ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Lindab Access Doors - KCU, EKTL, TUTL, ESHUI
Lindab AB

EPD HUB, HUB-6329
Published on 16.05.2026, last updated on 16.05.2026, valid until 16.05.2031

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	Lindab AB
Address	Stålhögavägen 115, 269 92, Båstad, SE
Contact details	lindab@lindab.com
Website	https://www.lindab.com/

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804:2012+A2:2019/AC:2021 and ISO 14025
PCR	EPD Hub Core PCR Version 1.2, 24 Mar 2025
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	-
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Matilda Nielsen, Lindab Ventilation AB
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Magaly Gonzalez Vazquez as an authorized verifier for EPD Hub

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	Lindab Access Doors - KCU, EKTL, TUTL, ESHUI
Additional labels	KCU, EKTL, TUTL, ESHUI
Product reference	KCU Ø125
Place(s) of raw material origin	Europe
Place of production	Grevie, Sweden Prague, Czech Republic Tallinn, Estonia
Place(s) of installation and use	Europe
Period for data	Calendar year 2024
Averaging in EPD	Multiple products and multiple factories
Variation in GWP-fossil for A1-A3 (%)	<10
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	84,2

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg
Declared unit mass	1 kg
GWP-fossil, A1-A3 (kgCO2e)	3,13
GWP-total, A1-A3 (kgCO2e)	3,01
Secondary material, inputs (%)	6,09
Secondary material, outputs (%)	65,3
Total energy use, A1-A3 (kWh)	11,3
Net freshwater use, A1-A3 (m3)	0,06

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Lindab is a leading ventilation company in Europe, offering solutions for energy-efficient ventilation and a healthy indoor climate. The products are characterised by high quality, ease of installation and environmental thinking. In northern Europe, Lindab also offers an extensive range of roof, wall and rainwater systems.

FOR A BETTER CLIMATE

We want to create a better climate. Most of us spend the majority of our time indoors. The air we breathe, in our homes, at our workplaces and at school, affects our well-being. Since air is not visible, we do not always think about it. However, the indoor climate is crucial for how we feel, for our energy levels and whether we stay healthy. Lindab wants to contribute to the architecture and indoor climate of tomorrow. We also want a better climate for our planet. That is why we develop energy-efficient solutions for healthy indoor environments

OUR VISION

We want to be the leading player in the area in which we are strongest – ventilation in Europe. We focus on air distribution and air diffusion. Since we offer high-quality products, we focus on Europe where demand for good ventilation is high, and we can offer superior availability. We specialise in those parts of the ventilation system where we are the strongest. We adapt our offering to the local market, with our core ventilation offering as the clear common denominator in all markets.

THE IMPORTANCE OF VENTILATION

About 90 percent of the global population breathes poor air every day. A common misconception is that outdoor air is more polluted due to emissions, smog, and harmful chemicals. In fact, indoor air in homes, schools, offices, and factories can be as much as five times more polluted. People nonetheless spend most of their life indoors. The most common causes of indoor air pollution are mould, chemicals in, for example, furniture and building materials, dust, radon, and cigarette smoke but, above all, airborne particles from combustion and industrial processes, which are so small they can enter the human bloodstream via the respiratory system. Today, air pollution is a risk factor in several of the world's most common causes of death, including heart disease, pneumonia, stroke, diabetes, and lung cancer. Ventilation is an efficient and convenient method to remove those indoor air pollutants.

SUSTAINABILITY PLAN

For us, sustainability is a way of thinking and working. This affects how we work with Lindab's strategy in all areas. Everything from the purchases we make, to the deliveries and the service we offer our customers. Lindab has three long-term, non-financial targets for the business, one that focuses on increasing our attractiveness as an employer, one for reducing our own carbon dioxide emissions, and one for a better working environment.

Read more about Lindab Groups sustainability work and non-financial targets on www.lindabgroup.com.

PRODUCT DESCRIPTION

It is important that ventilation systems are designed with an easy access, for maintenance and cleaning of the system. Lindab offers a wide range of both circular and rectangular access doors, to give full entry to the ventilation ductwork and facilitate maintenance of the duct system.

This EPD covers Lindab insulated access doors for circular duct systems: KCU, EKTL, TUTL and ESHUI.

These products are designed to provide easy access for inspection, maintenance, and cleaning of ventilation systems. The insulated access doors consist primarily of galvanized steel and stone wool insulation. They are designed for installation on a Lindab Safe duct system and are intended for indoor use. The access doors included in this EPD can achieve tightness class C or D.

The access doors are available in several sizes to fit common circular dimensions.

For more information on Lindab access doors visit https://www.lindab.com/access-doors

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	77	Europe
Minerals	23	Europe
Fossil materials	-	-
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	0,035

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg
Mass per declared unit	1 kg
Functional unit	-
Reference service life	50 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	ND	ND	ND	ND	ND	ND	ND	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 = ND. Modules not relevant = MNR

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage (A1-A3) cover the manufacturing of raw materials used in production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

Transport of incoming raw materials (A2) is based on actual transport distances provided from suppliers to the manufacturing site, and no generic assumptions have been applied.
The steel raw material used in Lindab's access doors is supplied through Lindab Group's own steel service centre, Lindab Steel AB. The steel input is Lindab's own hot-dip galvanized steel with zinc coating, declared in EPD HUB-0463, and serves as the primary material for the product.
Manufacturing begins by cutting the steel sheets into square sections, followed by forming operations using a pressing machine. Forming oil is applied to reduce machine wear, stabilize production and prevent cracking of the steel.
After forming, components are assembled, insulation is inserted into the product, and the handle is attached to the door lid. Material losses from cutting and forming are included, and metal waste is collected and sent for recycling. Packaging materials (such as cardboard) are included where relevant for each product size.
Waste processing in A3 is modelled using a European end-of-life scenario. Treatment routes for steel, cardboard and wood packaging follow World Steel Association (2020) and Eurostat statistics (2020–2021). Stone wool waste is modelled according to European practice where recycling is limited and landfill is dominant (Eurima, 2021; Väntsi & Kärki, 2013).
Electricity used in manufacturing is modelled with the dataset 'Electricity production, hydro, reservoir, non-alpine region (reference product: electricity, high voltage), Sweden'. A market-based approach is used in modelling the electricity mix utilized in the factory. The use of renewable 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. Material loss during installation is assumed to be zero, as the product is delivered ready for installation and mounted mechanically without cutting, adhesives or auxiliary materials. Installation waste of the product is therefore 0%, since access doors are installed by clamping them onto the circular duct system without modifications. As a result, A5 includes only the handling of packaging materials. Packaging waste management is included and modelled according to a European average scenario. The transportation distance in A4 is based on the market share per country. For A5, the transport distance for packaging waste to a waste management facility is assumed to be 50 km.

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase. These life cycle stages are dependent on how the product is used and should be developed and included as part of a holistic assessment of specific construction works.

The reference service life of the product is highly dependent on the conditions of use, average lifespan under normal conditions is minimum 50 years. This is an estimated value based on experience and scientific facts.

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

PRODUCT END OF LIFE (C1-C4, D)

Energy consumption for demounting is included in C1, accounting for 0.1 kWh. Transport to disposal is included in C2, based on an assumed distance of 50 km using lorry transport. Waste processing and recycling activities are included in C3 and C4 and are modelled according to a European end-of-life scenario.

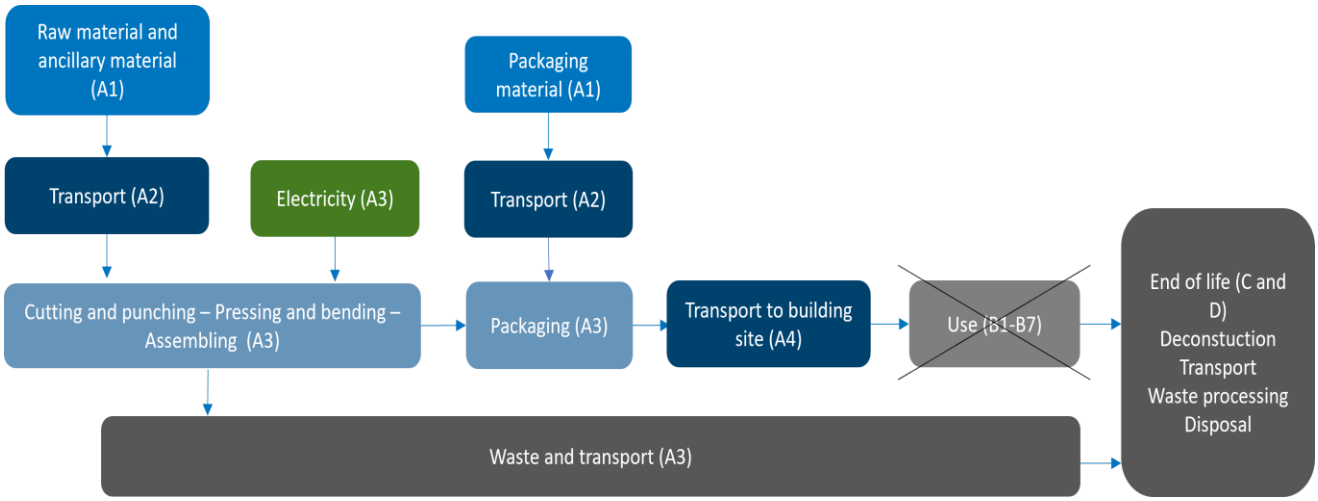
End of Life Scenarios (A3, A5, C1-C4, D)

Recycling rates and treatment routes for key materials are based on established industry and statistical sources. These include:

Name	Recycling	Incineration	Landfill	Source
Steel	85	-	15	World Steel 2020
Cardboard packaging	83	8	9	EUROSTAT, 2020
Wood packaging	32	30	38	EUROSTAT, 2020
Stone wool	-	-	100	Eurima (2021), and Väntsi & Kärki (2013)

Benefits and loads from recycling and recovery are reported in Module D and correspond to the treatment routes applied in A5 and C1–C4. To avoid double counting, any recycled content already included in the product has been subtracted from the benefits and loads in Module D. This applies to both recycled content present in raw materials and in packaging materials. Benefits and loads in Module D do not include manufacturing losses or co-products from the A3 manufacturing stage.

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

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products and multiple factories
Grouping method	Based on a representative product
Variation in GWP-fossil for A1-A3, %	<10

The products in this EPD are grouped as an average product group, since all access doors included follow the same overall manufacturing process and have comparable material compositions. This EPD is represented by the model KCU Ø125, which is a high-runner product and considered representative of the access door assortment. The included products vary in sizes and shapes, but KCU-125 reflects the typical material composition, manufacturing steps and environmental performance of the product group.

The grouping is based on a representative product whose bill of materials, manufacturing process and environmental impacts closely reflect the average of the included products. All products undergo similar processing steps, including sheet metal cutting, pressing and forming, application of insulation, attachment of hand-tack components, and final assembly. Because the production processes and material flows are highly similar, the products qualify for grouping in a single declared average.

The variation in GWP-fossil (modules A1–A3) between the included products and the representative product is +6.39% to –9.9%, which is within the commonly accepted variation range for averaged EPDs. The variation has been calculated by comparing the total GWP-fossil result of each included product to the GWP-fossil of the representative product. The percentage deviation is expressed as the relative difference in total climate impact per product compared to the representative product.

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'.

Transport assumptions and distances for materials:

• Transport of raw materials to the manufacturing site is based on actual supplier distances; no generic assumptions are applied.

Raw material data sources:

• Hot-dip galvanized steel with zinc coating is taken from Lindab's own third-party verified EPD: HUB-0463 – Hot-dip galvanized steel with zinc coating, 0.4 mm, 3.14 kg/m² (Lindab Steel AB).

Production losses considered:

• Material losses from steel cutting and forming are included in A3.
• Recyclable metal waste generated during manufacturing is collected and sent for recycling.

Energy sources profile:

• Electricity is modelled using the dataset: Electricity production, hydro, reservoir, non-alpine region (reference product: electricity, high voltage), Sweden.
• Market-based approach applied, reflecting contracted hydro-based electricity supply.
• Transmission and distribution losses from high-voltage to medium/low-voltage levels are included.

Packaging and ancillary materials used / not used:

• Packaging materials include cardboard, wood, depending on product size.
• Ancillary materials include forming oil used during steel pressing operations.

Assumptions for A3 manufacturing waste, treatment and references:

• Waste processing modelled using a European end-of-life scenario.
• Steel recycling based on World Steel Association (2020).
• Cardboard packaging treatment based on Eurostat (2021).
• Wood packaging treatment based on Eurostat (2020).
• Stone wool waste modelled according to European practice with limited recycling and dominant landfill (Eurima, 2021; Väntsi & Kärki, 2013).

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	3,04E+00	1,69E-02	-4,37E-02	3,01E+00	1,20E-01	1,28E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,52E-02	1,47E-02	6,91E-04	-8,45E-01
GWP – fossil	kg CO_2e	3,06E+00	1,69E-02	5,02E-02	3,13E+00	1,19E-01	2,71E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,52E-02	1,48E-02	6,91E-04	-8,26E-01
GWP – biogenic	kg CO_2e	-2,44E-02	3,35E-06	-1,22E-01	-1,46E-01	2,37E-05	1,26E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,64E-06	-3,13E-05	-2,20E-07	-1,85E-02
GWP – LULUC	kg CO_2e	7,81E-04	6,07E-06	2,80E-02	2,88E-02	4,22E-05	2,95E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,54E-05	1,82E-05	3,95E-07	-1,32E-04
Ozone depletion pot.	kg CFC-$_{11}$e	1,82E-08	3,34E-10	1,05E-09	1,95E-08	2,38E-09	3,57E-11	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,06E-10	1,98E-10	2,00E-11	-2,87E-09
Acidification potential	mol H^+e	9,86E-03	5,25E-05	2,72E-04	1,02E-02	3,74E-04	1,43E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,17E-04	1,76E-04	4,90E-06	-3,33E-03
EP-freshwater[2)]	kg Pe	1,25E-04	1,14E-06	2,72E-05	1,53E-04	7,92E-06	7,44E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,71E-06	9,50E-06	5,68E-08	-3,52E-04
EP-marine	kg Ne	1,94E-03	1,76E-05	8,85E-05	2,04E-03	1,26E-04	1,50E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,80E-05	3,89E-05	1,87E-06	-7,29E-04
EP-terrestrial	mol Ne	2,23E-02	1,91E-04	8,53E-04	2,33E-02	1,37E-03	5,22E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,13E-04	4,39E-04	2,04E-05	-7,99E-03
POCP ("smog")[3)]	kg NMVOC	6,65E-03	8,21E-05	3,14E-04	7,05E-03	5,86E-04	1,85E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,64E-04	1,30E-04	7,31E-06	-2,71E-03
ADP-minerals & metals[4)]	kg Sbe	1,66E-04	5,70E-08	2,58E-07	1,66E-04	3,91E-07	1,38E-08	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,16E-07	1,05E-06	1,10E-09	-8,38E-06
ADP-fossil resources	MJ	3,24E+01	2,37E-01	8,04E-01	3,35E+01	1,68E+00	3,31E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,94E-01	1,98E-01	1,70E-02	-7,59E+00
Water use[5)]	m^3e depr.	6,21E-01	1,18E-03	9,12E-01	1,53E+00	8,24E-03	1,06E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,30E-03	3,56E-03	4,89E-05	-1,42E-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.

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	2,54E+00	4,24E-03	3,43E+00	5,97E+00	2,90E-02	-1,26E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,89E-03	3,69E-02	1,64E-04	-4,71E-01
Renew. PER as material	MJ	0,00E+00	0,00E+00	1,27E+00	1,27E+00	0,00E+00	-1,27E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,65E-01
Total use of renew. PER	MJ	2,54E+00	4,24E-03	4,70E+00	7,24E+00	2,90E-02	-2,54E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,89E-03	3,69E-02	1,64E-04	-3,07E-01
Non-re. PER as energy	MJ	3,36E+01	2,37E-01	7,24E-01	3,46E+01	1,68E+00	3,31E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,94E-01	1,98E-01	1,70E-02	-7,59E+00
Non-re. PER as material	MJ	0,00E+00	0,00E+00	3,90E-02	3,90E-02	0,00E+00	-3,90E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,10E-02
Total use of non-re. PER	MJ	3,36E+01	2,37E-01	7,63E-01	3,46E+01	1,68E+00	-5,91E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,94E-01	1,98E-01	1,70E-02	-7,58E+00
Secondary materials	kg	6,09E-02	1,10E-04	1,47E-02	7,58E-02	7,69E-04	3,58E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,22E-04	2,42E-04	4,26E-06	4,40E-01
Renew. secondary fuels	MJ	2,55E-03	1,37E-06	2,02E-02	2,27E-02	9,70E-06	2,66E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,83E-06	1,12E-05	8,83E-08	-6,80E-05
Non-ren. secondary fuels	MJ	6,26E-22	0,00E+00	0,00E+00	6,26E-22	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	5,88E-03	3,25E-05	4,93E-02	5,52E-02	2,26E-04	-5,91E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,55E-05	1,05E-04	1,76E-05	-2,06E-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	1,58E-01	3,44E-04	3,92E-03	1,62E-01	2,41E-03	3,66E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,51E-04	1,29E-03	1,87E-05	-2,89E-01
Non-hazardous waste	kg	1,10E+00	7,34E-03	3,51E-01	1,46E+00	5,08E-02	7,00E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,61E-02	4,67E-02	4,28E-04	-2,11E+00
Radioactive waste	kg	4,60E-04	7,81E-08	2,09E-06	4,62E-04	5,32E-07	2,23E-08	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,02E-07	4,30E-07	2,60E-09	6,93E-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	4,18E-06	0,00E+00	0,00E+00	4,18E-06	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	2,53E-02	0,00E+00	2,38E-01	2,63E-01	0,00E+00	4,80E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	6,53E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,88E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy – Electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,29E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy – Heat	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,59E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

ENVIRONMENTAL IMPACTS – 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	3,06E+00	1,69E-02	7,82E-02	3,15E+00	1,20E-01	2,71E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,52E-02	1,48E-02	6,91E-04	-8,26E-01

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.

SCENARIO DOCUMENTATION

Manufacturing energy scenario documentation

Scenario parameter	Value
Electricity data source and quality	GO electricity 100 % hydro, supplied by Becour; Modelled with Electricity production, hydro, reservoir, non alpine region, Sweden, Ecoinvent
Electricity CO2e / kWh	0,006
District heating data source and quality	-
District heating CO2e / kWh	0

Transport scenario documentation A4

Scenario parameter	Value
Fuel and vehicle type. Eg, electric truck, diesel powered truck	EURO5, truck 16-32 metric ton, diesel, 0,00441l/tkm
Average transport distance, km	Truck 571 km
Capacity utilization (including empty return) %	50
Bulk density of transported products	-
Volume capacity utilization factor	1

Installation scenario documentation A5

Scenario information	Value
Ancillary materials for installation (specified by material) / kg or other units as appropriate	0
Water use / m³	0
Other resource use / kg	0
Quantitative description of energy type (regional mix) and consumption during the installation process / kWh or MJ	0
Waste materials on the building site before waste processing, generated by the product's installation (specified by type) / kg	0
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	Waste paperboard, materials for recycling, 0.036 kgWaste packaging paper, incineration with energy recovery, 0.0034 kgWaste packaging paper, landfill, 0.0039 kgWaste wood, materials for recycling, 0.012 kgWaste wood, incineration with energy recovery, 0.012 kgWaste wood, landfill, 0.015 kg
Direct emissions to ambient air, soil and water / kg	0

End of life scenario documentation

Scenario information	Value
Collection process – kg collected separately	1
Collection process – kg collected with mixed waste	0
Recovery process – kg for re-use	0
Recovery process – kg for recycling	0,65
Recovery process – kg for energy recovery	0
Disposal (total) – kg for final deposition	0,35
Scenario assumptions e.g. transportation	Transported 50 km by lorry

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

Magaly Gonzalez Vazquez as an authorized verifier for EPD Hub Limited 16.05.2026

VERIFIED ISO 14025