

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

Three-layer parquet floor
Berg & Berg AB



EPD HUB, EPD HUB-0976

Publishing 22.12.2023, last updated 22.12.2023, valid until 22.12.2028

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Berg & Berg AB
Address	Flyttblocksvägen 2, 372 52 Kallinge
Contact details	mikael.carlevad@berg-berg.com
Website	https://berg-berg.com/en/

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR version 1.0, 1 Feb 2022
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Alexander Mathisen, Gidås Sustainability Agency
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal certification <input checked="" type="checkbox"/> External verification
EPD verifier	Haiha Nguyen, as an authorized verifier acting for EPD Hub Limited

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	Three-layer parquet floor
Additional labels	Oak parquet, Pine parquet, Ash parquet, Red oak parquet, Beech parquet
Product reference	-
Place of production	Kallinge, Sweden
Period for data	01.01.2022 - 31.12.2022
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3	20%

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m ²
Declared unit mass	8 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	2,24E+00
GWP-total, A1-A3 (kgCO ₂ e)	-1,90E+01
Secondary material, inputs (%)	0,0811
Secondary material, outputs (%)	72,5
Total energy use, A1-A3 (kWh)	55,2
Total water use, A1-A3 (m ³ e)	4,02E-01

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Our philosophy at Berg & Berg is to keep the entire manufacturing process in our own hands, from logs to ready parquet. We buy logs from forest owners in our region and take care of all parts in the logs during production. We are certified for FSC and Natureplus and stand for local and high quality manufacturing. It goes without saying that Berg & Berg floors are beautiful and visually timeless.

PRODUCT DESCRIPTION

Three-layer parquet from Berg & Berg consists of spruce veneer (back), pine (middlelayer) and a toplayer. The floor is 14 mm in thickness and the toplayer could be made in different species (oak, pine, ash, red oak and beech) and different patterns such as 1-strip, 3-strip, 9-strip and 19-strip. The surface could be oxidative oil or lacquer. The floors are installed floating or glued down. The floors have a thick toplayer for longer lifetime.

Further information can be found at berg-berg.com.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	0	-
Minerals	0	-
Fossil materials	3,6	NO
Bio-based materials	96,4	SE

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	3,534
Biogenic carbon content in packaging, kg C	0,042

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m ²
Mass per declared unit	8 kg
Functional unit	-
Reference service life	Use stage not included

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	MND	MND	MND	MND	MND	MND	MND	x	x	x	x	x		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstr./demol.	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = MND. 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. 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.

To produce the wear surface, the log is sawn in the sawmill to different dimensions. Then there is new sawing, drying and sorting. The pine for frame material is bought and then cut, split and a frame is built up. The veneer for the back is purchased. These three ingredients are pressed together into a parquet floor. The floor is then sanded, profiled and surface treated. Lastly the parquet is packaged and stored before delivery to customers.

Production losses are used for in-house heating and to produce wood briquettes that are sold as a co-product.

If transport modes and distances were unknown for certain materials, a transport distance of 50 km was assumed, in combination with Lorry, >32 tonne, EURO 5 being the chosen transport mode. These assumptions were made for all life cycle modules unless longer distances or other modes (e.g. sea or air travel) were relevant.

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.

Based on data from the manufacturer, the transport distance was set to 860 km, and the transport medium was assumed to be Lorry, >32 tonne, EURO 5. See previous section for additional transport information.

According to the manufacturer an installation loss of 5% have been set. The installation loss is related to adaption of the parquet to fit the floor at installation site. While 100 % of the waste packaging is assumed to be sorted for municipal incineration, an efficiency rate of 73% when recovering energy and electricity during incineration of the packaging materials has been assumed. The transport distance from customer to the nearest waste treatment plant was set to 50 km, in combination with Lorry, >32 tonne, EURO 5 being the chosen transport mode.

As the parquet is designed to be clicked into place, this is assumed to be done entirely by hand. Therefore, energy consumption in the form of electricity and other fuels has been assumed to be zero during installation. The same reasoning has also been implemented during disassembly.

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 end-of-life stage C1-C4 & D includes:

- Deconstruction/demolition (C1)
- Transport to waste management facility (C2)
- Waste processing for reuse, recovery and/or recycling (C3)
- Waste disposal (C4)

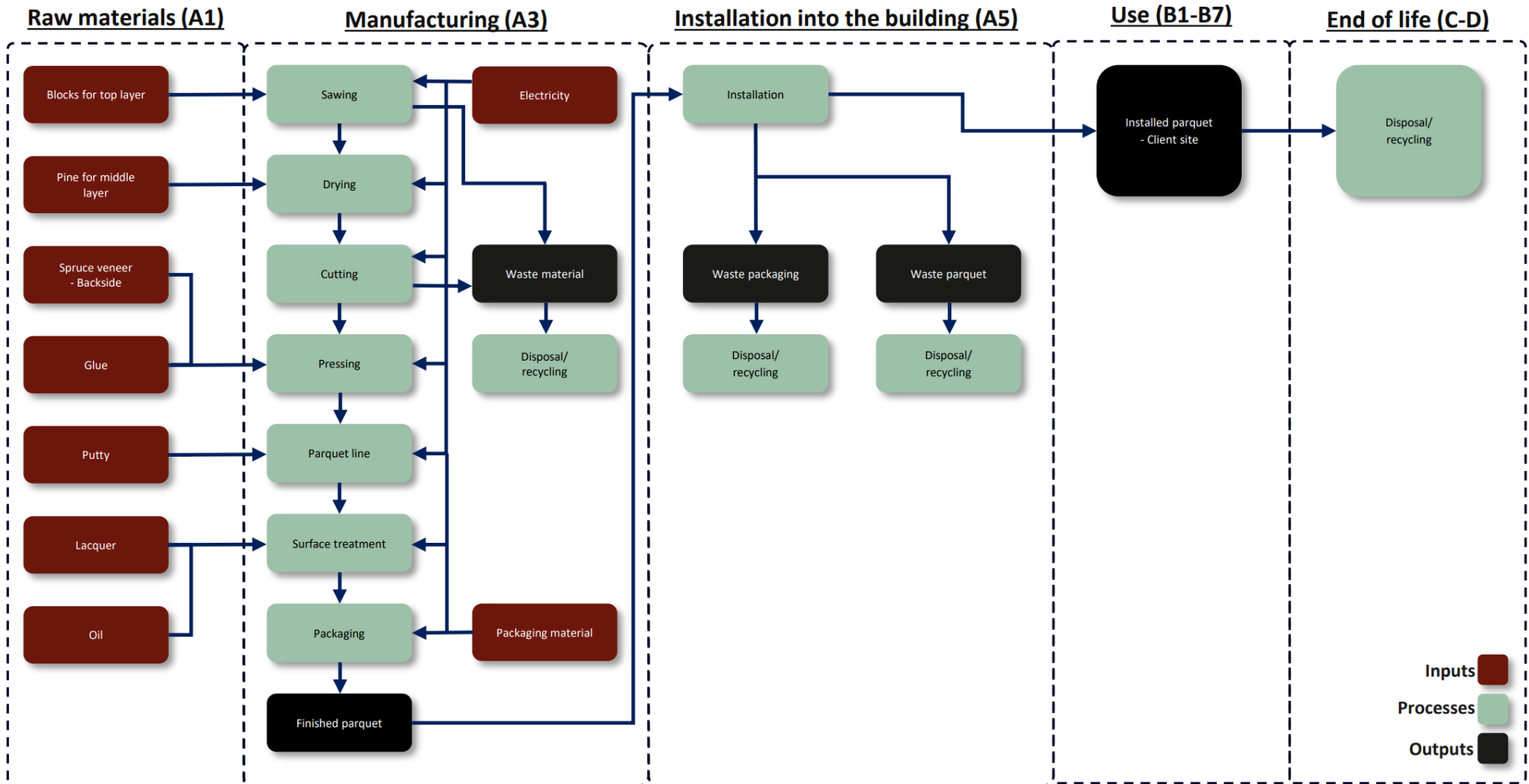
Waste processing and disposal credits are assigned to module D.

Module D includes reuse, recovery and/or recycling potentials conveyed as benefits and net impacts. While 100% of the waste material is assumed to be incinerated in a municipal incineration plant, an efficiency rate of 73 % when recovering energy and electricity during incineration of these materials has been assumed.

Demolition of the parquet was assumed to be done entirely by hand, without the use of electric or fuel-powered machines. Therefore, no energy consumption has been specified in module C1.

If transport modes and distances were unknown for certain materials, a transport distance of 50 km was assumed, in combination with Lorry, >32 tonne, EURO 5 being the chosen transport mode.

MANUFACTURING PROCESS AND SYSTEM BOUNDARY



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.

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	Allocated by mass or volume
Packaging materials	Allocated by mass or volume
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

AVERAGES AND VARIABILITY

Type of average	Multiple products
Averaging method	Averaged by shares of total mass
Variation in GWP-fossil for A1-A3	20%

The results in this EPD represent an average of five variants of parquet flooring (Oak, pine, ash, red oak and beech). All five of these variants are produced by the same manufacturer and in the same location, but with varying surface layer. The function and materials (except the wood species of the surface layer) of these variants are however the same. A conversion table can be found on page 11, with which the results of this EPD can be applied to each product included in the study.

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. Ecoinvent and One Click LCA databases were used as sources of environmental data.

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

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	-2,00E+01	3,66E-01	5,67E-01	-1,90E+01	6,91E-01	3,40E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,76E-02	2,17E+01	0,00E+00	-2,68E+00
GWP – fossil	kg CO ₂ e	1,64E+00	3,66E-01	2,33E-01	2,24E+00	6,90E-01	1,61E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,75E-02	6,58E-02	0,00E+00	-2,66E+00
GWP – biogenic	kg CO ₂ e	-2,16E+01	0,00E+00	-1,54E-01	-2,18E+01	0,00E+00	1,54E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	2,16E+01	0,00E+00	0,00E+00
GWP – LULUC	kg CO ₂ e	1,95E-02	1,37E-04	4,88E-01	5,07E-01	2,55E-04	2,54E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,38E-05	1,49E-04	0,00E+00	-1,58E-02
Ozone depletion pot.	kg CFC ₁₁ e	2,50E-07	9,01E-08	4,80E-08	3,88E-07	1,59E-07	2,83E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	8,64E-09	3,33E-09	0,00E+00	-1,43E-07
Acidification potential	mol H ⁺ e	1,10E-02	1,20E-03	1,17E-03	1,34E-02	2,92E-03	8,70E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,59E-04	3,53E-04	0,00E+00	-2,18E-02
EP-freshwater ²⁾	kg Pe	1,93E-04	2,60E-06	2,82E-05	2,24E-04	5,65E-06	1,20E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,07E-07	6,77E-06	0,00E+00	-1,07E-04
EP-marine	kg Ne	2,79E-03	2,79E-04	5,80E-04	3,65E-03	8,69E-04	2,38E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,72E-05	4,97E-05	0,00E+00	-2,57E-03
EP-terrestrial	mol Ne	3,38E-02	3,09E-03	2,92E-03	3,98E-02	9,59E-03	2,60E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,21E-04	5,61E-04	0,00E+00	-3,03E-02
POCP (“smog”) ³⁾	kg NMVOCe	1,18E-02	1,17E-03	9,73E-04	1,40E-02	3,07E-03	8,90E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,67E-04	1,57E-04	0,00E+00	-8,28E-03
ADP-minerals & metals ⁴⁾	kg Sbe	1,51E-05	9,25E-07	2,18E-06	1,82E-05	1,62E-06	1,05E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	8,80E-08	1,82E-07	0,00E+00	-4,59E-06
ADP-fossil resources	MJ	2,69E+01	5,78E+00	4,12E+00	3,68E+01	1,04E+01	2,51E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,64E-01	1,37E+00	0,00E+00	-5,27E+01
Water use ⁵⁾	m ³ e depr.	1,49E+00	2,67E-02	1,59E+01	1,74E+01	4,64E-02	8,74E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,52E-03	3,68E-02	0,00E+00	-1,28E+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, PEF

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	1,21E-07	4,14E-08	1,71E-08	1,80E-07	7,96E-08	1,38E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,33E-09	1,33E-09	0,00E+00	-2,18E-07
Ionizing radiation ⁶⁾	kBq U235e	7,29E-02	2,98E-02	2,26E-02	1,25E-01	4,94E-02	1,04E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,68E-03	3,64E-02	0,00E+00	-2,19E+00
Ecotoxicity (freshwater)	CTUe	3,04E+01	4,80E+00	1,04E+01	4,56E+01	9,33E+00	2,99E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,07E-01	8,28E-01	0,00E+00	-7,16E+01
Human toxicity, cancer	CTUh	1,74E-09	1,27E-10	4,01E-10	2,27E-09	2,29E-10	1,37E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,25E-11	4,05E-11	0,00E+00	-9,94E-10
Human tox. non-cancer	CTUh	2,00E-08	4,90E-09	4,86E-09	2,97E-08	9,23E-09	2,13E-09	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,02E-10	8,21E-10	0,00E+00	-2,89E-08
SQP ⁷⁾	-	8,13E+02	6,53E+00	-4,89E+00	8,15E+02	1,19E+01	4,14E+01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	6,50E-01	2,12E-01	0,00E+00	-2,77E+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	1,16E+02	7,55E-02	4,98E+01	1,66E+02	1,17E-01	8,30E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	6,35E-03	2,38E-01	0,00E+00	-1,67E+01
Renew. PER as material	MJ	1,69E+02	0,00E+00	1,59E+00	1,70E+02	0,00E+00	-1,59E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-1,69E+02	0,00E+00	0,00E+00
Total use of renew. PER	MJ	2,84E+02	7,55E-02	5,14E+01	3,36E+02	1,17E-01	6,72E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	6,35E-03	-1,69E+02	0,00E+00	-1,67E+01
Non-re. PER as energy	MJ	2,42E+01	5,78E+00	2,92E+00	3,29E+01	1,04E+01	2,32E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,64E-01	1,37E+00	0,00E+00	-5,25E+01
Non-re. PER as material	MJ	4,27E+00	0,00E+00	1,19E+00	5,46E+00	0,00E+00	-1,19E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-4,27E+00	0,00E+00	0,00E+00
Total use of non-re. PER	MJ	2,85E+01	5,78E+00	4,12E+00	3,84E+01	1,04E+01	1,12E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,64E-01	-2,90E+00	0,00E+00	-5,25E+01
Secondary materials	kg	6,49E-03	1,65E-03	4,19E-02	5,00E-02	2,88E-03	2,81E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,57E-04	5,16E-04	0,00E+00	-3,83E-03
Renew. secondary fuels	MJ	2,06E-04	1,49E-05	4,01E-03	4,23E-03	2,91E-05	2,14E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,58E-06	8,28E-07	0,00E+00	-2,07E-05
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m ³	3,18E-02	7,64E-04	3,70E-01	4,02E-01	1,34E-03	2,03E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,30E-05	1,15E-03	0,00E+00	-4,54E-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	7,28E-02	6,22E-03	2,13E-02	1,00E-01	1,38E-02	6,76E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,48E-04	5,63E-03	0,00E+00	-2,20E-01
Non-hazardous waste	kg	1,41E+00	1,08E-01	9,77E-01	2,49E+00	2,26E-01	1,60E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,23E-02	3,07E-01	0,00E+00	-8,99E+00
Radioactive waste	kg	5,46E-05	3,98E-05	8,89E-06	1,03E-04	6,94E-05	9,34E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,77E-06	9,85E-06	0,00E+00	-5,18E-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	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	9,66E-03	0,00E+00	6,62E+00	6,63E+00	0,00E+00	3,32E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy rec	kg	3,07E-03	0,00E+00	1,70E+00	1,70E+00	0,00E+00	1,54E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	3,95E-02	0,00E+00	0,00E+00	3,95E-02	0,00E+00	1,98E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

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 ₂ e	1,57E+00	3,62E-01	7,93E-01	2,72E+00	6,83E-01	1,85E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,72E-02	6,51E-02	0,00E+00	-2,63E+00
Ozone depletion Pot.	kg CFC ₁₁ e	2,03E-07	7,14E-08	3,51E-08	3,10E-07	1,26E-07	2,26E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	6,84E-09	2,88E-09	0,00E+00	-1,16E-07
Acidification	kg SO ₂ e	8,04E-03	9,68E-04	9,31E-04	9,94E-03	2,27E-03	6,55E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,23E-04	2,98E-04	0,00E+00	-1,86E-02
Eutrophication	kg PO ₄ ³ e	3,84E-03	2,07E-04	7,48E-04	4,80E-03	5,17E-04	3,01E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,81E-05	2,37E-04	0,00E+00	-3,96E-03
POCP ("smog")	kg C ₂ H ₄ e	1,10E-03	4,43E-05	9,23E-05	1,24E-03	8,87E-05	6,88E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,82E-06	1,29E-05	0,00E+00	-8,08E-04
ADP-elements	kg Sbe	1,38E-05	9,00E-07	2,06E-06	1,68E-05	1,57E-06	9,75E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	8,52E-08	1,80E-07	0,00E+00	-4,62E-06
ADP-fossil	MJ	2,59E+01	5,78E+00	4,12E+00	3,58E+01	1,04E+01	2,46E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,64E-01	1,37E+00	0,00E+00	-5,25E+01

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online.

This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

HaiHa Nguyen, as an authorized verifier acting for EPD Hub Limited
22.12.2023



APPENDIX 1

The following table can be used to convert the average results presented in this EPD to each of the five products included in the study. This can be done by simply multiplying the results by the relevant conversion factor presented in the table below. This is valid for all environmental impact indicators (Impact categories) included in this study. For instance, GWP-Fossil (A1-A3) for Product 1 would be calculated by multiplying 2.14 kgCO₂e (See result table) by the conversion factor 0.98.

Product	Product name	Conversion factor
1	Oak parquet	0.98
2	Pine parquet	1.18
3	Ash parquet	0.96
4	Red oak parquet	0.98
5	Beech parquet	0.98