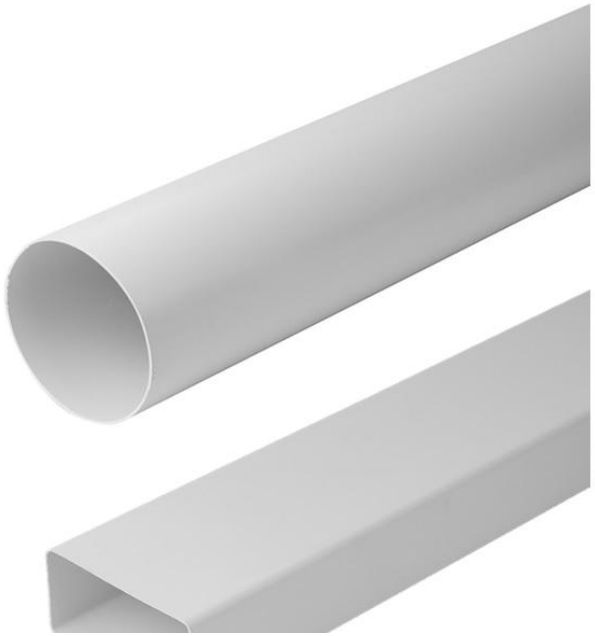
ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

Plastic ventilation duct
SIA EIROPLASTS



EPD HUB, HUB-3229
Published on 27.04.2025, last updated on 27.04.2025, valid until 26.04.2030

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, Salaspils municipality, 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	EN 15804+A2:2019 and 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 options, A4-A5, 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	Sarah Curpen, as an authorized verifier acting for EPD Hub Limited.

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	Plastic ventilation duct
Additional labels	Plastic ventilation duct round or rectangular
Product reference	A100-1
Place of production	Latvia
Period for data	01/01/2023 - 31/12/2023
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3	-4,1%/-6,8% %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg of the product
Declared unit mass	1 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	3,99E+00
GWP-total, A1-A3 ($kgCO_2e$)	3,18E+00
Secondary material, inputs (%)	1,57
Secondary material, outputs (%)	70
Total energy use, A1-A3 (kWh)	16,1
Net freshwater use, A1-A3 (m^3)	0,03

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

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

PRODUCT DESCRIPTION

A ventilation air duct made from durable plastic, specifically designed for both supply and exhaust ventilation systems, offers exceptional flame retardancy, high resistance to water and chemicals, and is fully recyclable. This EUROPLAST plastic round air duct is ideal for indoor ventilation systems in small to medium-sized residential or commercial spaces. It can be installed beneath suspended ceilings, within walls, or left exposed for open installations. Featuring a versatile range of connectors and adapters, this duct facilitates straightforward assembly of ventilation systems in both horizontal and vertical orientations, accommodating various angles and connection needs. The ductwork is sturdy, requiring minimal adjustments and resistant to sagging, ensuring long-term reliability. The assembly process is quick, simple, and clean, utilizing connection elements that do not require sealants or additional fasteners. Durable yet lightweight, this air duct helps minimize labor and operational costs.

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

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	-	-
Minerals	-	-
Fossil materials	100	Europe
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	0,5005

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg of unit
Mass per declared unit	1 kg

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	MND	MND	MND	MND	MND	MND	MND	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 = 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.

The product is made from high-quality polyvinylchloride and is specifically designed as a hygienic ventilation duct. This duct is engineered to ensure no emission of odors, flavors, heavy metals, or other substances that could be harmful to health. The manufacturing process includes extrusion to precise dimensions, cooling, and secure packaging. The finished ducts are then packed in plastic materials and distributed to construction warehouses, ready for installation.

The product is manufactured using an extrusion line and temporarily stored nearby. When it is time for packaging, the product is transported approximately 30 meters to an automated packaging line named ULMA, which consumes roughly 0.0106 kWh of electricity. During this stage, the plastic pipe is packaged in polyethylene and labeled accordingly. Subsequently, workers manually place the pipes into boxes, adding two sheets of cardboard between six units for protection. Finally, the boxed products are moved to storage.

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: Transportation to retail locations is determined by annual sales and considers the number of delivery points. Products are then distributed to construction sites mainly via road, using fully loaded vehicles; return trips are not included in these calculations as they are typically used by transport companies for other deliveries. The environmental impact of transportation mainly stems from the disposal of packaging waste and the emissions of biogenic carbon dioxide from wood pallets. Furthermore, the lifecycle impacts include the production, processing, and disposal of materials as installation waste. A5: Energy consumption during the installation process

is not extensively modeled, as it accounts for less than 1% of the total energy requirement. Only minimal electricity is used, mainly for cutting pipes (when necessary) and drilling holes in walls. The installation predominantly involves manual labor for tasks such as connecting round ducts and installing valves, and the energy associated with these manual tasks is incorporated into the overall calculations.

PRODUCT USE AND MAINTENANCE (B1-B7)

The use stage is not assessed as it is no impacts are expected to occur during the use of the product.
Air, soil, and water impacts during the use phase have not been studied.

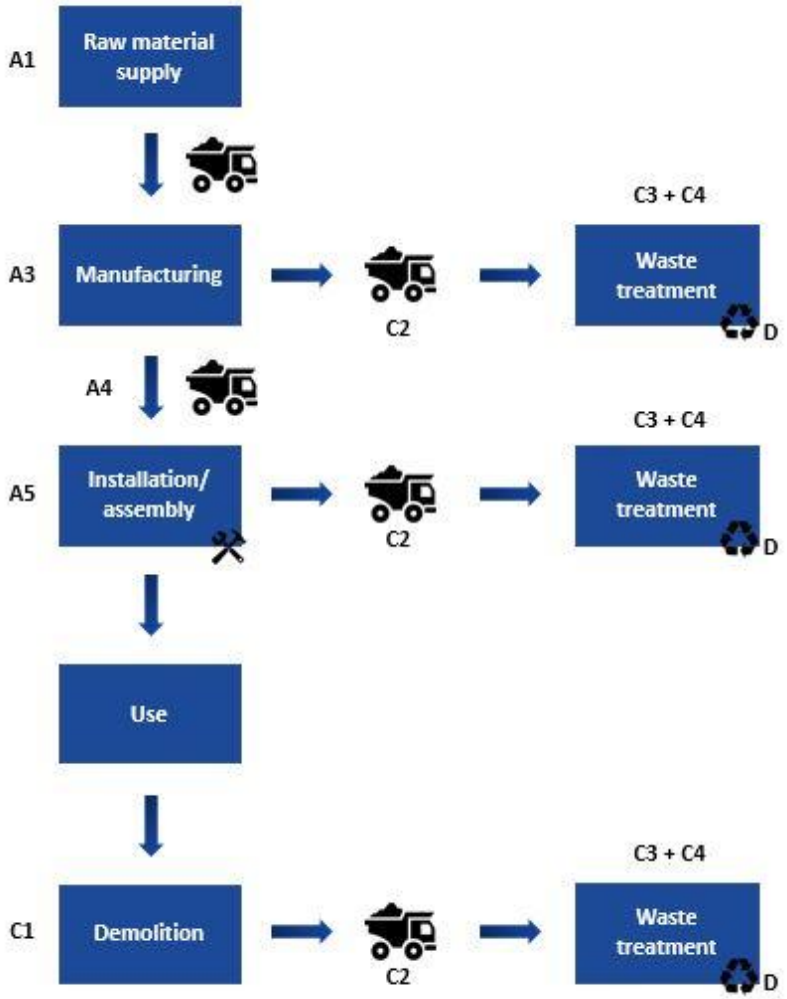
PRODUCT END OF LIFE (C1-C4, D)

C1: The modeling approach for the demolition or deconstruction phase is adopted with a conservative assumption, as it accounts for less than 1% of the total energy requirement. The demolition predominantly involves manual labor, further minimizing energy consumption.

C2: Waste is collected separately and transported by trucks or lorries to waste treatment facilities. Of this, 70% of the material, representing polyvinyl chloride (PVC), is directed to recycling, 20% is sent to incineration facilities, and 10% is disposed of in a landfill.

C3-C4: The modeling approach for both waste processing for reuse, recovery, and/or recycling (C3) and waste disposal (C4) was adopted with a conservative assumption. This ensures that the treatment and disposal processes are cautiously estimated, focusing on minimizing the potential overestimation of environmental benefits and impacts. C3 encompasses activities like sorting and recycling, aiming to prepare waste materials for further use or transformation. C4 deals with the final disposal of waste, including landfilling and incineration, where no further material recovery is expected.

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.

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	-

AVERAGES AND VARIABILITY

Type of average	Multiple products
Averaging method	Averaged by shares of total mass
Variation in GWP-fossil for A1-A3	-4,1%/-6,8% %

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

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

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	3,13E+00	1,82E-01	-1,37E-01	3,18E+00	1,25E-01	8,97E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,08E-03	5,42E-01	6,84E-03	-2,52E+00
GWP – fossil	kg CO_2e	3,13E+00	1,82E-01	6,76E-01	3,99E+00	1,25E-01	7,53E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,08E-03	5,42E-01	6,84E-03	-2,16E+00
GWP – biogenic	kg CO_2e	0,00E+00	0,00E+00	-8,22E-01	-8,22E-01	0,00E+00	8,22E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-3,60E-01
GWP – LULUC	kg CO_2e	2,95E-03	6,45E-05	9,24E-03	1,23E-02	5,59E-05	2,22E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,82E-07	1,17E-04	7,26E-07	-5,72E-04
Ozone depletion pot.	kg CFC_{-11}e	8,85E-07	3,64E-09	1,59E-08	9,04E-07	1,84E-09	2,74E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,59E-11	2,29E-09	2,93E-11	-8,24E-07
Acidification potential	mol H^+e	1,29E-02	9,94E-04	3,15E-03	1,71E-02	4,26E-04	1,01E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,67E-06	4,94E-04	8,26E-06	-1,10E-02
EP-freshwater[2)]	kg Pe	8,68E-04	1,21E-05	3,92E-04	1,27E-03	9,73E-06	4,82E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	8,38E-08	3,13E-05	1,20E-07	-2,36E-04
EP-marine	kg Ne	2,57E-03	4,15E-04	1,07E-03	4,05E-03	1,40E-04	1,18E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,21E-06	2,09E-04	3,90E-05	-1,93E-03
EP-terrestrial	mol Ne	2,68E-02	4,53E-03	7,60E-03	3,89E-02	1,52E-03	3,88E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,31E-05	1,43E-03	3,33E-05	-2,10E-02
POCP ("smog")[3)]	kg NMVOCe	1,21E-02	1,50E-03	2,87E-03	1,65E-02	6,28E-04	1,30E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,41E-06	4,47E-04	1,28E-05	-6,71E-03
ADP-minerals & metals[4)]	kg Sbe	3,96E-05	5,94E-07	2,85E-06	4,30E-05	3,48E-07	8,82E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,00E-09	9,21E-07	2,69E-09	-4,57E-05
ADP-fossil resources	MJ	6,24E+01	2,57E+00	1,40E+01	7,90E+01	1,81E+00	2,39E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,56E-02	1,04E+00	2,52E-02	-4,19E+01
Water use[5)]	m^3e depr.	9,02E-01	1,26E-02	8,12E+00	9,03E+00	8,95E-03	7,51E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,72E-05	5,45E-01	1,29E-04	-1,35E+00

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, PEF

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	1,30E-07	1,93E-08	2,67E-08	1,76E-07	1,25E-08	1,59E-09	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,08E-10	5,75E-09	1,82E-10	-8,91E-08
Ionizing radiation[6)]	kBq U235e	1,89E-01	3,25E-03	2,04E-01	3,97E-01	1,58E-03	9,10E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,36E-05	5,70E-03	2,46E-05	-1,45E-02
Ecotoxicity (freshwater)	CTUe	2,14E+01	3,38E-01	3,86E+00	2,56E+01	2,56E-01	2,99E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,21E-03	2,27E+01	8,74E+00	-4,08E+01
Human toxicity, cancer	CTUh	4,23E-09	6,85E-11	6,57E-10	4,96E-09	2,06E-11	1,33E-11	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,78E-13	1,83E-10	4,77E-13	-1,04E-09
Human tox. non-cancer	CTUh	3,29E-08	2,04E-09	5,92E-09	4,08E-08	1,17E-09	6,67E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,01E-11	2,95E-09	4,30E-11	-3,16E-08
SQP[7)]	-	9,45E+00	1,53E+00	5,22E+01	6,32E+01	1,83E+00	2,19E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,57E-02	9,99E-01	5,80E-02	-2,27E+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	2,84E+00	4,41E-02	3,82E+00	6,71E+00	2,48E-02	-7,38E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,14E-04	1,12E-01	3,91E-04	-4,76E+00
Renew. PER as material	MJ	0,00E+00	0,00E+00	7,14E+00	7,14E+00	0,00E+00	-7,14E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,45E+00
Total use of renew. PER	MJ	2,84E+00	4,41E-02	1,10E+01	1,38E+01	2,48E-02	-1,45E+01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,14E-04	1,12E-01	3,91E-04	-1,31E+00
Non-re. PER as energy	MJ	3,94E+01	2,57E+00	9,24E+00	5,12E+01	1,81E+00	-1,66E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,56E-02	-3,30E+01	-2,13E+00	-5,72E+01
Non-re. PER as material	MJ	0,00E+00	0,00E+00	3,19E-01	3,19E-01	0,00E+00	-3,19E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,94E-01
Total use of non-re. PER	MJ	3,94E+01	2,57E+00	9,55E+00	5,15E+01	1,81E+00	-1,98E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,56E-02	-3,30E+01	-2,13E+00	-5,63E+01
Secondary materials	kg	1,57E-02	1,17E-03	2,06E-01	2,22E-01	7,72E-04	2,81E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	6,65E-06	2,57E-03	9,07E-06	8,70E-01
Renew. secondary fuels	MJ	1,46E-04	1,48E-05	1,78E-01	1,78E-01	9,80E-06	2,22E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	8,45E-08	8,55E-05	1,70E-07	2,14E-05
Non-ren. secondary fuels	MJ	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
Use of net fresh water	m^3	2,21E-02	3,45E-04	1,09E-02	3,33E-02	2,68E-04	-4,59E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,31E-06	1,26E-02	-3,69E-04	-7,98E-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	2,21E-01	3,67E-03	3,97E-02	2,65E-01	3,07E-03	2,66E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,65E-05	1,31E-01	4,44E-05	-1,54E-01
Non-hazardous waste	kg	4,18E+01	7,74E-02	2,90E+00	4,48E+01	5,68E-02	9,00E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,90E-04	7,13E-01	4,98E-01	-3,69E+00
Radioactive waste	kg	4,82E-05	8,09E-07	5,24E-05	1,01E-04	3,87E-07	2,30E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,33E-09	1,46E-06	6,01E-09	-4,07E-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	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	0,00E+00	0,00E+00	0,00E+00	2,79E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	7,00E-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	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	8,61E-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	MND	MND	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	MND	MND	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	3,11E+00	1,81E-01	6,85E-01	3,98E+00	1,24E-01	1,01E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,07E-03	5,42E-01	6,56E-03	-2,04E+00
Ozone depletion Pot.	kg $CFC_{-11}e$	8,84E-07	2,89E-09	1,30E-08	9,00E-07	1,47E-09	2,22E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,27E-11	2,16E-09	2,35E-11	-1,29E-06
Acidification	kg SO_2e	1,06E-02	7,20E-04	2,50E-03	1,39E-02	3,25E-04	7,56E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,80E-06	3,87E-04	6,12E-06	-9,23E-03
Eutrophication	kg PO_4^3e	2,13E-02	1,83E-04	6,49E-03	2,80E-02	7,93E-05	5,08E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	6,83E-07	8,22E-05	4,38E-06	-2,98E-03
POCP (“smog”)	kg C_2H_4e	8,67E-04	6,05E-05	2,66E-04	1,19E-03	2,90E-05	1,23E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,50E-07	3,74E-05	1,40E-06	-5,06E-04
ADP-elements	kg Sbe	3,25E-05	5,80E-07	2,83E-06	3,59E-05	3,40E-07	8,57E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,93E-09	7,27E-07	2,62E-09	-4,57E-05
ADP-fossil	MJ	5,93E+01	2,52E+00	1,04E+01	7,22E+01	1,79E+00	2,24E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,54E-02	9,44E-01	2,48E-02	-4,29E+01

ENVIRONMENTAL IMPACTS – GWP-GHG - THE INTERNATIONAL EPD SYSTEM

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	3,13E+00	1,82E-01	6,85E-01	4,00E+00	1,25E-01	7,53E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,08E-03	5,42E-01	6,84E-03	-2,16E+00

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product as defined by IPCC AR 5 (IPCC 2013). In addition, the characterisation factors for the flows - CH4 fossil, CH4 biogenic and Dinitrogen monoxide - were updated in line with the guidance of IES PCR 1.2.5 Annex 1. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterization factor for biogenic CO2 is set to zero.

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online
This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

Sarah Curpen, as an authorized verifier acting for EPD Hub Limited.
27.04.2025