



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

KONDENS DRASUT 50mm

REC Indovent



EPD HUB, HUB-2551

Published on 31.08.2025, last updated on 31.08.2025, valid until 30.08.2030

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.

GENERAL INFORMATION

MANUFACTURER

Manufacturer	REC Indovent AB
Address	Kärragatan 2, , 431 53, MÖLNDAL, , SE
Contact details	Info@REC-Indovent.se
Website	www.rec-indovent.se

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 1.1, 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	Fredrik Nilsson Rec Indovent AB
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal verification <input checked="" type="checkbox"/> 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	KONDENS DRASUT 50mm
Additional labels	Typ P
Product reference	55004
Place(s) of raw material origin	Sweden
Place of production	Linköping, Sweden
Place(s) of installation and use	Sweden
Period for data	Oct 2023 - Oct 2024
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	0%
A1-A3 Specific data (%)	28

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg KONDENS DRASUT 50mm
Declared unit mass	1 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	1,90E+00
GWP-total, A1-A3 (kgCO ₂ e)	1,65E+00
Secondary material, inputs (%)	0,75
Secondary material, outputs (%)	83,7
Total energy use, A1-A3 (kWh)	8,03
Net freshwater use, A1-A3 (m ³)	0,01

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Manufacturer of supreme quality flexible smoke and ventilation pipes/ducts. As well as manufacturing ventilation units and other ventilation components.

PRODUCT DESCRIPTION

KONDENS DRASUT Original - flexible ventilation connection with condensation insulation, used as a flexible, bendable, connection, between ventilation unit and duct. The condensation insulation is used to prevent condensation on the duct and the casing is completely hermetically sealed against the end sleeves. The air tightness is high, achieving class D, pressure between 0-1000 Pa. All values stated are third-party verified.

Further information can be found at:

www.rec-indovent.se

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	39	Sweden
Minerals	52	Sweden
Fossil materials	9	Sweden
Bio-based materials	0	Not part of product

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	0,078

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg KONDENS DRASUT 50mm
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	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 Swedish-based approach is used in modelling the electricity mix utilized in the factory.

The production starts with an aluminum strip, which is grooved and folded along its length, and then bent into an aluminum tube. The tube is then covered with a layer of glass wool and a casing made of PE/A plastic. Finally, it is fitted with end ducts made of galvanized sheet steel, before being compressed and packed for transport. There is no material loss in this process, as it is primarily an assembly rather than a manufacturing process.

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.

REC keeps transport losses down through cooperation with local suppliers of constituent components. Transport is calculated based on a weighted average of 115 km for sales and transport in 2023. The product is sold ready for installation, no raw material waste is generated by the installation (A5). Post-treatment of product packaging is declared and the average EU scenario per packaging material has been applied with different quotas regarding recycling, incineration and landfill.

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the user phase. Air, soil, and water impacts during the use phase have not been applied.

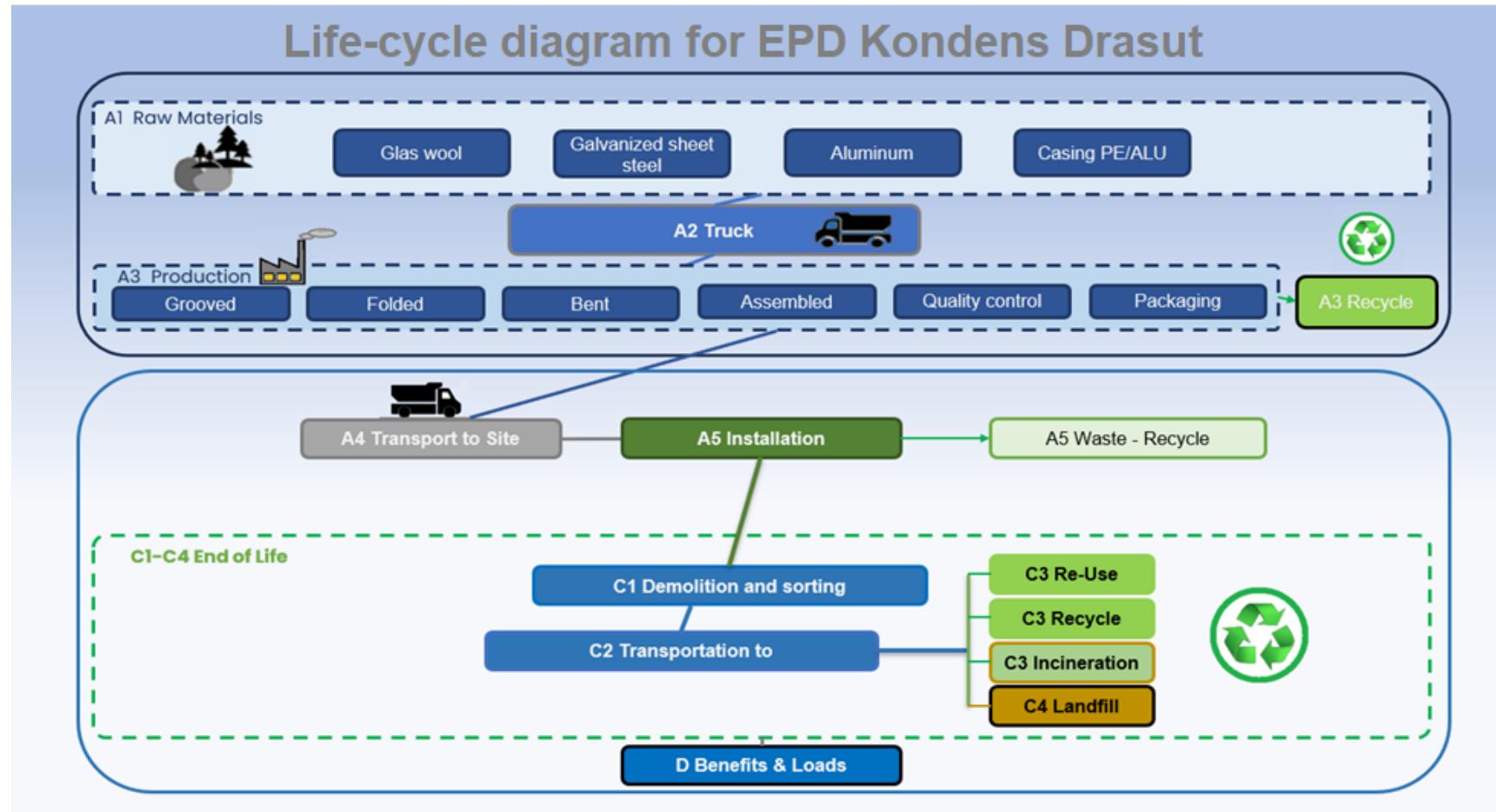
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

The product is dismantled using an electric lift or forklift. The duct sections are disconnected from their mounting points and lowered for transport to recycling or waste handling.

100% of the waste is collected and transported for waste treatment. The transport distance to treatment is assumed to be 50 km, and the mode of transport is assumed to be a truck. The material is assumed to be sorted and recycled in accordance with Swedish waste management standards, which means that 77% of the product is assumed to be recycled, 16% is assumed to be landfilled, and 7% is assumed to be incinerated.

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.

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	Not applicable
Ancillary materials	Not applicable
Manufacturing energy and waste	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	0%

The percentage of averaged material in the product is calculated for one Kg. The finished product is manufactured in several sizes and weights.

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 ₂ e	1,84E+00	2,86E-02	-2,18E-01	1,65E+00	1,44E-02	2,99E-01	MND	2,95E-04	5,39E-03	2,22E-01	1,28E-03	-6,61E-01						
GWP – fossil	kg CO ₂ e	1,81E+00	2,86E-02	6,11E-02	1,90E+00	1,44E-02	1,21E-02	MND	2,54E-04	5,39E-03	2,19E-01	1,28E-03	-7,43E-01						
GWP – biogenic	kg CO ₂ e	1,81E-02	6,47E-06	-2,80E-01	-2,62E-01	3,26E-06	2,87E-01	MND	5,64E-06	1,22E-06	2,37E-03	-5,82E-07	8,97E-02						
GWP – LULUC	kg CO ₂ e	7,09E-03	1,28E-05	2,41E-04	7,35E-03	6,45E-06	2,20E-06	MND	3,57E-05	2,41E-06	1,11E-05	6,05E-07	-7,77E-03						
Ozone depletion pot.	kg CFC-11e	1,16E-07	4,22E-10	1,81E-09	1,18E-07	2,13E-10	4,66E-11	MND	7,52E-12	7,95E-11	1,22E-10	3,39E-11	-7,06E-09						
Acidification potential	mol H ⁺ e	1,72E-02	9,74E-05	3,34E-04	1,77E-02	4,91E-05	1,88E-05	MND	1,42E-06	1,84E-05	1,02E-04	7,94E-06	-4,63E-03						
EP-freshwater ²⁾	kg Pe	8,97E-05	2,22E-06	1,92E-05	1,11E-04	1,12E-06	1,25E-06	MND	9,13E-08	4,19E-07	4,91E-06	1,01E-07	-2,81E-04						
EP-marine	kg Ne	1,78E-03	3,20E-05	9,40E-05	1,90E-03	1,61E-05	2,86E-05	MND	4,25E-07	6,03E-06	3,56E-05	3,31E-06	-7,00E-04						
EP-terrestrial	mol Ne	2,71E-02	3,48E-04	1,08E-03	2,85E-02	1,76E-04	7,97E-05	MND	3,91E-06	6,57E-05	3,31E-04	3,32E-05	-7,33E-03						
POCP ("smog") ³⁾	kg NMVOCe	7,70E-03	1,44E-04	4,59E-04	8,30E-03	7,24E-05	2,51E-05	MND	9,82E-07	2,71E-05	9,14E-05	1,19E-05	-2,80E-03						
ADP-minerals & metals ⁴⁾	kg Sbe	3,68E-05	7,97E-08	3,86E-07	3,73E-05	4,02E-08	7,22E-09	MND	5,90E-09	1,50E-08	4,07E-07	2,24E-09	-3,90E-06						
ADP-fossil resources	MJ	2,62E+01	4,15E-01	1,31E+00	2,79E+01	2,09E-01	4,40E-02	MND	4,18E-02	7,82E-02	1,18E-01	2,78E-02	-8,71E+00						
Water use ⁵⁾	m ³ e depr.	4,47E-01	2,05E-03	1,54E-01	6,03E-01	1,03E-03	2,15E-03	MND	2,30E-03	3,86E-04	7,18E-03	2,05E-04	-3,75E-01						

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

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

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	2,15E-07	2,86E-09	6,10E-09	2,24E-07	1,44E-09	3,02E-10	MND	2,47E-11	5,39E-10	4,16E-09	1,79E-10	-6,14E-08						
Ionizing radiation ⁶⁾	kBq 11235e	1,02E-01	3,61E-04	1,70E-02	1,19E-01	1,82E-04	2,58E-04	MND	3,05E-03	6,81E-05	9,91E-04	4,02E-05	-5,11E-02						
Ecotoxicity (freshwater)	CTUe	2,19E+01	5,86E-02	4,45E-01	2,24E+01	2,96E-02	1,73E-02	MND	2,24E-03	1,11E-02	1,28E-01	8,72E-01	-1,78E+00						
Human toxicity, cancer	CTUh	4,71E-09	4,72E-12	2,82E-10	5,00E-09	2,38E-12	2,18E-12	MND	2,35E-13	8,89E-13	1,56E-11	2,62E-13	-5,04E-10						
Human tox. non-cancer	CTUh	2,38E-08	2,68E-10	7,35E-10	2,48E-08	1,35E-10	1,36E-10	MND	7,31E-12	5,06E-11	6,99E-10	1,56E-11	-6,47E-09						
SQP ⁷⁾	-	2,45E+00	4,18E-01	2,30E+01	2,59E+01	2,11E-01	5,27E-02	MND	8,94E-03	7,87E-02	2,72E-01	5,38E-02	-1,92E+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	3,48E+00	5,68E-03	1,87E+00	5,35E+00	2,87E-03	-1,84E+00	MND	2,86E-02	1,07E-03	1,82E-02	7,00E-04	-2,67E+00						
Renew. PER as material	MJ	0,00E+00	0,00E+00	2,51E+00	2,51E+00	0,00E+00	-2,51E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-5,00E-01						
Total use of renew. PER	MJ	3,48E+00	5,68E-03	4,38E+00	7,87E+00	2,87E-03	-4,36E+00	MND	2,86E-02	1,07E-03	1,82E-02	7,00E-04	-3,17E+00						
Non-re. PER as energy	MJ	2,21E+01	4,15E-01	9,98E-01	2,35E+01	2,09E-01	-1,18E-01	MND	4,18E-02	7,82E-02	-3,48E+00	-7,40E-03	-8,71E+00						
Non-re. PER as material	MJ	4,08E+00	0,00E+00	3,36E-01	4,42E+00	0,00E+00	-3,36E-01	MND	0,00E+00	0,00E+00	-2,99E+00	-1,09E+00	0,00E+00						
Total use of non-re. PER	MJ	2,62E+01	4,15E-01	1,33E+00	2,79E+01	2,09E-01	-4,53E-01	MND	4,18E-02	7,82E-02	-6,47E+00	-1,10E+00	-8,71E+00						
Secondary materials	kg	7,53E-03	1,76E-04	9,46E-03	1,72E-02	8,90E-05	3,46E-05	MND	4,99E-06	3,33E-05	2,29E-04	9,03E-06	2,04E-01						
Renew. secondary fuels	MJ	1,02E-05	2,24E-06	8,50E-02	8,50E-02	1,13E-06	2,47E-07	MND	1,60E-08	4,23E-07	7,82E-06	1,48E-07	-3,51E-05						
Non-ren. secondary fuels	MJ	1,70E-22	0,00E+00	0,00E+00	1,70E-22	0,00E+00	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Use of net fresh water	m ³	8,15E-03	6,13E-05	1,06E-03	9,28E-03	3,09E-05	-2,06E-04	MND	5,45E-05	1,16E-05	9,08E-05	-3,60E-05	-8,35E-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	2,01E-01	7,02E-04	4,33E-03	2,06E-01	3,54E-04	4,69E-04	MND	2,98E-05	1,32E-04	2,68E-03	1,09E-04	-2,03E-01						
Non-hazardous waste	kg	4,88E+00	1,30E-02	1,78E-01	5,07E+00	6,56E-03	3,58E-01	MND	5,86E-04	2,45E-03	1,12E-01	8,42E-02	-2,16E+00						
Radioactive waste	kg	1,63E-04	8,84E-08	4,85E-06	1,68E-04	4,46E-08	6,58E-08	MND	6,51E-07	1,67E-08	2,54E-07	9,46E-09	-1,19E-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	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	5,20E-02	MND	0,00E+00	0,00E+00	7,69E-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	5,10E-02	MND	0,00E+00	0,00E+00	6,70E-02	0,00E+00	0,00E+00						
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,95E-01	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	9,85E-02	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	1,96E-01	MND	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 ₂ e	1,78E+00	2,84E-02	6,11E-02	1,87E+00	1,43E-02	1,56E-02	MND	2,92E-04	5,36E-03	2,21E-01	1,27E-03	-7,42E-01						
Ozone depletion Pot.	kg CFC-11e	1,02E-07	3,37E-10	1,59E-09	1,04E-07	1,70E-10	3,77E-11	MND	6,33E-12	6,35E-11	1,02E-10	2,70E-11	-6,13E-09						
Acidification	kg SO ₂ e	1,44E-02	7,44E-05	2,55E-04	1,47E-02	3,75E-05	1,38E-05	MND	1,10E-06	1,40E-05	7,87E-05	5,85E-06	-3,91E-03						
Eutrophication	kg PO ₄ ³⁻ e	2,28E-03	1,81E-05	2,32E-03	4,61E-03	9,14E-06	5,98E-06	MND	2,52E-07	3,42E-06	1,84E-05	2,35E-06	-4,31E-04						
POCP ("smog")	kg C ₂ H ₄ e	9,15E-04	6,63E-06	4,17E-05	9,64E-04	3,34E-06	1,85E-06	MND	8,17E-08	1,25E-06	5,62E-06	5,66E-07	-4,16E-04						
ADP-elements	kg Sbe	3,68E-05	7,77E-08	3,79E-07	3,72E-05	3,92E-08	6,78E-09	MND	5,95E-09	1,47E-08	4,05E-07	2,16E-09	-3,80E-06						
ADP-fossil	MJ	2,55E+01	4,09E-01	1,21E+00	2,71E+01	2,06E-01	3,95E-02	MND	1,57E-03	7,71E-02	1,01E-01	2,72E-02	-7,92E+00						

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

31.08.2025

