HITSA

WE SUPPLY OUTDOOR SPACES

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

HAW Table with bench
HITSA A/S

EPD HUB, HUB-6120

Published on 24.04.2026, last updated on 24.04.2026, valid until 24.04.2031

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	HITSA A/S
Address	37 Albuen, 6000, Kolding, DK
Contact details	hitsa@hitsa.dk
Website	www.hitsa.dk, www.hitsa.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 1.2, 24 Mar 2025
Sector	Manufactured 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	Tatjana Kasina
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Yazan Badour 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	HAW Table with bench
Additional labels	-
Product reference	-
Place(s) of raw material origin	Europe, Rest of World
Place of production	Albuen 37, 6000 Kolding, Denmark
Place(s) of installation and use	Primarily Denmark and Sweden
Period for data	Calendar year 2024
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	-29,8 / +38,7
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	92,4

ENVIRONMENTAL DATA SUMMARY

Declared unit	HAW table bench set
Declared unit mass	93,214 kg
Mass of packaging	46,72 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	235
GWP-total, A1-A3 ($kgCO_2e$)	211
Total energy use, A1-A3 (kWh)	968
Net freshwater use, A1-A3 (m^3)	4,47

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

HITSA designs and manufactures urban furniture and cycling products. Our benches, bollards, bicycle racks and shelters provide attractive outdoor environments and good functionality for people in urban spaces. Production takes place at our own facilities, with a focus on design, craftsmanship and quality. As a business, we work on making social inclusion and environmental and climate sustainability a part of our culture. HITSA has 110 employees at our sites in Denmark and Sweden, including metalworkers, carpenters, painters, designers, sales staff and installers. Our values of honesty, responsibility and customer focus serve as guidelines for everything we do.

PRODUCT DESCRIPTION

This product represents an average of the HAW table-bench set, based on eight different design variants.
All variants are freestanding, integrated outdoor table-bench units designed by Studio Hammer and intended for use in public spaces such as urban areas, parks, and other outdoor environments. The design is characterized by a W-shaped load-bearing steel frame, ensuring structural stability and suitability for long-term outdoor use.
Across the variants, the table-bench sets consist of combinations of galvanized steel and mahogany used for the seating surfaces, and/or tabletop. Steel surfaces are perforated with a regular hole pattern (27 mm diameter) to allow drainage and improve functionality. Wooden surfaces are manufactured as plank-based tabletops and seating elements in mahogany. Two standard lengths are represented in the dataset: 1300 mm and 1900 mm, both with a consistent tabletop width of 650 mm. Surface finishing is available in selected predefined colours and optional RAL colours, including the manufacturer's SAHARA colour range with a fine-grain textured surface.
The average product represents the following eight individual variants:

1900 mm variants
1. HAW BB, 1900 FP, RAL
Fully manufactured in galvanized steel (frame, tabletop, and seating).
2. HAW BB, 1900 FP, mahogany, RAL
Galvanized steel frame combined with mahogany seating and tabletop.
3. HAW MIX1 BB, 1900 FP, mahogany, RAL
Galvanized steel frame, mahogany seating surfaces, and galvanized steel tabletop.
4. HAW MIX2 BB, 1900 FP, mahogany, RAL
Galvanized steel frame, galvanized steel seating surfaces, and mahogany tabletop.

1300 mm variants
5. HAW BB, 1300 FP, RAL
Fully manufactured in galvanized steel (frame, tabletop, and seating).
6. HAW BB, 1300 FP, mahogany, RAL
Galvanized steel frame combined with mahogany seating and tabletop.
7. HAW MIX1 BB, 1300 FP, mahogany, RAL
Galvanized steel frame, mahogany seating surfaces, and galvanized steel tabletop.
8. HAW MIX2 BB, 1300 FP, mahogany, RAL
Galvanized steel frame, galvanized steel seating surfaces, and mahogany tabletop.

Further information can be found at:
www.hitsa.dk, www.hitsa.se

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	80,05	Europe
Minerals	0	-
Fossil materials	3,25	Europe
Bio-based materials	16,7	Europe, RoW

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	6,51
Biogenic carbon content in packaging, kg C	18,01

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	HAW table bench set
Mass per declared unit	93,214 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	ND	ND	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

Not declared = ND.

MANUFACTURING AND PACKAGING (A1-A3)

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

A market-based approach is used in modelling the electricity mix utilized in the factory.
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A market-based approach is used in modelling the electricity mix utilized in the factory.
A1: This module covers the extraction and processing of raw materials, including the associated energy consumption.
A2: The raw materials are transported by lorry via road to the manufacturing facility.
A3: This module represents the manufacturing processes at HITSA a/s. The data field includes energy use, consumption of ancillary materials, and waste generation at the production site.
Key process steps:
1. Material preparation: steel profiles required for production are retrieved and prepared, ensuring raw materials are ready for processing.
2. Cutting: steel and wood profiles, respectively, are cut and to the specified lengths and dimensions using specialized cutting equipment in line with product design requirements. After this additional grinding is performed as needed.
3. Oil treatment of wood is conducted by full immersion in an open tank system.
4. Welding: cut steel components are welded together to form the final steel structure.
5. External galvanization: steel components are sent to an external facility for hot galvanization, where they are immersed in molten zinc to create a protective coating against corrosion.
6. Receiving galvanized components: following hot-dip galvanization, the components are returned to the production facility. The galvanized items are inspected to ensure the coating is uniform and compliant with quality standards.
7. Optional coating: upon request RAL-coating is performed in the internal, fully automated paint/coating facility.
8. Final assembly: galvanized components are assembled into their final configuration, if not done prior to galvanization. wooden parts are mounted. This includes joining parts, ensuring alignment, and making final adjustments before the product is prepared for delivery.
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.

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A4: Transport to Installation Site
Transport of the finished product to the site of installation is performed by lorry via road. The average transport distance is calculated at 187 km, based on an average of the following two distribution scenarios:
• Company-operated transport: Products sold with installation services are transported directly to the installation site using HITSA's own fleet.
• External logistics: Products sold as self-installation are transported by an external logistics provider.

Cradle to gate with options, A4-A5, and modules C1-C4, D

A5: Installation
The products are delivered flat packed and are assembled on-site. Installation consists solely of manual assembly using basic handheld tools such as screwdrivers or wrenches. No additional materials, energy-consuming processes, machinery, or auxiliary equipment are required. The resource use associated with installation is therefore considered negligible.

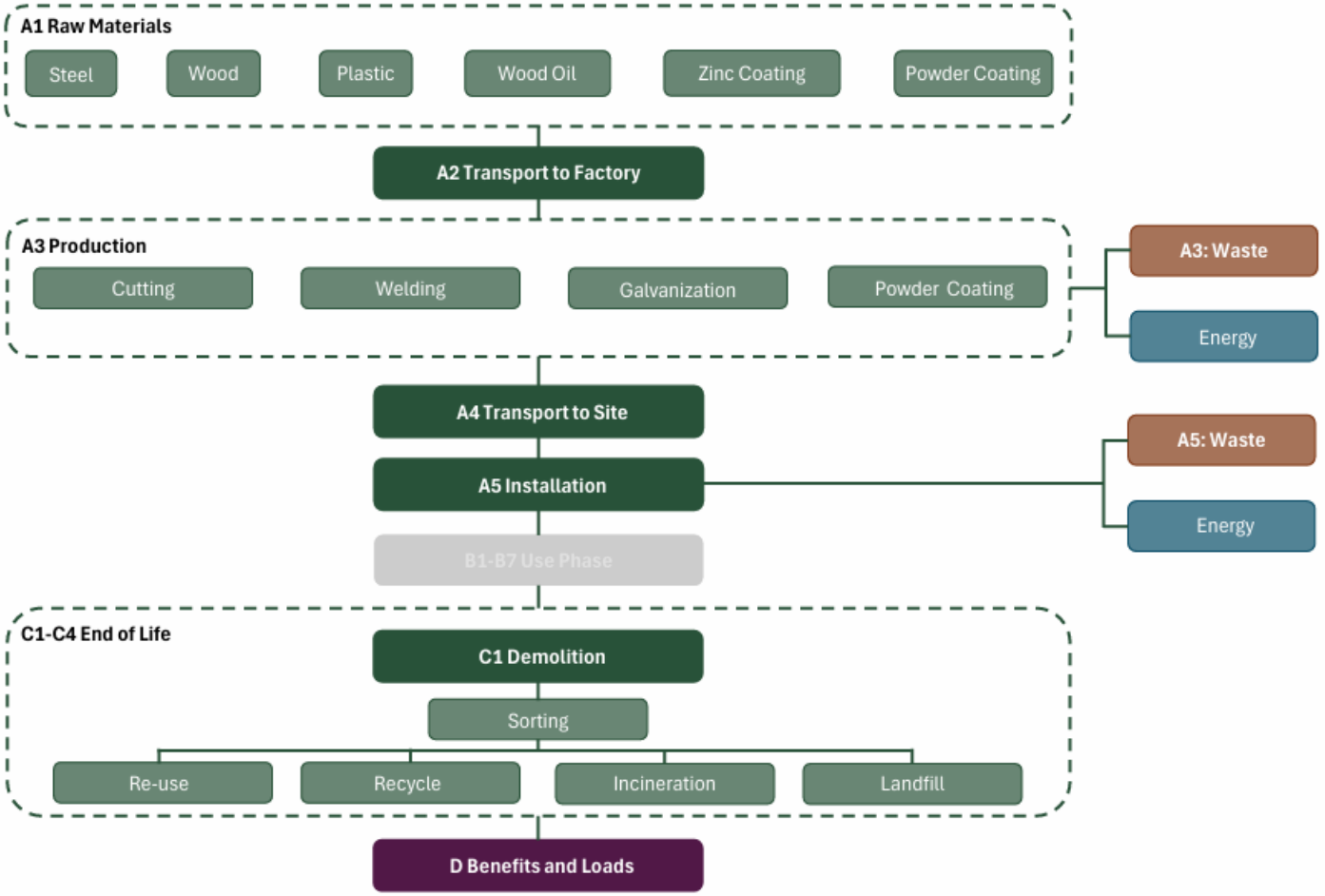
PRODUCT USE AND MAINTENANCE (B1-B7)

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)

C1. Deconstruction / Demolition
The product is free-standing and not cast into, anchored, or bolted to the ground, no demolition activities are required at end of life. Deconstruction is limited to simple manual disassembly of the individual components. As no heavy equipment, energy intensive processes, or ground works are involved, the energy demand related to deconstruction and demolition is considered negligible and therefore excluded from the assessment.
C2. Transport to Waste Processing Facility
As no mass loss occurs during the use stage, the mass of the end of life product is assumed to be equal to that of the declared product. All end of life steel components are collected and transported to appropriate waste management facilities. An average transport distance of 50 km has been applied, based on Google Maps estimations.
C3. Recycling
Steel products and components are considered highly recyclable. The recyclability rate is slightly lower for painted or galvanized steel compared to untreated steel, as surface coatings (zinc and paint) must be removed prior to remelting. Nevertheless, both steel and zinc are efficiently recycled. According to Broniewicz & Dec (2022), 90 % of the steel content is assumed to be recycled, while the remaining 10 % is directed to landfill.
C4. Disposal
Residual steel material not suitable for recycling (estimated at 10 %) is assumed to be sent to landfill (Broniewicz & Dec, 2022).
Module D – Reuse, Recovery and Recycling Potential
Module D accounts for the environmental impacts and benefits associated with the net end of life recycling of steel, including the substitution of primary steel and primary zinc production outside the system boundary. Packaging materials, including wooden pallets used for transport, are treated exclusively as installation waste in module A5 and are not included in modules C–D.

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	No allocation
Manufacturing energy and waste	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on average results of product group - by total mass
Variation in GWP-fossil for A1-A3, %	-29,8 / +38,7

The average product represents the following eight individual variants:
1900 mm variants
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tabletop.
4. HAW MIX2 BB, 1900 FP, mahogany, RAL
Galvanized steel frame, galvanized steel seating surfaces, and mahogany tabletop.
1300 mm variants
5. HAW BB, 1300 FP, RAL
Fully manufactured in galvanized steel (frame, tabletop, and seating).
6. HAW BB, 1300 FP, mahogany, RAL
Galvanized steel frame combined with mahogany seating and tabletop.
7. HAW MIX1 BB, 1300 FP, mahogany, RAL
Galvanized steel frame, mahogany seating surfaces, and galvanized steel tabletop.
8. HAW MIX2 BB, 1300 FP, mahogany, RAL
Galvanized steel frame, galvanized steel seating surfaces, and mahogany tabletop.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification v3.2.5. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11/3.12 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11/3.12 environmental data sources follow the methodology 'allocation, Cut-off, EN 15804+A2'.

- EN 15804+A2:2019/2022 – Sustainability of construction works – Environmental product declarations.
- EN 15941:2017 – Sustainability of construction works – Data quality for environmental assessment.
- Ecoinvent Association (2023). *Ecoinvent database v3.10–3.12*.
- Danish Energy Agency (2024). *Lower heating value (LHV) of natural gas*.
- Google Maps (2025). Transport distance estimations.
- Broniewicz, E., & Dec, M. (2022). *Recycling and disposal rates of steel products*.
- Structure Magazine (n.d.). *10 things every structural engineer should know about embodied carbon in wood*. https://www.structuremag.org/article/10-things-every-structural-engineer-should-know-about-embodied-carbon-wood/

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	1,82E+02	3,82E+00	2,53E+01	2,11E+02	5,01E+00	5,79E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,59E+00	1,95E+01	1,31E-01	-1,19E+02
GWP – fossil	kg CO_2e	2,06E+02	3,82E+00	2,58E+01	2,35E+02	5,01E+00	2,54E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,59E+00	1,64E+00	1,31E-01	-1,19E+02
GWP – biogenic	kg CO_2e	-2,49E+01	7,55E-04	-5,75E-01	-2,54E+01	1,12E-03	3,25E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,28E-04	1,78E+01	-2,68E-05	0,00E+00
GWP – LULUC	kg CO_2e	8,25E-01	1,68E-03	2,21E-02	8,49E-01	2,27E-03	2,42E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,59E-03	1,96E-03	6,88E-05	-4,46E-02
Ozone depletion pot.	kg CFC-$_{11}$e	1,21E-05	5,96E-08	4,53E-06	1,67E-05	7,43E-08	2,62E-08	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,04E-08	2,19E-08	3,20E-09	-4,71E-07
Acidification potential	mol H^+e	2,50E+00	8,62E-03	8,01E+00	1,05E+01	1,15E-02	8,93E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,20E-02	1,91E-02	8,17E-04	-5,21E-01
EP-freshwater[2)]	kg Pe	6,09E-02	2,93E-04	4,09E-03	6,53E-02	3,92E-04	4,24E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,79E-04	1,04E-03	3,84E-05	-5,76E-02
EP-marine	kg Ne	2,65E-01	2,01E-03	1,33E-02	2,80E-01	2,66E-03	9,48E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,89E-03	4,62E-03	1,67E-03	-1,18E-01
EP-terrestrial	mol Ne	9,42E+00	2,17E-02	1,47E-01	9,59E+00	2,87E-02	3,64E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,23E-02	5,10E-02	3,39E-03	-1,28E+00
POCP ("smog")[3)]	kg NMVOCe	8,61E-01	1,24E-02	6,01E-02	9,34E-01	1,61E-02	1,19E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,68E-02	1,48E-02	1,27E-03	-4,21E-01
ADP-minerals & metals[4)]	kg Sbe	5,78E-03	1,28E-05	6,80E-05	5,86E-03	1,68E-05	4,45E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,17E-05	1,06E-04	2,11E-07	-6,33E-03
ADP-fossil resources	MJ	2,37E+03	5,37E+01	4,20E+02	2,84E+03	7,04E+01	2,27E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,05E+01	2,17E+01	2,72E+00	-1,13E+03
Water use[5)]	m^3e depr.	1,69E+02	2,54E-01	5,03E+01	2,19E+02	3,30E-01	6,28E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,35E-01	6,30E-01	1,04E-02	-3,02E+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	2,19E-05	2,84E-07	3,64E-07	2,25E-05	3,73E-07	1,67E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,90E-07	2,56E-07	1,85E-08	-7,66E-06
Ionizing radiation[6)]	kBq U235e	5,86E+03	4,78E-02	2,56E+00	5,86E+03	5,76E-02	5,88E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,11E-02	1,88E-01	2,04E-03	2,50E+00
Ecotoxicity (freshwater)	CTUe	3,23E+03	8,32E+00	5,08E+01	3,29E+03	1,12E+01	1,30E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,92E+00	1,25E+01	7,78E-01	-1,73E+03
Human toxicity, cancer	CTUh	1,13E-06	6,39E-10	7,11E-09	1,14E-06	8,38E-10	8,71E-10	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,09E-10	1,56E-09	2,76E-11	-5,34E-08
Human tox. non-cancer	CTUh	4,07E-06	3,39E-08	1,17E-07	4,22E-06	4,44E-08	4,39E-08	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,17E-08	1,06E-07	1,44E-09	-1,97E-06
SQP[7)]	-	3,56E+02	3,25E+01	1,02E+02	4,91E+02	4,26E+01	2,13E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,17E+01	3,93E+01	5,70E+00	-3,80E+02

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	3,21E+02	7,76E-01	1,53E+02	4,75E+02	9,78E-01	-6,75E+02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,92E-01	-1,28E+02	-6,33E+01	-8,82E+01
Renew. PER as material	MJ	2,04E+02	0,00E+00	3,51E+00	2,07E+02	0,00E+00	-3,01E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-1,77E+02	0,00E+00	0,00E+00
Total use of renew. PER	MJ	5,25E+02	7,76E-01	1,57E+02	6,82E+02	9,78E-01	-7,05E+02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,92E-01	-3,05E+02	-6,33E+01	-8,82E+01
Non-re. PER as energy	MJ	2,57E+03	5,37E+01	3,82E+02	3,01E+03	7,04E+01	-9,69E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,05E+01	2,17E+01	8,33E-01	-1,13E+03
Non-re. PER as material	MJ	7,72E-02	0,00E+00	4,07E+01	4,08E+01	0,00E+00	-4,07E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-6,71E-02	0,00E+00	0,00E+00
Total use of non-re. PER	MJ	2,57E+03	5,37E+01	4,22E+02	3,05E+03	7,04E+01	-5,04E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,05E+01	2,16E+01	8,33E-01	-1,13E+03
Secondary materials	kg	3,64E+01	2,45E-02	1,67E-01	3,66E+01	3,20E-02	1,60E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,26E-02	2,72E-02	7,90E-04	6,55E+01
Renew. secondary fuels	MJ	2,49E-02	3,13E-04	1,64E-02	4,17E-02	4,09E-04	1,60E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,88E-04	1,14E-03	1,57E-05	-9,17E-03
Non-ren. secondary fuels	MJ	1,52E-02	0,00E+00	3,10E-03	1,83E-02	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	4,16E+00	7,34E-03	2,98E-01	4,47E+00	9,63E-03	-5,86E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,74E-03	1,27E-02	-1,21E-02	-5,11E-01

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	6,20E+00	9,18E-02	1,33E+00	7,63E+00	1,23E-01	1,52E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,78E-02	1,83E-01	3,81E-03	-3,68E+01
Non-hazardous waste	kg	9,91E+01	1,75E+00	1,67E+01	1,18E+02	2,32E+00	1,03E+02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,65E+00	1,28E+01	1,89E+01	-3,16E+02
Radioactive waste	kg	2,87E-02	1,17E-05	5,18E-04	2,92E-02	1,41E-05	1,47E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,01E-05	4,82E-05	4,99E-07	6,54E-04

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	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	2,65E+00	2,65E+00	ND	1,50E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	7,00E+01	ND	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	1,63E+00	1,63E+00	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00
Exported energy	MJ	3,45E-01	0,00E+00	6,26E-02	4,08E-01	0,00E+00	7,78E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	2,62E+01	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	3,28E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	1,11E+01	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	4,50E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	1,51E+01	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_2e	0,00E+00	3,80E+00	2,11E+01	2,49E+01	4,98E+00	3,54E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,57E+00	1,63E+00	3,45E-01	-1,18E+02
Ozone depletion Pot.	kg $CFC_{-11}e$	0,00E+00	4,75E-08	7,53E-07	8,01E-07	5,93E-08	2,11E-08	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,03E-08	1,80E-08	2,55E-09	-4,93E-07
Acidification	kg SO_2e	0,00E+00	6,95E-03	3,33E-02	4,03E-02	9,25E-03	6,63E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	9,18E-03	1,53E-02	6,05E-04	-4,19E-01
Eutrophication	kg PO_4^3e	0,00E+00	1,67E-03	6,93E-03	8,60E-03	2,21E-03	2,39E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,23E-03	2,42E-03	2,99E-04	-7,69E-02
POCP (“smog”)	kg C_2H_4e	0,00E+00	6,83E-04	2,76E-03	3,44E-03	8,97E-04	7,60E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,22E-04	9,22E-04	1,01E-04	-5,94E-02
ADP-elements	kg Sbe	0,00E+00	1,25E-05	3,02E-05	4,26E-05	1,64E-05	4,27E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,14E-05	1,06E-04	2,06E-07	-6,33E-03

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADP-fossil	MJ	0,00E+00	5,29E+01	3,09E+02	3,62E+02	6,95E+01	2,17E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,98E+01	1,84E+01	2,69E+00	-1,18E+03

ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[9)]	kg CO_2e	2,07E+02	3,82E+00	2,58E+01	2,36E+02	5,01E+00	2,54E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,59E+00	1,64E+00	1,31E-01	-1,19E+02

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. In addition, the characterisation factors for the flows – CH4 fossil, CH4 biogenic and Dinitrogen monoxide – were updated. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterisation factor for biogenic CO2 is set to zero

SCENARIO DOCUMENTATION

DATA SOURCES

Manufacturing energy scenario documentation

1. Electricity production, wind, <1MW turbine, onshore, Denmark, Ecoinvent, 0.0125 kgCO2e/kWh
2. Electricity voltage transformation from high to medium voltage, Denmark, Ecoinvent, 0.15 kgCO2e/kWh
3. Heat production, natural gas, at boiler condensing modulating >100kW, Albania, Ecoinvent, 0.0721 kgCO2e/MJ
4. Electricity, Denmark, residual mix, 2024, Denmark, One Click LCA, 0.59 kgCO2e/kWh
5. Electricity production, wind, <1MW turbine, onshore, Denmark, Ecoinvent, 0.0125 kgCO2e/kWh
6. Electricity voltage transformation from high to medium voltage, Denmark, Ecoinvent, 0.15 kgCO2e/kWh
7. Heat production, natural gas, at boiler condensing modulating >100kW, Albania, Ecoinvent, 0.0721 kgCO2e/MJ
8. Electricity, Denmark, residual mix, 2024, Denmark, One Click LCA, 0.59 kgCO2e/kWh
9. Electricity, Denmark, residual mix, 2024, Denmark, One Click LCA, 0.59 kgCO2e/kWh
10. Electricity production, wind, <1MW turbine, onshore, Denmark, Ecoinvent, 0.0125 kgCO2e/kWh
11. Electricity voltage transformation from high to medium voltage, Denmark, Ecoinvent, 0.15 kgCO2e/kWh
12. Heat production, natural gas, at boiler condensing modulating >100kW, Albania, Ecoinvent, 0.0721 kgCO2e/MJ
13. Electricity, Denmark, residual mix, 2024, Denmark, One Click LCA, 0.59 kgCO2e/kWh
14. Electricity production, wind, <1MW turbine, onshore, Denmark, Ecoinvent, 0.0125 kgCO2e/kWh
15. Electricity voltage transformation from high to medium voltage, Denmark, Ecoinvent, 0.15 kgCO2e/kWh
16. Heat production, natural gas, at boiler condensing modulating >100kW, Albania, Ecoinvent, 0.0721 kgCO2e/MJ
17. Electricity production, wind, <1MW turbine, onshore, Denmark, Ecoinvent, 0.0125 kgCO2e/kWh
18. Electricity voltage transformation from high to medium voltage, Denmark, Ecoinvent, 0.15 kgCO2e/kWh
19. Heat production, natural gas, at boiler condensing modulating >100kW, Albania, Ecoinvent, 0.0721 kgCO2e/MJ
20. Electricity, Denmark, residual mix, 2024, Denmark, One Click LCA, 0.59 kgCO2e/kWh
21. Electricity production, wind, <1MW turbine, onshore, Denmark, Ecoinvent, 0.0125 kgCO2e/kWh
22. Electricity voltage transformation from high to medium voltage, Denmark, Ecoinvent, 0.15 kgCO2e/kWh
23. Heat production, natural gas, at boiler condensing modulating >100kW, Albania, Ecoinvent, 0.0721 kgCO2e/MJ
24. Electricity, Denmark, residual mix, 2024, Denmark, One Click LCA, 0.59 kgCO2e/kWh
25. Electricity production, wind, <1MW turbine, onshore, Denmark, Ecoinvent, 0.0125 kgCO2e/kWh
26. Electricity voltage transformation from high to medium voltage, Denmark, Ecoinvent, 0.15 kgCO2e/kWh
27. Heat production, natural gas, at boiler condensing modulating >100kW, Albania, Ecoinvent, 0.0721 kgCO2e/MJ
28. Electricity, Denmark, residual mix, 2024, Denmark, One Click LCA, 0.59 kgCO2e/kWh
29. Electricity production, wind, <1MW turbine, onshore, Denmark, Ecoinvent, 0.0125 kgCO2e/kWh
30. Electricity voltage transformation from high to medium voltage, Denmark, Ecoinvent, 0.15 kgCO2e/kWh
31. Heat production, natural gas, at boiler condensing modulating >100kW, Albania, Ecoinvent, 0.0721 kgCO2e/MJ
32. Electricity, Denmark, residual mix, 2024, Denmark, One Click LCA, 0.59 kgCO2e/kWh

Transport scenario documentation - A4 (Transport resources)

1. Transport, freight, lorry 16-32 metric ton, EURO6, 187.0 km

Transport to the building site (A4) - Scenario documentation

Scenario parameter	Value
Capacity utilization (including empty return) %	50
Bulk density of transported products	0,00E+00
Volume capacity utilization factor	

Installation at the building site (A5) - Scenario documentation

Scenario parameter	Value
Energy: type and consumption (MJ or kWh)	The products are delivered flat packed and are assembled on-site. Installation consists solely of manual assembly using basic handheld tools such as screwdrivers or wrenches. No additional materials, energy-consuming processes, machinery, or auxiliary equipment are required. The resource use associated with installation is therefore considered negligible.
Water use (m^3)	-
Ancillary materials: type and mass (kg)	-
Waste materials: type and mass (kg)	Wood packaging = 45,92 Plastic packaging = 0,8
Waste materials: output routes	-
Direct emissions (kg)	-

End of life (C1-C4) - Scenario documentation

Scenario information	Value
Collection process: collected separately (kg)	-
Collection process: Mixed waste (kg)	-
Recovery: re-use (kg)	0
Recovery: recycling (kg)	83,3
Recovery: energy recovery (kg)	16,7
Disposal (kg)	-
Scenario assumptions e.g. transportation (mode, km) & other	-

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 15804+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

Yazan Badour as an authorized verifier for EPD Hub Limited 24.04.2026

VERIFIED ISO 14025