ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Kährs 13mm Engineered Wood Floors
Kährs Group

EPD HUB, HUB-6901
Published on 04.07.2026, last updated on 04.07.2026, valid until 03.07.2031

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	Kährs Group
Address	Ångbåtsbron 1, 211 20 Malmö, Sweden
Contact details	info@kahrs.se
Website	http://www.kahrs.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	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	Roxana Petraș, Kährs Group
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	Kährs 13mm Engineered Wood Floors
Additional labels	15mm Engineered Wood Floors,Kährs, Karelia. Additional brands available on request.
Product reference	Wood floor coverings according to EN 13489:2017 and EN 14342:2013
Place(s) of raw material origin	Sweden
Place of production	Nybro, Sweden
Place(s) of installation and use	Sweden
Period for data	Calendar year 2019
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 (%)	11.1

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m2 of installed floor covering
Declared unit mass	7.0195 kg
Mass of packaging	0.1962 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	2.83
GWP-total, A1-A3 ($kgCO_2e$)	-10.7
Secondary material, inputs (%)	0.06
Total energy use, A1-A3 (kWh)	37.3
Net freshwater use, A1-A3 (m^3)	0.05

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Kährs is one of the world's oldest and most innovative manufacturers of engineered wood flooring, with more than 160 years of experience in wood processing and floor production. Throughout its history, the company has introduced several industry-leading innovations, including the development of multi-layer wood flooring and the glueless Woodloc® locking joint system. Building on generations of accumulated expertise, Kährs continuously develops flooring solutions that combine high quality, attractive design, ease of installation, durability, and sustainability. Today, Kährs products are installed in homes, offices, hotels, retail spaces, cultural venues, and sports facilities worldwide. The company supplies flooring products to more than 70 countries, holds a leading market position in Sweden, and maintains a strong presence across Europe and the United Kingdom. Sustainability and environmental responsibility are integral to Kährs' operations, guiding the company's efforts to deliver innovative and sustainable flooring solutions.

PRODUCT DESCRIPTION

Kährs 3-layer floors consist of a surface layer, core layer, and backing. The core material is made from pine/spruce lamella. The total thickness of the floor is 13 mm. The surface layer can be resanded 3–4 times. The floors can be installed floating on a level, solid surface such as concrete, particleboard, or wood, or glued down. Products are available with either an oil or lacquer surface treatment and in various wood species.

The multi-layered engineered flooring board was originally invented by Kährs. The lamella construction provides structural stability and allows for efficient use of raw materials across the product's layers. All Kährs lamella floors are constructed in three layers. The surface layer is always made of solid wood. The other two layers form the floor's foundation and are made from pine and spruce. All layers have a combined thickness of between 13 and 15 millimetres. The floors can be installed floating or glued down.
Kährs is certified at all sites to ISO 9001 and ISO 14001. All sites are certified to FSC® 019122 and PEFC™. The parquet meets the requirements of EN 13489 and the CE DOP.

Further information can be found at:
http://www.kahrs.com/

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	-	-
Minerals	-	-
Fossil materials	6	EU
Bio-based materials	94	EU

BIOGENIC CARBON CONTENT

Product’s biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	3.2
Biogenic carbon content in packaging, kg C	0.072

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m2 of installed floor covering
Mass per declared unit	7.0195 kg
Functional unit	-
Reference service life	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

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.
The production process begins with the sourcing of raw materials, including logs, sawn planks, and backside veneers from a large network of forest owners and suppliers. The wood is sawn and kiln-dried to produce the core and top-layer materials. The surface layer is graded, strip-glued, and bonded to the core and backside layers. Depending on the product specification, additional processing steps such as filling, sanding, lacquering, or oil treatment may be applied. The flooring boards are then profiled, subjected to final quality inspection, packaged, and stored in the warehouse prior to distribution. Quality control procedures are implemented throughout all Raw materials are sourced from suppliers across Europe. The surface layer is produced from oak hardwood timber sourced from Germany, while the core and backing layers use pine and spruce softwood sourced from Sweden. Chemical inputs — including acrylic varnish, epoxy resin, and PVC edge profiles — are sourced from European suppliers. All materials are of EU origin, with 94–95% bio-based content by mass depending on product thickness.
Production losses arise primarily from wood drying and cutting. Significant wood mass is lost through these processes; all resulting wood waste (chips and offcuts) is recovered and used as fuel — either as wood pellets (produced on-site) or fed into the district heating system. No wood waste goes to landfill. Losses from surface treatment emissions (glue, lacquer, oil) are estimated using best available data and are below the 0.1% cut-off threshold.
All raw materials are transported to the manufacturing facility in Nybro, Sweden by road freight. Full truck load is assumed for all transports, and empty return trips are not included as vehicles are assumed to serve other clients on return. Transport distances and modes were provided by the Manufacturer and are documented in the detailed inventory tables.
Electricity is supplied through a contracted renewable hydropower source . Heat is provided via district heating using wood chip co-generation.
Packaging materials included per m² of finished product are: one EUR-flat pallet , corrugated cardboard edging , low-density polyethylene film ,and PVC edge profiles .

All wood waste generated during manufacturing is recovered as a by-product and sold to a pellet manufacturer (on-site facility) for fuel production. No manufacturing wood waste is sent to landfill or incineration. Since the pellet factory is located on-site, no additional transport is required for wood waste. Transportation of other manufacturing waste streams (non-wood) is assumed to follow standard local waste logistics; distances are not considered significant relative to total impacts and fall within the study's cut-off criteria.
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.

Finished products are transported from the manufacturing facility to customers by truck and, where applicable, by a combination of road and sea freight for overseas markets. Transportation distances and vehicle types are based on the actual export distribution of products during the reference year. Products are packaged to prevent damage during transport, and no product losses are assumed during module A4. For the packaged products, a volume capacity utilisation factor of 1 is assumed.

The flooring is installed using Kährs' glueless Woodloc® locking joint system, which mechanically locks the boards together without the need for adhesives. Therefore, the use of ancillary installation materials is considered negligible

and has been excluded from the assessment. Energy consumption during installation is also assumed to be negligible.

Installation losses are assumed to be 1% by mass of the flooring product, corresponding to 0.07 kg of product waste per declared unit. Packaging waste generated during installation consists of 0.09 kg of wooden pallet material, 0.05 kg of paper packaging, and 0.05 kg of plastic wrapping film. All installation and packaging waste is assumed to be collected and sent for recycling, incinaration with energy recovery and landfilling based on EUROSTAT scenarios for different materials.

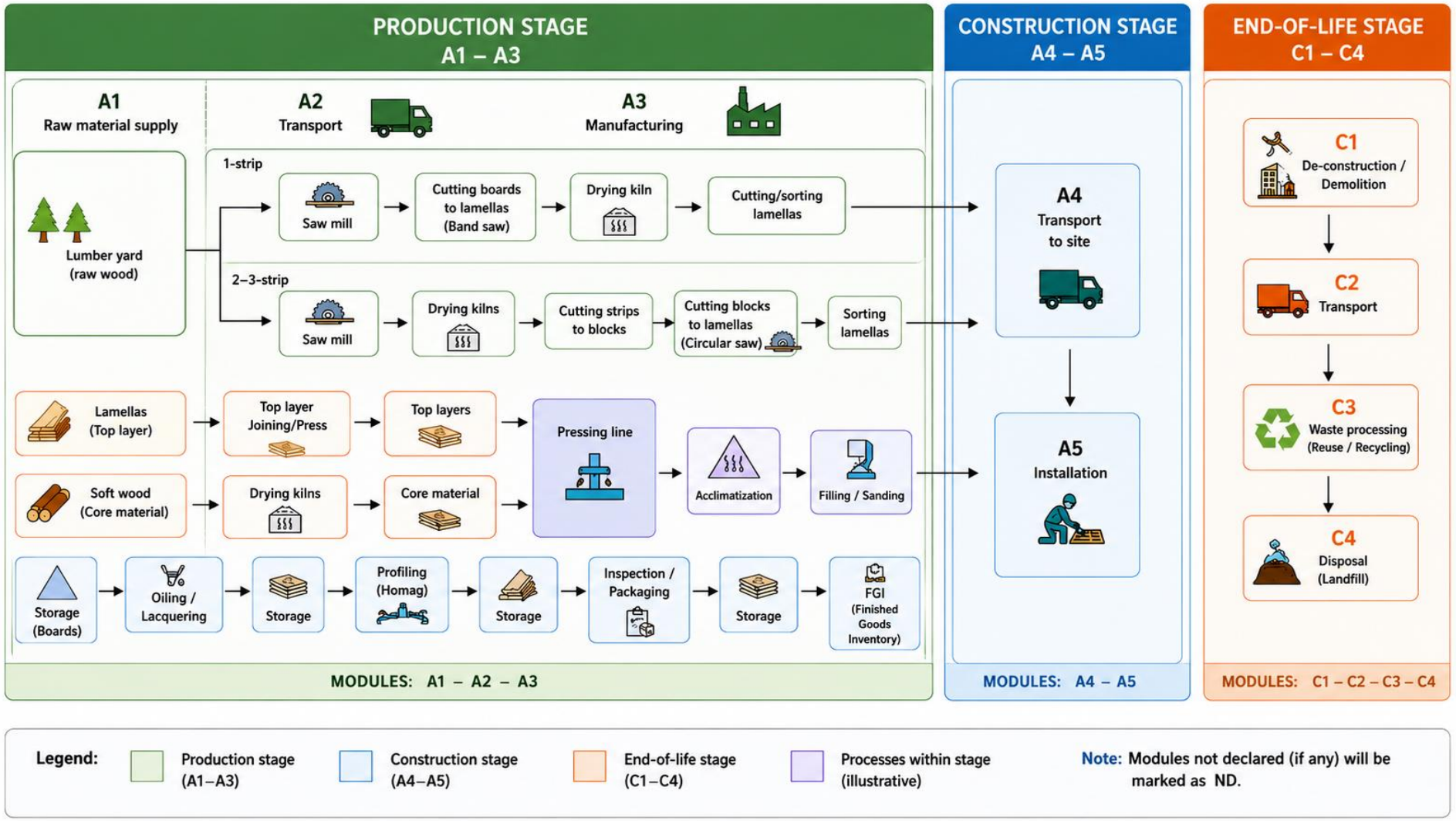
Waste generated during installation is assumed to be transported 50 km by truck to the respective waste management facilities. Environmental impacts associated with installation therefore include the treatment and transport of installation losses and packaging waste generated at the construction site.

PRODUCT END OF LIFE (C1-C4, D)

At the end of its service life, the flooring product is assumed to be removed without significant energy consumption; therefore, the impacts associated with demolition and disassembly are considered negligible. The end-of-life scenario is representative of current waste management practices in Sweden, where the product is assumed to reach its end of life. The product is transported by truck to the nearest waste treatment facility, with an assumed transport distance of 50 km.

Based on current wood waste management practices, 95% of the post-consumer wood flooring is assumed to be incinerated with energy recovery, while the remaining 5% is disposed of in landfill. These scenarios are currently in use and are considered representative of one of the most likely end-of-life treatment routes for wood flooring products in the reference market. The impacts associated with waste processing, energy recovery, and landfill disposal are included in modules C3 and C4. Module D accounts for the potential benefits beyond the system boundary resulting from the substitution of conventional energy production through the recovery of energy from the incinerated wood fraction.

LIFE CYCLE FLOW DIAGRAM



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	Physical Properties
Packaging material	No allocation
Ancillary materials	No allocation
Manufacturing energy and waste	Physical Properties

PRODUCT & MANUFACTURING SITES GROUPING

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

This EPD is product and factory specific.

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	-1.12E+01	1.92E-01	2.68E-01	-1.07E+01	2.81E-01	2.66E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.90E-02	1.29E+01	7.07E-01	-2.79E+00
GWP – fossil	kg CO_2e	2.24E+00	1.88E-01	4.06E-01	2.83E+00	2.81E-01	1.11E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.90E-02	1.02E-01	3.49E-02	-2.71E+00
GWP – biogenic	kg CO_2e	-1.34E+01	4.36E-04	-1.52E-01	-1.36E+01	1.38E-04	1.55E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.83E-07	1.28E+01	6.72E-01	-7.67E-02
GWP – LULUC	kg CO_2e	5.15E-03	3.81E-03	1.41E-02	2.30E-02	1.06E-04	2.41E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.74E-05	2.83E-05	2.55E-06	-4.05E-03
Ozone depletion pot.	kg CFC_{-11}e	1.26E-08	5.41E-09	1.36E-08	3.16E-08	5.91E-09	5.03E-10	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.67E-10	1.14E-09	1.04E-10	-3.38E-08
Acidification potential	mol H^+e	1.48E-02	1.74E-03	2.83E-03	1.93E-02	1.70E-03	2.70E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.36E-04	1.07E-03	3.01E-05	-1.72E-02
EP-freshwater[2)]	kg Pe	2.42E-04	1.42E-05	1.27E-04	3.83E-04	1.88E-05	6.47E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.23E-06	4.61E-05	4.38E-07	-1.73E-03
EP-marine	kg Ne	2.16E-03	5.10E-04	9.79E-04	3.65E-03	5.00E-04	8.91E-05	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.48E-05	5.69E-04	7.77E-04	-2.52E-03
EP-terrestrial	mol Ne	2.29E-02	5.28E-03	1.06E-02	3.88E-02	5.49E-03	6.94E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.84E-04	5.46E-03	1.22E-04	-2.47E-02
POCP ("smog")[3)]	kg NMVOCe	9.67E-03	1.66E-03	2.90E-03	1.42E-02	1.97E-03	2.39E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.99E-04	1.37E-03	5.04E-05	-7.91E-03
ADP-minerals & metals[4)]	kg Sbe	1.27E-05	5.47E-07	1.98E-06	1.52E-05	7.53E-07	2.02E-07	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.12E-07	2.13E-07	7.89E-09	-3.35E-06
ADP-fossil resources	MJ	3.45E+01	2.65E+00	2.06E+01	5.78E+01	4.04E+00	7.31E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.56E-01	9.13E-01	9.24E-02	-4.50E+01
Water use[5)]	m^3e depr.	1.16E+00	1.71E-02	8.53E-01	2.03E+00	2.24E-02	2.74E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.25E-03	2.22E-01	4.05E-03	-8.87E-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	3.56E-07	1.65E-08	4.14E-08	4.13E-07	2.63E-08	6.10E-09	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.82E-09	1.21E-08	6.71E-10	-1.36E-07
Ionizing radiation[6)]	kBq U235e	5.19E-02	2.65E-03	1.05E+00	1.10E+00	4.28E-03	1.13E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.66E-04	1.04E-03	7.81E-05	-8.69E-01
Ecotoxicity (freshwater)	CTUe	1.12E+02	2.70E+00	4.18E+01	1.56E+02	3.40E+00	2.71E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.15E-01	2.50E+00	1.49E+00	-7.08E+01
Human toxicity, cancer	CTUh	1.23E-08	4.02E-11	4.72E-10	1.28E-08	4.77E-11	1.43E-10	ND	ND	ND	ND	ND	ND	ND	0.00E+00	6.12E-12	1.92E-10	2.34E-12	-4.47E-10
Human tox. non-cancer	CTUh	4.02E-08	1.73E-09	8.33E-09	5.02E-08	2.47E-09	1.03E-09	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.46E-10	1.29E-08	4.06E-10	-1.84E-08
SQP[7)]	-	8.95E+02	2.38E+00	3.71E+01	9.34E+02	3.73E+00	9.49E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.55E-01	2.57E-01	2.18E-01	-1.30E+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	7.32E+01	5.05E-02	1.25E+01	8.57E+01	5.95E-02	-2.44E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	7.73E-03	-1.12E+02	1.27E-03	-7.77E+00
Renew. PER as material	MJ	8.01E+01	0.00E+00	2.05E+00	8.21E+01	0.00E+00	-2.05E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	-7.61E+01	-4.00E+00	3.77E-01
Total use of renew. PER	MJ	1.53E+02	5.05E-02	1.45E+01	1.68E+02	5.95E-02	-4.49E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	7.73E-03	-1.89E+02	-4.00E+00	-7.40E+00
Non-re. PER as energy	MJ	2.92E+01	2.68E+00	1.68E+01	4.86E+01	4.04E+00	-1.63E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.56E-01	9.13E-01	-1.37E+01	-4.50E+01
Non-re. PER as material	MJ	5.33E+00	0.00E+00	2.22E+00	7.55E+00	0.00E+00	-2.22E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	-3.97E-01	-4.93E+00	9.20E-01
Total use of non-re. PER	MJ	3.45E+01	2.68E+00	1.90E+01	5.61E+01	4.04E+00	-3.85E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.56E-01	5.16E-01	-1.86E+01	-4.41E+01
Secondary materials	kg	4.39E-03	1.26E-03	5.98E-02	6.54E-02	1.73E-03	8.36E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.33E-04	2.14E-03	3.17E-05	1.78E-02
Renew. secondary fuels	MJ	5.47E-05	1.33E-05	5.36E-02	5.37E-02	2.09E-05	5.39E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.04E-06	6.98E-06	6.36E-07	-1.53E-05
Non-ren. secondary fuels	MJ	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
Use of net fresh water	m^3	2.70E-02	5.18E-04	1.85E-02	4.61E-02	5.21E-04	3.33E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	7.98E-05	1.31E-03	-1.40E-03	-2.05E-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	1.74E-01	5.04E-03	3.36E-02	2.12E-01	5.85E-03	4.08E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.56E-03	4.30E-02	1.54E-04	-1.84E-01
Non-hazardous waste	kg	1.66E+00	8.45E-02	2.51E+00	4.25E+00	1.17E-01	3.20E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	7.03E-02	6.83E+00	1.00E+00	-8.92E+00
Radioactive waste	kg	1.33E-05	6.46E-07	2.25E-04	2.39E-04	1.05E-06	2.46E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.12E-07	2.60E-07	1.91E-08	-2.23E-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	0.00E+00	0.00E+00	8.10E-01	8.10E-01	0.00E+00	1.71E-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	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	6.64E+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	4.81E-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	2.02E-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	2.79E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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	2.24E+00	1.92E-01	4.20E-01	2.86E+00	2.81E-01	1.11E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.90E-02	1.02E-01	3.49E-02	-2.72E+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. Electricity production, hydro, run-of-river, Sweden, Ecoinvent, 0.0044 kgCO2e/kWh
2. Heat and power co-generation, wood chips, 6667 kW, state-of-the-art 2014, Sweden, Ecoinvent, 0.0026 kgCO2e/MJ
3. Electricity voltage transformation from high to medium voltage, Sweden, Ecoinvent, 0.0314 kgCO2e/kWh

Transport scenario documentation - A4 (Transport resources)

1. Transport, freight, lorry, >32 metric ton, diesel, EURO 5, 428 km
2. Transport, freight, sea, container ship, heavy fuel oil, 877 km
3. Transport, freight, lorry, >32 metric ton, diesel, EURO 5, 248 km

Transport to the building site (A4) - Scenario documentation

Scenario parameter	Value
Capacity utilization (including empty return) %	100
Bulk density of transported products	555
Volume capacity utilization factor	1

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)	The impacts of the ancillary materials and consumed energy during installation are assumed zero since they are negligible. by mass.
Waste materials: type and mass (kg)	Weight loss from product is assumed as 1% .0.07 kg from product , 0.09kg Pallet, 0.05 kg paper and 0.05 kg plastic wrapping filim.
Waste materials: output routes	Cardboard - 83% recycling , 9% landfill, 8% incineration; Wood packaging - 32% recycling , 38% landfill, 30% incineration; Plastic - 40% recycling , 23% landfill, 37% incineration; All the waste material from product is assumed to be 100% recycling .0.07 kg from product
Direct emissions (kg)	-

End of life (C1-C4) - Scenario documentation

Scenario information	Value
Collection process: collected separately (kg)	Module C1: The impacts of the disassembly stage are assumed zero, since the consumption of energy and natural resources for disassembling the end-of-life product is negligible.
Collection process: Mixed waste (kg)	Module C2: Transportation distance to the closest disposal area is estimated as 50 km and the transportation method is assumed as lorry which is the most common. Module C3, C4, D: 95% of the end-of-life product is assumed to be recovered to energy. 5% Landfill
Recovery: re-use (kg)	0
Recovery: recycling (kg)	0
Recovery: energy recovery (kg)	6.64
Disposal (kg)	0.38
Scenario assumptions e.g. transportation (mode, km) & other	Incineration 50km

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

Magaly Gonzalez Vazquez as an authorized verifier for EPD Hub Limited
04.07.2026

VERIFIED ISO 14025

ANNEX I – SCALING TABLE

KÄHRS ENGINEERED WOOD FLOORS	13MM	15MM
Weight	7.0195	8.3380
Impact actegorty kg CO2eq.	A1-A3	A1-A3
Global Warming Potential total	-1.07E+01	-1.23E+01
Global Warming Potential fossil	2.83E+00	3.27E+00
Global Warming Potential biogenic	-1.36E+01	-1.57E+01
Global Warming Potential, LULUC	2.30E-02	2.65E-02