2,18E-03	1,39E-04	9,16E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,81E-05	2,23E-04	4,50E-05	-5,54E-05
EP-terrestrial	mol Ne	1,91E-02	2,90E-03	1,70E-03	2,37E-02	1,51E-03	2,22E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,97E-04	2,44E-03	4,92E-04	-5,63E-04
POCP ("smog")[3)]	kg NMVOCe	5,23E-03	1,20E-03	7,41E-04	7,17E-03	6,22E-04	7,36E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	8,11E-05	7,28E-04	1,50E-04	-2,43E-04
ADP-minerals & metals[4)]	kg Sbe	1,80E-04	6,64E-07	4,36E-07	1,81E-04	3,45E-07	2,64E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,50E-08	1,91E-08	1,05E-08	-4,89E-08
ADP-fossil resources	MJ	2,98E+01	3,45E+00	1,94E+03	1,97E+03	1,80E+00	1,42E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,34E-01	6,97E-01	1,71E-01	-1,78E+00
Water use[5)]	m^3e depr.	1,63E-01	1,71E-02	5,20E-02	2,32E-01	8,87E-03	3,65E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,16E-03	1,74E-03	5,02E-04	-4,98E-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	0,00E+00	2,38E-08	8,38E-09	3,22E-08	1,24E-08	9,83E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,62E-09	1,37E-08	2,74E-09	-2,93E-09
Ionizing radiation[6)]	kBq U235e	0,00E+00	3,01E-03	1,22E-02	1,52E-02	1,56E-03	3,58E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,04E-04	3,09E-04	9,45E-05	-3,65E-02
Ecotoxicity (freshwater)	CTUe	0,00E+00	4,88E-01	3,61E-01	8,49E-01	2,54E-01	1,01E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,31E-02	3,84E-02	1,65E-02	-2,05E-01
Human toxicity, cancer	CTUh	0,00E+00	3,93E-11	4,59E-10	4,98E-10	2,04E-11	4,82E-12	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,66E-12	5,48E-12	1,59E-12	-3,83E-10
Human tox. non-cancer	CTUh	0,00E+00	2,24E-09	9,27E-10	3,16E-09	1,16E-09	2,91E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,52E-10	8,67E-11	3,71E-11	-4,49E-10
SQP[7)]	-	0,00E+00	3,48E+00	3,85E+01	4,19E+01	1,81E+00	1,39E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,36E-01	4,88E-02	7,33E-02	-2,24E-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	1,95E+00	4,73E-02	2,92E+00	4,91E+00	2,46E-02	-4,15E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,21E-03	4,41E-03	1,40E-03	7,40E-01
Renew. PER as material	MJ	0,00E+00	0,00E+00	4,21E+00	4,21E+00	0,00E+00	-4,21E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,12E+00
Total use of renew. PER	MJ	1,95E+00	4,73E-02	7,13E+00	9,12E+00	2,46E-02	-8,36E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,21E-03	4,41E-03	1,40E-03	1,86E+00
Non-re. PER as energy	MJ	2,98E+01	3,45E+00	1,19E+00	3,44E+01	1,80E+00	-4,39E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,34E-01	6,97E-01	1,71E-01	-1,03E+00
Non-re. PER as material	MJ	0,00E+00	0,00E+00	2,78E-01	2,78E-01	0,00E+00	-2,78E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,50E-02
Total use of non-re. PER	MJ	2,98E+01	3,45E+00	1,47E+00	3,47E+01	1,80E+00	-7,17E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,34E-01	6,97E-01	1,71E-01	-9,59E-01
Secondary materials	kg	2,65E-02	1,47E-03	1,57E-02	4,37E-02	7,65E-04	9,22E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	9,97E-05	2,90E-04	7,08E-05	-7,98E-05
Renew. secondary fuels	MJ	8,68E-23	1,87E-05	1,42E-01	1,42E-01	9,71E-06	9,53E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,27E-06	7,57E-07	4,00E-07	-5,41E-07
Non-ren. secondary fuels	MJ	1,02E-21	0,00E+00	0,00E+00	1,02E-21	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	4,99E-04	5,10E-04	3,10E-03	4,11E-03	2,66E-04	-4,28E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,46E-05	4,61E-05	3,58E-05	-8,62E-01

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	6,48E-02	5,85E-03	5,89E-03	7,65E-02	3,04E-03	8,62E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,97E-04	7,76E-04	2,06E-04	-2,69E-03
Non-hazardous waste	kg	7,75E-02	1,08E-01	1,71E-01	3,57E-01	5,63E-02	7,19E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,35E-03	1,06E-02	5,03E-03	-1,18E-01
Radioactive waste	kg	5,65E-04	7,36E-07	3,15E-06	5,69E-04	3,83E-07	8,93E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,00E-08	7,57E-08	2,32E-08	-3,06E-06

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	MND	MND	MND	MND	MND	MND	MND	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	2,00E-02	2,00E-02	0,00E+00	8,90E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	8,50E-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	8,30E-02	MND	MND	MND	MND	MND	MND	MND	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	4,50E-01	MND	MND	MND	MND	MND	MND	MND	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	2,60E-01	MND	MND	MND	MND	MND	MND	MND	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	1,90E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

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	2,47E+00	2,37E-01	1,12E-01	2,82E+00	1,23E-01	1,74E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,61E-02	5,30E-02	1,20E-02	-6,65E-02
Ozone depletion Pot.	kg $CFC_{-11}e$	2,16E-13	2,80E-09	1,58E-09	4,39E-09	1,46E-09	1,32E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,90E-10	6,46E-10	1,60E-10	-1,32E-08
Acidification	kg SO_2e	5,74E-03	6,20E-04	4,36E-04	6,80E-03	3,22E-04	4,06E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,20E-05	3,38E-04	7,05E-05	-2,66E-04
Eutrophication	kg PO_4^3e	6,17E-04	1,51E-04	3,59E-03	4,36E-03	7,85E-05	1,61E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,02E-05	7,90E-05	1,72E-05	-4,05E-05
POCP (“smog”)	kg C_2H_4e	5,31E-04	5,52E-05	6,39E-05	6,51E-04	2,87E-05	4,84E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,75E-06	2,53E-05	5,44E-06	-3,19E-05
ADP-elements	kg Sbe	1,80E-04	6,47E-07	4,26E-07	1,81E-04	3,37E-07	2,54E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,39E-08	1,86E-08	1,03E-08	-4,84E-08
ADP-fossil	MJ	2,84E+01	3,41E+00	1,94E+03	1,97E+03	1,77E+00	1,36E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,31E-01	6,92E-01	1,70E-01	-1,57E+00

ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[9)]	kg CO_2e	2,54E+00	2,38E-01	1,13E-01	2,89E+00	1,24E-01	1,12E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,62E-02	5,33E-02	1,21E-02	-6,74E-02

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.

THIRD-PARTY VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier. The project report on the Life Cycle Assessment and the report(s) on features of environmental relevance are filed at EPD Hub. EPD Hub PCR and ECO Platform verification checklist are used.

EPD Hub is not able to identify any unjustified deviations from the PCR and EN 15802+A2 in the Environmental Product Declaration and its project report.

EPD Hub maintains its independence as a third-party body; it was not involved in the execution of the LCA or in the development of the declaration and has no conflicts of interest regarding this verification.

The company-specific data and upstream and downstream data have been examined as regards plausibility and consistency. The publisher is responsible for ensuring the factual integrity and legal compliance of this declaration.

The software used in creation of this LCA and EPD is verified by EPD Hub to conform to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules and General Program Instructions.

Verified tools

Tool verifier: Magaly Gonzalez Vazquez
Tool verification validity: 27 March 2025 - 26 March 2028

Sarah Curpen, as an authorized verifier acting for EPD Hub Limited
19.08.2025