ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Ikō Premium Laminate Floor / Dureco Floor / Laminate Friends
ter Hürne GmbH

EPD HUB, HUB-7440
Published on 25.09.2026, last updated on 25.09.2026, valid until 24.09.2031

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	ter Hürne GmbH & Co. KG
Address	Ramsdorfer Str. 5, 46354 Südlohn, Deutschland
Contact details	+49 2862 701-0 / info@terhuerne.de
Website	https://www.terhuerne.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	Wei-Li Hung
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Afzal khan Peerukhan as an authorized verifier for EPD Hub

This EPD is intended for business-to-business 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	Ikō Premium Laminate Floor /Dureco Floor / Laminate Friends
Additional labels	-
Product reference	-
Place(s) of raw material origin	Global
Place of production	Lampertswalde, Germany
Place(s) of installation and use	Germany
Period for data	01.10.2020 - 30.09.2021
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	-
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	46.2

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m2
Declared unit mass	7.516 kg
Mass of packaging	0.09 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	5.4
GWP-total, A1-A3 ($kgCO_2e$)	-3.65
Secondary material, inputs (%)	12.7
Total energy use, A1-A3 (kWh)	54.8
Net freshwater use, A1-A3 (m^3)	0.22

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

ter Hürne is a leading European hard- wood engineered flooring manufacturer based in Südlohn in Münsterland. The family owned and run company, which was founded in 1959 and is now managed in the second generation, manufactures high quality products made in Germany and has approximately 300 employees at the site.

As a wood specialist ter Hürne focusses on innovative and attractive flooring solutions made of a multitude of materials and has established itself as a market leader in the sector on a national and international level. The product range extends from engineered hardwood floors, wood powder floors, laminate floors, wall and ceiling panels, and LVT floors to the PVC-free Avatara Design Floor.

Further information can be found at https://www.terhuerne.com/

PRODUCT DESCRIPTION

Laminate floors from ter Hürne are multi-layer, wood based flooring solutions designed to provide stability and durability in their intended areas of use. They are manufactured from responsibly sourced wood materials and meet defined quality and environmental standards. The products are engineered to withstand everyday wear while supporting a healthy indoor environment.

The product ranges include a variety of decors and surface textures suitable for residential and light commercial applications. They consist of a stable, wood based core combined with a durable surface layer resistant to abrasion, scratches, and pressure. Production follows material efficient processes and meets elevated requirements for low emissions; all products undergo independent testing and remain well below permissible emission thresholds.

Their long lasting construction makes them suitable for spaces with regular foot traffic and environments requiring a robust and low maintenance flooring solution. The floating installation using a click system allows versatile use in homes, multifamily buildings, office spaces, and other interior areas with moderate level of use.

Product construction

1) Top Layer – Surface sealing made of corundum precious resin coating
2) Design Layer – Design carrier made of wood fibers
3) Coreboard – Water-resistant coreboard made of highly compressed wood fibers
4) Smart Connect Pro Aqua – Water-resistant click connection
5) Backing Layer – Wood pulp stabilizing layer

With cork impact sound insulation:

1) Top Layer – Surface sealing made of corundum precious resin coating
2) Design Layer – Design carrier made of wood fibers
3) Coreboard – Water-resistant coreboard made of extremely compressed wood fibers
4) Smart Connect Pro Aqua – Water-resistant click connection
5) Cork Impact Sound Insulation

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	-	-
Minerals	-	-
Fossil materials	26	Global
Bio-based materials	74	Global

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	2.6
Biogenic carbon content in packaging, kg C	0.18

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m2
Mass per declared unit	7.516 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

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 utilised in the factory.

Raw material/energy supply (A1):
The timber supply for laminate flooring is a combination of small round wood not suitable for sawmills and sawmill residues in the form of wood chips. The chemical component is made of resin, wax, hardener, and urea. Production loss (21%) is considered at this stage.

The wasted materials are either burnt onsite in our biomass plant, or recycled for use in particleboard production.

Each pack of laminate flooring is packaged in a cardboard box and shrink wrapped and then stacked onto a wooden pallet. A top board made of HDF is used to protect the products, PET banding made from 100% post-consumer recycled plastic is used to strap the packs to the pallet and the entire pallet if stretch wrapped for further protection of the product.

Transportation to manufacturing site (A2):
- Transportation of the timber to the manufacturing site (considers both road and rail deliveries).
- Transportation of chemicals and packaging from manufacturer/supplier to the production site.
- Transportation of raw paper from manufacturer/supplier.

Manufacturing (A3):
The proper manufacturing of the boards and treatment of waste generated from the manufacturing process up to the end-of waste state during manufacturing is included in module A3.

All installation waste is modelled as leaving the system in A3. German Government figures have been used for determining the rates of recycling.

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.

Transport (A4):
This covers the 2397 km average distance travelled from site to customer, which is done by EURO 6 32t lorry.

Installation (A5):
Installation has been excluded as a factor because, typically, this product undergoes reprocessing by our customers to make final construction products. There are boundless variations in processing methods, auxiliary materials, energy consumption, wastage, etc.

Packaging materials:
Wood, paper, and plastic packaging are assumed to follow the EU scenario based on Ecoinvent v3.12.

PRODUCT END OF LIFE (C1-C4, D)

Module C1:
Disassembly is done by hand at use-site, therefore creating no additional loads.

Module C2:
The material is transported to waste treatment site, which is assumed to be within 50km, of the local waste collection centre and treated as municipal wood waste.

Module C3:
The end-of-life scenario assumes 100% energy recovery through incineration of the product, based on extensive waste-wood recycling facilities in the Europe, where the flooring is incinerated and used as biomass fuel for energy recovery.

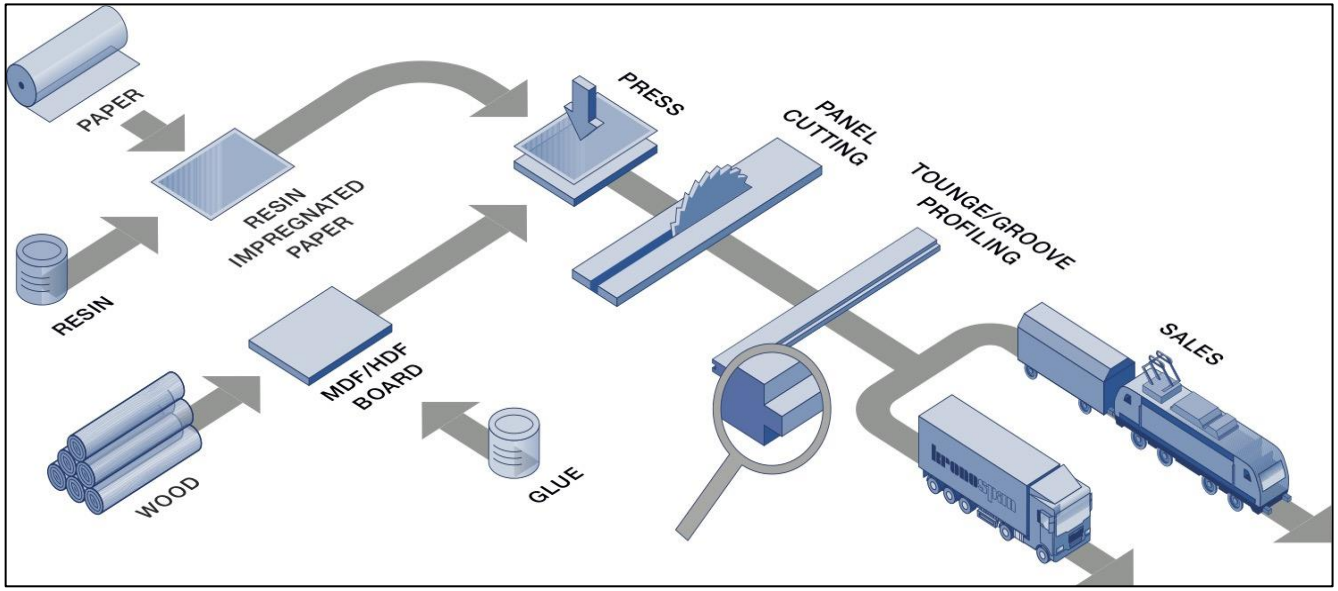
Module C4:
Within the EoL scenario no disposal to landfill will occur, thus this module will show Zero values.

Module D:
The benefits of energy recovery through the incineration of flooring are calculated in Module D. It is modelled as a substitution of virgin timber, and the scenario is based on Ecoinvent v3.12 (2020 EU data from Eurostat & BuildLCA).

All end-of-life burdens associated with deconstruction, transport, sorting, and preparation for recycling are included in C1–C3, and Module D reports only the net benefits and loads from the avoided production of virgin timber.

Packaging materials:
Wood, paper, and plastic packaging are assumed to follow the EU scenario based on Ecoinvent v3.12.

LIFE CYCLE FLOW DIAGRAM



Raw Board Production

The production process starts with raw board production. Water, water vapour and high pressure soften the wood chips. These are then pressed through a grinder which breaks up the wood fibres. The moist wood fibres are glued and transported to a drier. The glued and dried wood fibres are scattered onto a conveyor belt. The fibres bond with the glue at a compression temperature of 200 °C to form a homogeneous board. After pressing, the hot boards are cooled and then transported automatically to a storage area.

Paper Impregnation

Laminate flooring production includes the application of impregnated paper to the raw board. When impregnating the paper, rollers and doctor blades ensure the even or asymmetrical application of resin to one or both sides. The impregnated paper is then conveyed through a drying channel.

Pressing / Lamination

Pre-arranged packages with abrasion proof overlay, decor paper, base board and counteracting paper are put into the press. Heat and pressure liquefy the resin in the press and bond the papers and base board together to form a solid unit.

Cutting and Profiling

Longitudinal and latitudinal saws cut the large format boards into individual panels along the markings on the decor paper. Tongue and groove profiles are cut into the edges of the panels.

Packaging and Distribution

The panels are then stacked in boxes and wrapped in moisture-repellent foil which are then transported to customer by either road or rail.

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	Not applicable
Ancillary materials	Not applicable
Manufacturing energy and waste	No allocation

PRODUCT & MANUFACTURING SITES GROUPING

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

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'.

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	-7.14E+00	1.68E-01	3.32E+00	-3.65E+00	1.89E+00	7.04E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.18E-02	7.78E+00	0.00E+00	-1.71E+01
GWP – fossil	kg CO_2e	2.98E+00	1.68E-01	2.26E+00	5.40E+00	1.89E+00	9.14E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.17E-02	1.17E-01	0.00E+00	-5.90E+00
GWP – biogenic	kg CO_2e	-1.01E+01	1.59E-05	1.02E+00	-9.10E+00	4.46E-04	6.13E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	7.67E+00	0.00E+00	-1.12E+01
GWP – LULUC	kg CO_2e	5.87E-03	7.64E-05	3.70E-02	4.29E-02	8.80E-04	2.11E-05	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.86E-05	3.23E-05	0.00E+00	-4.17E-03
Ozone depletion pot.	kg CFC-$_{11}$e	9.78E-08	2.57E-09	6.02E-08	1.61E-07	3.04E-08	2.49E-10	ND	ND	ND	ND	ND	ND	ND	0.00E+00	6.07E-10	1.31E-09	0.00E+00	-5.54E-08
Acidification potential	mol H^+e	1.70E-02	5.13E-04	1.76E-02	3.52E-02	4.81E-03	8.85E-05	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.45E-04	1.21E-03	0.00E+00	-4.24E-02
EP-freshwater[2)]	kg Pe	7.65E-04	1.32E-05	1.43E-01	1.44E-01	1.52E-04	4.16E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.52E-06	5.05E-05	0.00E+00	-2.92E-03
EP-marine	kg Ne	4.20E-03	1.56E-04	1.74E-03	6.09E-03	1.22E-03	8.56E-05	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.80E-05	6.43E-04	0.00E+00	-6.14E-03
EP-terrestrial	mol Ne	5.29E-02	1.69E-03	6.80E-02	1.23E-01	1.32E-02	3.68E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.19E-04	6.18E-03	0.00E+00	-6.32E-02
POCP ("smog")[3)]	kg NMVOCe	1.39E-02	7.64E-04	4.15E-03	1.88E-02	7.28E-03	1.17E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.13E-04	1.55E-03	0.00E+00	-1.97E-02
ADP-minerals & metals[4)]	kg Sbe	2.65E-05	4.75E-07	4.29E-02	4.29E-02	5.46E-06	5.60E-08	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.19E-07	2.39E-07	0.00E+00	-3.87E-06
ADP-fossil resources	MJ	6.79E+01	2.47E+00	3.15E+01	1.02E+02	2.84E+01	2.04E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.95E-01	1.03E+00	0.00E+00	-7.36E+01
Water use[5)]	m^3e depr.	8.64E+00	1.22E-02	2.13E+00	1.08E+01	1.40E-01	8.60E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.48E-03	2.45E-01	0.00E+00	-1.17E+00

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

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, 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	1.49E-07	1.67E-08	1.18E-07	2.84E-07	1.85E-07	2.21E-09	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.09E-09	1.36E-08	0.00E+00	-4.19E-07
Ionizing radiation[6]	kBq U235e	2.79E-01	2.15E-03	3.93E-01	6.73E-01	2.47E-02	5.01E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.99E-04	1.18E-03	0.00E+00	-7.73E-01
Ecotoxicity (freshwater)	CTUe	2.05E+01	3.49E-01	4.67E+00	2.55E+01	3.99E+00	1.12E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.24E-01	7.92E-01	0.00E+00	-1.04E+01
Human toxicity, cancer	CTUh	1.47E-09	2.78E-11	5.56E-10	2.06E-09	3.15E-10	1.47E-11	ND	ND	ND	ND	ND	ND	ND	0.00E+00	6.55E-12	2.18E-10	0.00E+00	-1.33E-09
Human tox. non-cancer	CTUh	4.86E-08	1.60E-09	5.58E-09	5.57E-08	1.83E-08	5.03E-10	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.70E-10	1.46E-08	0.00E+00	-6.15E-08
SQP[7]	-	8.68E+02	2.49E+00	4.17E+01	9.12E+02	2.86E+01	2.00E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.94E-01	2.90E-01	0.00E+00	-4.04E+01

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8]	MJ	4.47E+01	3.39E-02	2.00E+01	6.47E+01	3.89E-01	-4.65E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	8.28E-03	-1.27E+02	0.00E+00	1.14E+02
Renew. PER as material	MJ	1.05E+02	0.00E+00	-1.35E+01	9.19E+01	0.00E+00	-5.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	-8.68E+01	0.00E+00	-1.26E+02
Total use of renew. PER	MJ	1.50E+02	3.39E-02	6.52E+00	1.57E+02	3.89E-01	-9.65E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	8.28E-03	-2.14E+02	0.00E+00	-1.13E+01
Non-re. PER as energy	MJ	6.13E+01	2.47E+00	3.48E+01	9.86E+01	2.84E+01	-2.42E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.95E-01	1.03E+00	0.00E+00	-7.37E+01
Non-re. PER as material	MJ	6.96E+00	0.00E+00	7.83E-01	7.74E+00	0.00E+00	-7.90E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	-5.73E+00	0.00E+00	1.19E+00
Total use of non-re. PER	MJ	6.83E+01	2.47E+00	3.56E+01	1.06E+02	2.84E+01	-3.21E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.95E-01	-4.70E+00	0.00E+00	-7.25E+01
Secondary materials	kg	9.55E-01	1.05E-03	1.12E-01	1.07E+00	1.21E-02	2.16E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.49E-04	2.42E-03	0.00E+00	2.56E-02
Renew. secondary fuels	MJ	5.57E-03	1.34E-05	3.41E+01	3.41E+01	1.54E-04	2.05E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.25E-06	5.73E-06	0.00E+00	-1.61E-04
Non-ren. secondary fuels	MJ	1.17E-03	0.00E+00	0.00E+00	1.17E-03	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	2.07E-01	3.68E-04	1.35E-02	2.21E-01	4.27E-03	-4.72E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	8.54E-05	1.51E-03	0.00E+00	-5.20E-02

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	1.27E-01	4.18E-03	3.60E-02	1.67E-01	4.79E-02	3.82E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.81E-03	4.86E-02	0.00E+00	-5.46E-01
Non-hazardous waste	kg	4.90E+00	7.73E-02	3.94E+00	8.92E+00	8.86E-01	5.51E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	7.52E-02	7.71E+00	0.00E+00	-2.23E+01
Radioactive waste	kg	1.14E-03	5.26E-07	2.31E-05	1.17E-03	6.04E-06	1.23E-07	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.19E-07	2.93E-07	0.00E+00	-1.98E-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	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	1.03E-02	0.00E+00	5.20E-02	6.23E-02	0.00E+00	1.47E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy rec	kg	8.90E-04	0.00E+00	0.00E+00	8.90E-04	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	7.52E+00	0.00E+00	0.00E+00
Exported energy	MJ	3.66E-05	0.00E+00	0.00E+00	3.66E-05	0.00E+00	9.45E-01	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	4.02E-01	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	5.43E-01	ND	ND	ND	ND	ND	ND	ND	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_2e	3.16E+00	1.67E-01	2.26E+00	5.58E+00	1.88E+00	1.00E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.15E-02	1.16E-01	0.00E+00	-5.87E+00
Ozone depletion Pot.	kg $CFC_{-11}e$	8.64E-08	2.05E-09	4.88E-08	1.37E-07	2.42E-08	2.01E-10	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.84E-10	1.09E-09	0.00E+00	-4.70E-08
Acidification	kg SO_2e	1.36E-02	3.98E-04	1.08E-02	2.48E-02	3.83E-03	6.53E-05	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.11E-04	8.47E-04	0.00E+00	-3.60E-02
Eutrophication	kg PO_4^3e	5.85E-03	9.63E-05	7.16E-03	1.31E-02	9.15E-04	2.65E-05	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.00E-05	3.25E-04	0.00E+00	-3.41E-03
POCP (“smog”)	kg C_2H_4e	8.69E-04	3.63E-05	3.15E-04	1.22E-03	3.64E-04	7.99E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	9.64E-06	6.73E-05	0.00E+00	-2.02E-03
ADP-elements	kg Sbe	2.61E-05	4.63E-07	4.29E-02	4.29E-02	5.33E-06	5.39E-08	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.16E-07	1.98E-07	0.00E+00	-3.78E-06
ADP-fossil	MJ	6.28E+01	2.44E+00	2.99E+01	9.51E+01	2.80E+01	1.96E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.88E-01	1.01E+00	0.00E+00	-6.01E+01

ENVIRONMENTAL IMPACTS – FRENCH NATIONAL COMPLEMENTS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADP-elements	kg Sbe	2.58E-05	4.63E-07	8.82E-07	2.71E-05	5.33E-06	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	1.98E-07	0.00E+00	-3.45E-06
Hazardous waste disposed	kg	1.27E-01	4.18E-03	3.51E-02	1.66E-01	4.79E-02	3.82E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.81E-03	4.86E-02	0.00E+00	-5.46E-01
Non-haz. waste disposed	kg	4.83E+00	7.73E-02	3.92E+00	8.83E+00	8.86E-01	5.51E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	7.52E-02	7.71E+00	0.00E+00	-2.23E+01
Air pollution	m^3	6.00E+02	4.06E+01	1.79E+02	8.19E+02	4.59E+02	4.66E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.04E+01	3.00E+01	0.00E+00	-2.32E+03
Water pollution	m^3	2.81E+01	1.15E+00	7.28E+01	1.02E+02	1.34E+01	2.09E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	6.57E-01	6.06E-01	0.00E+00	-3.54E+01

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	2.98E+00	1.68E-01	2.29E+00	5.44E+00	1.89E+00	9.14E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.18E-02	1.17E-01	0.00E+00	-5.90E+00

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. Secondary Fuels: Waste wood, World, Ecoinvent
2. Secondary Fuels: Waste wood, World, Ecoinvent
3. Heat and power co-generation, natural gas, conventional power plant, 100MW electrical, Germany, Ecoinvent, 0.53 kgCO2e/kWh
4. Electricity, medium voltage, residual mix , Germany, BAFU, 0.81 kgCO2e/kWh
5. Renewable electricity import mix (2020), Germany, ProBas, 0.0277 kgCO2e/MJ
6. Electricity, hard coal, at power plant, Germany, BAFU, 1.02 kgCO2e/kWh
7. Electricity, natural gas, at power plant, Germany, BAFU, 0.52 kgCO2e/kWh
8. Electricity production, nuclear, boiling water reactor, Germany, Ecoinvent, 0.0070 kgCO2e/kWh

Transport scenario documentation - A4 (Transport resources)

1. Transport, freight, lorry >32 metric ton, EURO6, 2397 km

Transport to the building site (A4) - Scenario documentation

Scenario parameter	Value
Capacity utilization (including empty return) %	-
Bulk density of transported products	7.61
Volume capacity utilization factor	-

Installation at the building site (A5) - Scenario documentation

Scenario parameter	Value
Energy: type and consumption (MJ or kWh)	-
Water use (m^3)	-
Ancillary materials: type and mass (kg)	-
Waste materials: type and mass (kg)	-
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)	0
Recovery: energy recovery (kg)	7.52
Disposal (kg)	0
Scenario assumptions e.g. transportation (mode, km) & other	The transport distance is assumed to be 50 km by road.

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

Afzal khan Peerukhan as an authorized verifier for EPD Hub Limited 25.09.2026

VERIFIED ISO 14025