



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Nordec Low CO₂ structures made from hollow sections, Peräseinäjoki factory
Nordec Group Oyj



EPD HUB, HUB-4413

Published on 16.11.2025, last updated on 16.11.2025, valid until 16.11.2030

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.

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Nordec Group Oyj
Address	Itämerenkatu 5, 00180 Helsinki, Finland
Contact details	info@nordec.com
Website	nordec.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	Dan Pada, Nordec Group Oyj
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	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	Nordec Low CO ₂ structures made from hollow sections
Additional labels	-
Product reference	-
Place(s) of raw material origin	EU, Turkey, UK
Place of production	Peräseinäjoki, Finland
Place(s) of installation and use	EU and Norway
Period for data	01.01.2024-31.12.2024
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	< 10 %
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	95,5

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg of painted steel structure
Declared unit mass	1 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	1,20
GWP-total, A1-A3 (kgCO ₂ e)	1,15
Secondary material, inputs (%)	93
Secondary material, outputs (%)	93
Total energy use, A1-A3 (kWh)	4,44
Net freshwater use, A1-A3 (m ³)	0,03

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Nordec is the leading provider of frame structure solutions in the Nordic countries, operating also in Central Eastern Europe. Nordec has decades of experience in designing, producing and delivering frame structures and envelopes for buildings and bridges and industry, optimizing the whole value chain from design to installation. Nordec has 4 factories for the steel structure production in Finland, Poland and Lithuania.

Nordec has certified management system for Quality according to ISO 9001, Occupational health and safety according to ISO 45001 and Environment according to ISO 14001.

Sustainability is an integral part of Nordec's strategy and the development of low-carbon products and solutions is of high priority. We want to minimize the environmental impact of our products by optimizing material usage and waste. We work together with our material suppliers and customers to find the most sustainable solutions for each project.

PRODUCT DESCRIPTION

This EPD represent a group of steel structures used in buildings and industrial projects: trusses, braces, beams and columns, made from cold-formed hollow sections (according to EN 10219) and outfitted with connecting parts made from hot-rolled steel plate. All products in the group are made of the same raw materials and with the same production process. Only the outfitting rate (i.e. the percentage of the weight of the final product made up of outfitting parts made of hot-rolled plates) varies from 2 % to 10 %.

All structures are designed according to Eurocodes together with national annexes as well as project specifications. All structures are made and CE-marked according to EN 1090.

Steel trusses are most often used as roof trusses, typically with a length of 10-40 m, but can be both shorter or longer. The height of the truss is related to the length of the truss, such that the height is in the range of 6-10 % of the length. By using a steel truss, the design can be optimized by adjusting the height of the truss and by combining profiles of different sizes and thicknesses

to enable an efficient use of the material. Steel trusses can span great lengths and carry big loads, providing a large open space in the building, enabling flexibility and adaptability of the building.

Braces are used as stabilizing elements, either in the roof or in the walls or between columns, stabilizing the building towards horizontal forces. A steel bracing system made from hollow sections is very efficient, as the profiles can be optimized and often be used both in tension and compression. The length and size of the braces varies and is determined according to project dimensions and requirements.

Columns are used as load-bearing structures, carrying loads in the vertical direction. The length and size of the columns varies according to building dimensions and requirements.

Beams are used as load-bearing structures, in a horizontal position. The length and size of the beams varies according to the building dimensions and requirements.

Beams and columns made from hollow sections are efficient, thanks to the large catalogue of different profiles and great torsional resistance.

Furthermore, as the steel structures are connected to supporting structures using bolted connections, the structures can easily be dismantled and used in another building in the future, enabling a circular economy.

The cold-formed hollow sections are made of recycled steel, with a recycling content of over 99 %. Steel used for outfitting parts, mainly plates, is made of virgin steel. The steel structures are produced in Nordec's factory in Peräseinäjoki, Finland.

Further information can be found at: nordec.com

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	99	EU, Turkey
Minerals	-	-
Fossil materials	1	EU, UK
Bio-based materials	-	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	-
Biogenic carbon content in packaging, kg C	0,0143

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg of painted steel truss
Mass per declared unit	1 kg
Functional unit	-
Reference service life	-

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 cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Ancillary materials used are steel shots for shot blasting and welding gases (argon, oxygen and carbon dioxide). Packaging materials used are wood, cardboard, plastic film, metal strips and screws. Also, fuels (diesel and propane) used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. Waste is transported by lorry 270-326 km. Waste treatment include landfilling of inert materials and treatment

and incineration of hazardous liquids. Also VOC-emissions to air are considered. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

Heating in the factory is provided by district heating, produced by 100 % renewable biomass, and by burning of propane.

The main raw material is cold-formed hollow sections, whereof close to 100 % is made from recycled steel in electric arc furnaces. The production loss is 9,6 % (cut-offs). Scrap steel is transported by lorry for steel recycling. Outfitting parts are made of mostly hot-rolled plates, whereof close to 100 % is made from virgin steel produced in blast furnaces. Outfitting plates are sourced from subcontractor. Production losses are accounted for in the data for the outfitting parts.

Hence about 93 % of the final product is made of recycled steel. The steel is transported by lorry and ship to the production site in Peräseinäjoki, Finland. The steel profiles are shot blasted and cut to length and shape. The structure is assembled and outfitted with plates for connections and all parts are welded together. The welded structures are painted and packed for transportation.

A market-based approach is used in modelling the electricity mix utilized in the factory. Electricity used is based on wind energy, as stated in the scenario documentation.

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.

Distance and method of transportation from the factory to the building sites is calculated as a weighted average of the actual transports in the year studied (2024). Method of transportation is lorry, average distance 176 km. Transportation does not cause any losses as the structures are packaged properly and secured to the trailer.

Energy consumption for installation on site is assumed to be the same as for demolition (C1), i.e. 0,01 kWh/kg, as diesel used in the building machinery. 100 % of packaging materials (wood, cardboard and plastics) are transported by lorry, assumed distance 50 km, recycled or incinerated for energy recovery, which is considered in this model, as well as direct emissions to the air of carbon dioxide to balance emissions of biogenic CO₂.

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.

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

PRODUCT END OF LIFE (C1-C4, D)

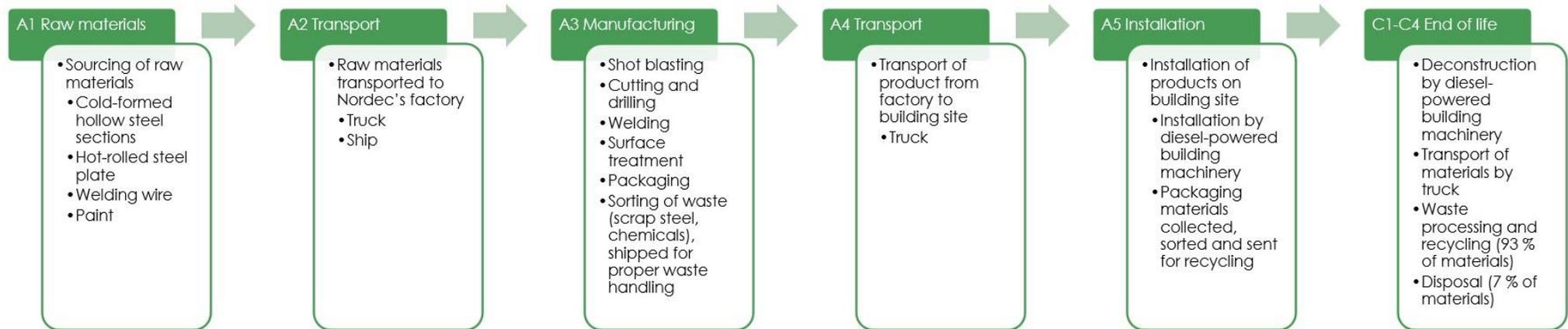
The energy consumption of the demolition process is on average 10 kWh/m² (Bozdag, Ö. & Secer, M. 2007). Considering an average mass of 1000 kg/m² of a concrete building, the energy consumption for demolition (C1) can be assumed to be 0,01 kWh/kg. The source of energy is diesel used in the building machinery.

100 % of the steel structures are assumed to be collected during demolition and transported 50 km by lorry (C2) for further treatment.

Based on data from the European Steel Association, the recycling rate of steel from construction is assumed to be 93 % (C3). The remaining 7 % is taken to landfill for final disposal (C4). Due to the recycling process the end-of-life product is converted back into recycled steel (D), however, benefit can be considered only for the virgin steel, not for the recycled steel. As the ingoing amount of recycled steel is larger than the output, no benefit is accounted for. The benefit from the packaging material recovery is considered.

The scenario and assumptions described here, are based on current data and current practice, representing most likely scenario of today.

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.

Fastening materials (nuts, bolts, welds) are excluded from A5 as they form a very small part of the installed product and are not always in Nordec's scope of delivery and are not part of the sold product.

The paint coating has not been separated from the steel for waste processing as it is assumed the paint is not removed before recycling and any impacts are deemed to be negligible

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.

This LCA study includes the provision of all materials, transportation, energy and emission flows, and end of life processing of product. The use phase is not covered, assuming there are no use emissions or replacements. All industrial processes from raw material acquisition and pre-processing, production, product distribution and installation, and end-of-life management are included.

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.

Raw materials are based on data from produced structures, whereas packaging materials, ancillary materials and manufacturing energy and waste are known on factory level and allocated to 1 kg of product.

Data type	Allocation
Raw materials	No allocation
Packaging material	Allocated by mass or volume
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
Grouping method	Based on a representative product
Variation in GWP-fossil for A1-A3, %	< 10 %

This EPD represent a group of products all made in the same factory. All products are made of the same raw-materials, from the same suppliers, only the outfitting rate (percentage of the final product made from hot-rolled steel plates) varying from 2 % to 10 %. The manufacturing process is the same for all products.

The product group consists of trusses, beams, columns and braces.

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 v3.10.1/3.11 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11 environmental data sources follow the methodology 'allocation, Cut-off, EN 15804+A2'.

Additional data sources:

- https://www.steelconstruction.info/The_recycling_and_reuse_surveys
- Energy consumption of RC buildings during their life cycle. Ö. Bozdağ & M. Seçer

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	9,25E-01	1,63E-01	6,39E-02	1,15E+00	1,96E-02	5,79E-02	ND	3,61E-03	5,36E-03	2,10E-02	4,37E-04	-2,05E-02						
GWP – fossil	kg CO ₂ e	9,18E-01	1,63E-01	1,17E-01	1,20E+00	1,96E-02	4,33E-03	ND	3,60E-03	5,36E-03	2,10E-02	4,37E-04	-2,16E-02						
GWP – biogenic	kg CO ₂ e	4,09E-03	3,02E-05	-5,35E-02	-4,94E-02	4,44E-06	5,36E-02	ND	3,68E-07	1,13E-06	-4,46E-05	-1,39E-07	1,09E-03						
GWP – LULUC	kg CO ₂ e	3,40E-03	8,16E-05	1,37E-04	3,62E-03	8,77E-06	6,24E-07	ND	3,69E-07	2,01E-06	2,59E-05	2,50E-07	-3,98E-05						
Ozone depletion pot.	kg CFC ₋₁₁ e	4,17E-08	2,37E-09	2,17E-09	4,63E-08	2,89E-10	6,39E-11	ND	5,52E-11	1,08E-10	2,83E-10	1,27E-11	-1,74E-10						
Acidification potential	mol H ⁺ e	4,98E-03	3,00E-03	4,46E-04	8,43E-03	6,68E-05	3,87E-05	ND	3,25E-05	1,73E-05	2,50E-04	3,10E-06	-1,54E-04						
EP-freshwater ²⁾	kg Pe	7,66E-05	8,29E-06	2,41E-05	1,09E-04	1,53E-06	3,53E-07	ND	1,04E-07	3,61E-07	1,35E-05	3,59E-08	-1,05E-05						
EP-marine	kg Ne	8,61E-04	7,67E-04	1,39E-04	1,77E-03	2,19E-05	1,82E-05	ND	1,51E-05	5,87E-06	5,54E-05	1,18E-06	-2,26E-05						
EP-terrestrial	mol Ne	9,55E-03	8,50E-03	1,68E-03	1,97E-02	2,39E-04	1,95E-04	ND	1,65E-04	6,39E-05	6,26E-04	1,29E-05	-2,38E-04						
POCP (“smog”) ³⁾	kg NMVOCe	2,70E-03	2,42E-03	1,19E-03	6,31E-03	9,85E-05	5,72E-05	ND	4,93E-05	2,82E-05	1,85E-04	4,62E-06	-7,46E-05						
ADP-minerals & metals ⁴⁾	kg Sbe	2,55E-06	2,83E-07	4,02E-07	3,23E-06	5,47E-08	3,91E-09	ND	1,29E-09	1,48E-08	1,49E-06	6,94E-10	-2,60E-08						
ADP-fossil resources	MJ	8,45E+00	2,15E+00	1,45E+00	1,20E+01	2,84E-01	5,46E-02	ND	4,72E-02	7,76E-02	2,82E-01	1,07E-02	-2,78E-01						
Water use ⁵⁾	m ³ e depr.	2,00E-01	8,14E-03	3,21E-02	2,40E-01	1,40E-03	1,21E-03	ND	1,18E-04	3,98E-04	5,07E-03	3,09E-05	-3,65E-03						

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 ⁶⁾	MJ	1,12E+00	2,25E-02	2,40E+00	3,55E+00	3,90E-03	-5,68E-01	ND	2,99E-04	1,26E-03	5,26E-02	1,04E-04	-1,17E-01						
Renew. PER as material	MJ	0,00E+00	0,00E+00	4,29E-01	4,29E-01	0,00E+00	-4,29E-01	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-9,20E-03						
Total use of renew. PER	MJ	1,12E+00	2,25E-02	2,83E+00	3,98E+00	3,90E-03	-9,97E-01	ND	2,99E-04	1,26E-03	5,26E-02	1,04E-04	-1,26E-01						
Non-re. PER as energy	MJ	9,05E+00	2,15E+00	1,23E+00	1,24E+01	2,84E-01	5,28E-02	ND	4,72E-02	7,76E-02	2,82E-01	1,07E-02	-2,78E-01						
Non-re. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,36E-04						
Total use of non-re. PER	MJ	9,05E+00	2,15E+00	1,23E+00	1,24E+01	2,84E-01	5,28E-02	ND	4,72E-02	7,76E-02	2,82E-01	1,07E-02	-2,78E-01						
Secondary materials	kg	1,08E+00	9,74E-04	1,47E-03	1,08E+00	1,21E-04	3,20E-05	ND	1,96E-05	3,36E-05	3,44E-04	2,70E-06	1,05E-03						
Renew. secondary fuels	MJ	2,77E-05	6,58E-06	1,13E-05	4,55E-05	1,54E-06	1,03E-07	ND	5,12E-08	4,24E-07	1,60E-05	5,58E-08	-1,77E-06						
Non-ren. secondary fuels	MJ	3,99E-07	0,00E+00	0,00E+00	3,99E-07	0,00E+00	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Use of net fresh water	m ³	2,68E-02	2,26E-04	7,45E-04	2,77E-02	4,20E-05	1,03E-05	ND	3,12E-06	1,15E-05	1,50E-04	1,12E-05	-1,92E-04						

6) 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	2,57E-02	3,21E-03	6,87E-03	3,58E-02	4,82E-04	2,73E-04	ND	5,25E-05	1,12E-04	1,84E-03	1,18E-05	-2,18E-03						
Non-hazardous waste	kg	9,04E-02	5,18E-02	1,10E-01	2,52E-01	8,91E-03	3,47E-02	ND	7,15E-04	2,25E-03	6,66E-02	2,71E-04	-4,52E-02						
Radioactive waste	kg	1,59E-05	3,39E-07	1,91E-06	1,82E-05	6,06E-08	7,76E-09	ND	5,12E-09	2,31E-08	6,13E-07	1,64E-09	-1,07E-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	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Materials for recycling	kg	1,44E-01	0,00E+00	8,96E-02	2,34E-01	0,00E+00	1,30E-03	ND	0,00E+00	0,00E+00	9,30E-01	0,00E+00	0,00E+00						
Materials for energy rec	kg	3,62E-04	0,00E+00	7,70E-04	1,13E-03	0,00E+00	3,29E-02	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Exported energy	MJ	7,87E-03	0,00E+00	0,00E+00	7,87E-03	0,00E+00	2,99E-01	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	4,51E-02	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	2,54E-01	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						

ADDITIONAL INDICATOR – GWP- GHG / GWP-IOBC - 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 / GWP-IOBC ⁷⁾	kg CO ₂ e	9,21E-01	1,63E-01	1,17E-01	1,20E+00	1,96E-02	4,33E-03	ND	3,61E-03	5,36E-03	2,10E-02	4,37E-04	-2,16E-02						

7) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. In addition, the characterization 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 characterization factor for biogenic CO₂ is set to zero.

SCENARIO DOCUMENTATION

Manufacturing energy scenario documentation

Scenario parameter	Value
Electricity data source and quality	Electricity production, wind, 1-3MW turbine, onshore; Sweden; Ecoinvent 3.10.1
Electricity CO2e / kWh	0,0175
District heating data source and quality	Heat and power co-generation, wood chips, 6667 kW, state-of-the-art 2014; Finland; Ecoinvent 3.10.1
District heating CO2e / kWh	0,00936

Transport scenario documentation A4

Scenario parameter	Value
Fuel and vehicle type. Eg, electric truck, diesel powered truck	Diesel powered truck
Average transport distance, km	176
Capacity utilization (including empty return) %	50
Bulk density of transported products	7850
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	-
Water use / m ³	-
Other resource use / kg	-
Quantitative description of energy type (regional mix) and consumption during the installation process / kWh or MJ	0,01 kWh
Waste materials on the building site before waste processing, generated by the product's installation (specified by type) / kg	-
Output materials (specified by type) as result of waste processing at the building site e.g. collection for recycling, for energy recovery, disposal (specified by route) / kg	Packaging materials collected for recycling. Transported by lorry to closest point of recycling (assumed distance 50 km): Wood 0,0326 kg Cardboard 0,00071 kg Plastic film 0,00004309 kg
Direct emissions to ambient air, soil and water / kg	-

End of life scenario documentation

Scenario information	Value
Collection process – kg collected separately	1
Collection process – kg collected with mixed construction waste	0
Recovery process – kg for re-use	0
Recovery process – kg for recycling	0,93
Recovery process – kg for energy recovery	0
Disposal (total) – kg for final deposition	0,07
Scenario assumptions e.g. transportation	Transported 50 km by lorry to closest point of recycling.

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
16.11.2025



ANNEX 1 – ADDITIONAL INFORMATION FOR NORWAY

The following self-declared data are given to meet the requirements for Norway.

MODULE A4, TRANSPORT FROM PRODUCTION SITE TO OSLO

GWP total: 9,83E-02 kgCO₂e

GWP fossil: 9,82E-02 kgCO₂e

DANGEROUS SUBSTANCES

The ready product does not contain any dangerous substances according to REACH or the Norwegian priority list in amounts greater than 0,1 % (1000 ppm).

ELECTRICITY IN MANUFACTURING PROCESS, MODULE A3

Peräseinäjoki: Electricity production, wind, 1-3MW turbine, onshore; Sweden;
Ecoinvent 3.10.1. 0,0175 kgCO₂e/kWh

INDOOR AIR EMISSIONS

The ready product does not cause any indoor air emissions.