

Owner: Junckers Industrier A/S
No.: MD-25122-EN
Issued: 28-05-2025
Valid to: 28-05-2030

3rd PARTY VERIFIED

EPD

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | ISO 14025 & EN 15804



Owner of declaration
Junckers Industrier A/S
Værftsvej 4
4600 Køge
Denmark



Issued:
28-05-2025

Valid to:
28-05-2030

Programme
EPD Danmark
www.epddanmark.dk



- | | |
|-------------------------------------------------|------------------------------------------------------|
| <input type="checkbox"/> Industry EPD | <input checked="" type="checkbox"/> Product specific |
| <input checked="" type="checkbox"/> Product EPD | <input type="checkbox"/> Average |
| | <input type="checkbox"/> Worst Case |

Declared product(s)

Single stave Oak 15 x 58.3 x 467.6mm /
Single stave Oak 15 x 62.2 x 623.5mm

Single stave Oak 22 x 58.3 x 467.6mm/
Single stave Oak 22 x 62.2 x 623.5mm

The EPD covers one hardwood type: oak.

Number of declared datasets/product variations: 2

Production site

Junckers Industrier A/S Værftsvej 4 4600 Køge Denmark	Junckers Industrier A/S Herthadalsvej 5 4840 Nørre Alslev Denmark
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Use of Guarantees of Origin

- ☒ No certificates used
☐ Electricity covered by GoO
☐ Biogas covered by GoO

Declared/ functional unit

1 m² of solid hardwood single stave floor excl. surface treatment

Year of production site data (A3)

2023

EPD version

Version 1

Basis of calculation

This EPD is developed and verified in accordance with the European standard EN 15804+A2.

Comparability

EPDs of construction products may not be comparable if they do not comply with the requirements in EN 15804. EPD data may not be comparable if the datasets used are not developed in accordance with EN 15804 and if the background systems are not based on the same database.

Validity

This EPD has been verified in accordance with ISO 14025 and is valid for 5 years from the date of issue.

Use

The intended use of an EPD is to communicate scientifically based environmental information for construction products, for the purpose of assessing the environmental performance of buildings.

EPD type

- ☒ Cradle-to-gate with modules C1-C4 and D
☐ Cradle-to-gate with options, modules C1-C4 and D
☐ Cradle-to-grave and module D
☐ Cradle-to-gate
☐ Cradle-to-gate with options

CEN standard EN 15804 serves as the core PCR

Independent verification of the declaration and data, according to EN ISO 14025

☐ internal ☒ external

Third party verifier:



Guangli Du



Martha Katrine Sørensen
EPD Danmark

Life cycle stages and modules (ND = module not declared)

Product			Construction process		Use							End of life				Beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Re-use, recovery and recycling potential
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

Product information

Product description

The main product components are shown in the table below.

Material	Weight-% of declared product
Wood, dry weight	92%
Water in wood	8%

The thermal properties of the floorboards are as follows.

Thermal conductivity, [W/m·K]:

Oak: Approx. 0,17

Thermal resistance, md [m²·K/W]:

22 mm floorboards: 0,13

15 mm floorboards: 0,09

Product packaging:

The composition of the sales- and transport packaging of the product is shown in the table below.

Material	Weight of packaging material (kg)	Weight-% of packaging
PE-film	0,069 – 0,103	100%
Total	0,069 – 0,103	100%

Representativity

This declaration, including data collection and the modeled foreground system including results, represents the production of 1 m² of single stave floor on the production site located in Køge and Nørre Alslev. Product specific data are based on average values collected in the period 2023. Background data are based on datasets from Ecoinvent 3.10 and a few datasets from CEPE 4.0 and are less than 10 years old. Generally, the used background datasets are of high quality, and the majority of the datasets are only a couple of years old.

Hazardous substances

The declared products do not contain substances listed on the "Candidate List of Substances of Very High Concern for authorisation"

(<http://echa.europa.eu/candidate-list-table>)

Product(s) use

Hardwood 2-strip parquet floor, which is ready to be installed in accordance with Junckers Laying Instructions. Intended for indoor use.

Essential characteristics

The hardwood floors are covered by harmonized technical specification EN 13226, EN13629 and EN 14342. Furthermore, a DoP (Declaration of Performance) can be found at under certificates at:

<https://www.junckers.com/download>


Further technical information can be obtained by contacting the manufacturer or on the manufacturer's website:

<https://www.junckers.com/wood-flooring/guidance/technical-advice>

Reference Service Life (RSL)

The reference service life (RSL) is not declared, as this EPD is based on a cradle-to-gate with modules C1-C4 and D, assessment where the RSL is not relevant.

Picture of product(s)

Single stave floors	Picture
<p>Single stave Oak 15 x 58.3 x 467.6mm / Single stave Oak 15 x 62.2 x 623.5mm</p> <p>Single stave Oak 22 x 58.3 x 467.6mm/ Single stave Oak 22 x 62.2 x 623.5mm</p>	

Example of product installed



LCA background

Declared unit

The LCI and LCIA results in this EPD relates to 1 m² of single stave floor.

Name	Value	Unit
Declared unit	1	m ²

The product variations include one hardwood species (oak), different thicknesses (15 mm or 22 mm) without surface treatments.

The results are grouped into two groups; 15 mm and 22 mm single stave floors in oak, as this is the parameter which impacts the results declared per 1 m² single stave floor.

Functional unit

Not defined.

Material properties

Single staves are made of oak and available in two widths and lengths:

Single stave with 22mm thickness in the width and length of 58,3 x 467,6 and 62,2 x 623,5

Single stave with 15mm thickness in the width and length of 58,3 x 467,6 and 62,2 x 623,5

The single stave floor has a moisture content of the wood of 8%. Mass factor and the density of the hardwood are listed in the table below.

Name	Mass factor (kg/DU)	Density wood* (kg/m ³)
Single stave Oak 15 x 58.3 x 467.6mm / Single stave Oak 15 x 62.2 x 623.5mm	12,06	760
Single stave Oak 22 x 58.3 x 467.6mm / Single stave Oak 22 x 62.2 x 623.5mm	15,50	760

*At moisture content of 8%

PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804+A2, and EN16485.

Conversion factors

Conversion factors from the declared unit of 1 m² to 1 kg are listed in the table below.

Name	Conversion factor to 1 kg
Single stave Oak 15 x 58.3 x 467.6mm / Single stave Oak 15 x 62.2 x 623.5mm	0,083
Single stave Oak 22 x 58.3 x 467.6mm / Single stave Oak 22 x 62.2 x 623.5mm	0,065

Energy modelling principles

Foreground system:

The product is produced using Danish residual electricity mix in the production in A3. The steam used at Køge is process steam from VEKS, which is produced from biomass.

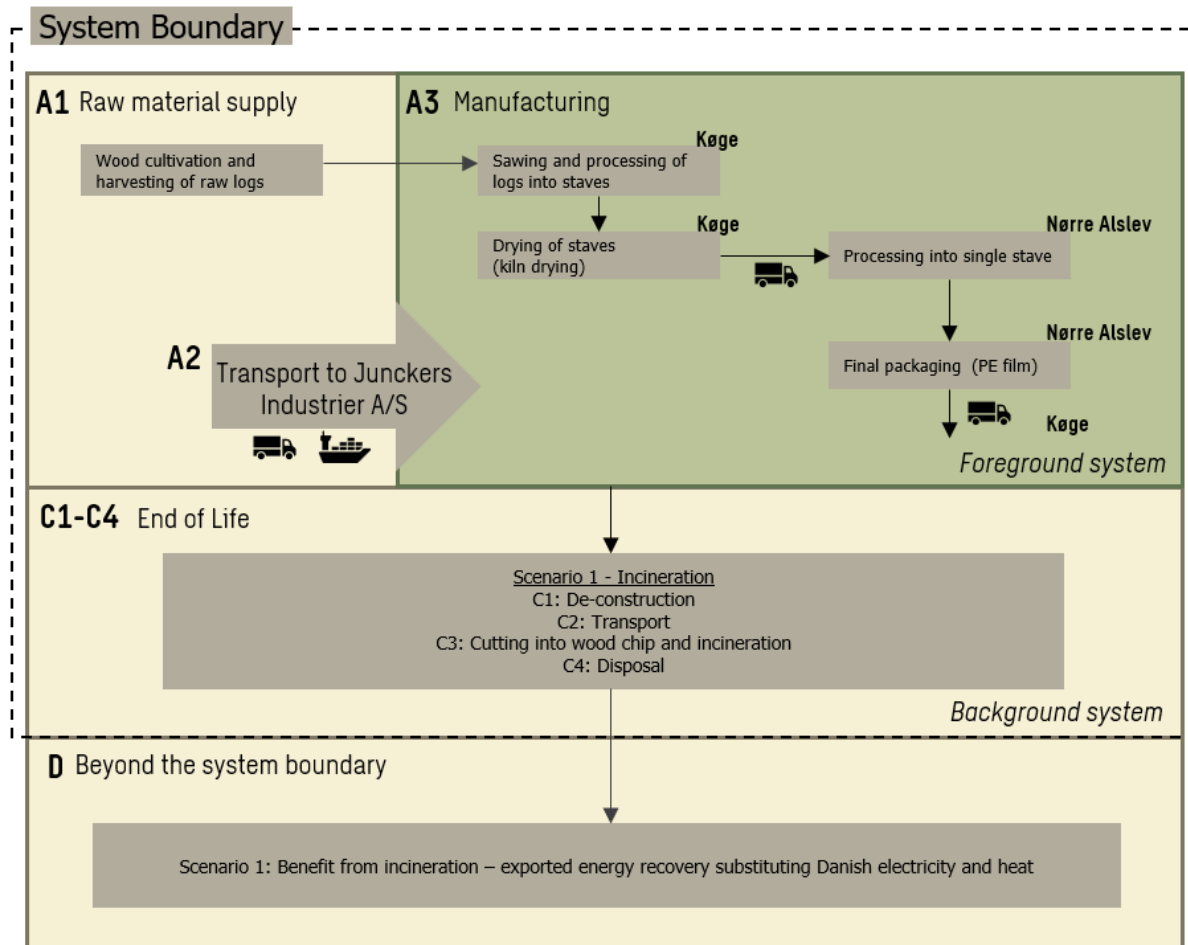
Information about the energy mix in the foreground system:

Energy mix	EF	Unit
Residual grid mix	0,632	kg CO ₂ e/kWh
Steam, biomass	0,0027	kg CO ₂ e/MJ

Background system:

Upstream processes are modelled using national energy mixes. Downstream processes are modelled using national energy mixes.

Flowdiagram



System boundary

This EPD is based on a cradle-to-gate with options, modules C1-C4 and D, cradle-to-gate LCA, in which 100 weight-% has been accounted for.

The general rules for the exclusion of inputs and outputs follows the requirements in EN 15804, 6.3.5, where the total of neglected input flows per module shall be a maximum of 5 % of energy usage and mass and 1 % of energy usage and mass for unit processes.

Joint co-production as defined in EN15804+A2, section 6.4.3.2 is allocated based on economic values, as the difference in revenue is regarded as high. This economic allocation has been applied in each sub-process of the production to allocate the specific processes to the different co-products.

Product stage (A1-A3) includes:

A1 – Extraction and processing of raw materials

A2 – Transport to the production site

A3 – Manufacturing processes

The product stage comprises the acquisition of all raw materials, products and energy, transport to the production site, packaging and waste processing up to the “end-of-waste” state or final disposal. The LCA results are declared in aggregated form for the product stage, which means, that the sub-modules A1, A2 and A3 are declared as one module A1-A3.

The production processes of single stave floor only take place at both Junckers production sites in Køge and in Nørre Alslev. The raw logs are transported from Denmark, Sweden, Germany and Poland to Denmark, where they are first sawed into staves. Hereafter the staves are dried in a kiln drying process, where the moisture content is reduced to 8%. After that, single stave floors undergo a few more steps; profiling into single stave floorboards and afterwards it is packaged.

End of Life (C1-C4) includes:

One end of life (EoL) is modelled;

- Incineration

A 100% incineration with energy recovery in module D from exported energy is presented. The EoL is modelled for the Danish market. EoL scenarios for other countries will vary from the one presented in this EPD.

In module C1 the deconstruction of the products covered by this EPD was assumed to be done manually, thus does not require any processes with an environmental impact. Hence, no impact is reported in this module.

In module C2 the transport between a demolition site and a waste management and incineration plant is modelled. A distance of 50 km is included in this EPD.

Module C3 includes the waste processing up until end-of-waste state. The single stave floor is chopped into smaller pieces whereafter it is incinerated and exported as thermal and electric energy.

Re-use, recovery and recycling potential (D) includes:

In general, module D includes reuse, recovery and/or recycling potential, expressed as net impact and benefits, due to reuse, recycling and incineration of materials with energy recovery in module C3.

Module D credits the electricity and heat produced at a combined heat and power plant when incinerating untreated wood in module C3.

To calculate the amount for credit in module D, the net flow is calculated: $M_{MR\ out} - M_{MR\ in}$

The electricity generated is assumed to replace the average Danish grid mix. For heat, the market is more regionalized, and a national average thermal energy mix is not as representative. As a simplified assumption, it is therefore assumed that heat from natural gas would be replaced.

LCA results

Single stave Oak 15 x 58.3 x 467.6mm /

Single stave Oak 15 x 62.2 x 623.5mm

ENVIRONMENTAL IMPACTS PER 1 m ² single stave floor – 15 mm oak							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ eq.	-1,02E+01	0,00E+00	6,25E-02	2,07E+01	0,00E+00	-7,98E+00
GWP-fossil	kg CO ₂ eq.	1,02E+01	0,00E+00	6,24E-02	2,71E-01	0,00E+00	-7,76E+00
GWP-biogenic	kg CO ₂ eq.	-2,04E+01	0,00E+00	3,34E-05	2,05E+01	0,00E+00	-2,06E-01
GWP-luluc	kg CO ₂ eq.	7,86E-02	0,00E+00	2,21E-05	2,90E-04	0,00E+00	-1,42E-02
ODP	kg CFC 11 eq.	2,11E-07	0,00E+00	1,30E-09	3,49E-09	0,00E+00	-2,59E-07
AP	mol H ⁺ eq.	5,55E-02	0,00E+00	1,48E-04	2,37E-03	0,00E+00	-2,31E-02
EP-freshwater	kg P eq.	1,59E-03	0,00E+00	5,04E-07	1,03E-05	0,00E+00	-2,68E-04
EP-marine	kg N eq.	1,59E-02	0,00E+00	3,79E-05	9,89E-04	0,00E+00	-4,37E-03
EP-terrestrial	mol N eq.	1,87E-01	0,00E+00	4,19E-04	1,06E-02	0,00E+00	-5,61E-02
POCP	kg NMVOC eq.	1,09E-01	0,00E+00	2,56E-04	2,71E-03	0,00E+00	-1,92E-02
ADPm ¹	kg Sb eq.	5,13E-05	0,00E+00	1,75E-07	5,24E-07	0,00E+00	-1,04E-04
ADPf ¹	MJ	5,92E+01	0,00E+00	7,71E-02	1,75E+00	0,00E+00	-3,92E+01
WDP ¹	m ³ world eq. deprived	1,99E+00	0,00E+00	4,46E-03	1,01E-01	0,00E+00	-9,65E-01
Caption	GWP-total = Global Warming Potential – total; GWP-fossil = Global Warming Potential – fossil fuels; GWP-biogenic = Global Warming Potential – biogenic; GWP-luluc = Global Warming Potential – land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water use						
Disclaimer	¹ The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1 m ² single stave floor – 15 mm oak							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PM	[Disease incidence]	6,42E-07	0,00E+00	6,06E-09	2,34E-08	0,00E+00	-1,43E-07
IRP ²	[kBq U235 eq.]	2,92E-01	0,00E+00	4,13E-04	1,71E-02	0,00E+00	-5,26E-01
ETP-fw ¹	[CTUe]	5,47E+01	0,00E+00	2,22E-01	2,56E+00	0,00E+00	-2,61E+01
HTP-c ¹	[CTUh]	4,18E-08	0,00E+00	3,99E-10	3,93E-09	0,00E+00	-2,22E-08
HTP-nc ¹	[CTUh]	3,48E-07	0,00E+00	6,01E-10	2,42E-08	0,00E+00	-1,10E-07
SQP ¹	-	8,22E+03	0,00E+00	9,43E-01	8,04E-01	0,00E+00	-9,28E+01
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality						
Disclaimers	¹ The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator. ² 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.						

RESOURCE USE PER 1 m ² single stave floor – 15 mm oak							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PERE	[MJ]	1,40E+03	0,00E+00	1,45E-02	4,66E-01	0,00E+00	-7,85E+01
PERM	[MJ]	1,75E+02	0,00E+00	0,00E+00	-1,75E+02	0,00E+00	0,00E+00
PERT	[MJ]	1,57E+03	0,00E+00	1,45E-02	-1,74E+02	0,00E+00	-7,85E+01
PENRE	[MJ]	1,43E+02	0,00E+00	9,37E-01	3,56E+00	0,00E+00	-1,24E+02
PENRM	[MJ]	2,92E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,46E+02	0,00E+00	9,37E-01	3,56E+00	0,00E+00	-1,24E+02
SM	[kg]	1,21E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	1,05E-01	0,00E+00	1,73E-04	3,71E-03	0,00E+00	-2,29E-02
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water						

WASTE CATEGORIES AND OUTPUT FLOWS PER 1 m ² single stave floor – 15 mm oak							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
HWD	[kg]	3,26E-02	0,00E+00	2,62E-05	9,89E-02	0,00E+00	-9,80E-03
NHWD	[kg]	2,70E+00	0,00E+00	8,01E-02	1,13E-01	0,00E+00	-5,57E-01
RWD	[kg]	2,14E-04	0,00E+00	2,82E-07	1,38E-05	0,00E+00	-2,73E-04
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	0,00E+00	0,00E+00	0,00E+00	3,31E+01	0,00E+00	0,00E+00
EET	[MJ]	0,00E+00	0,00E+00	0,00E+00	3,62E+01	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy						

BIOGENIC CARBON CONTENT PER 1 m ² single stave floor – 15 mm oak		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	5,58E+00
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

Single stave Oak 22 x 58.3 x 467.6mm/

Single stave Oak 22 x 62.2 x 623.5mm

ENVIRONMENTAL IMPACTS PER 1 m ² single stave floor – 22 mm oak							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ eq.	-1,39E+01	0,00E+00	8,03E-02	2,67E+01	0,00E+00	-1,03E+01
GWP-fossil	kg CO ₂ eq.	1,23E+01	0,00E+00	8,03E-02	3,48E-01	0,00E+00	-9,97E+00
GWP-biogenic	kg CO ₂ eq.	-2,62E+01	0,00E+00	4,29E-05	2,63E+01	0,00E+00	-2,65E-01
GWP-luluc	kg CO ₂ eq.	8,51E-02	0,00E+00	2,85E-05	3,73E-04	0,00E+00	-1,83E-02
ODP	kg CFC 11 eq.	2,57E-07	0,00E+00	1,67E-09	4,49E-09	0,00E+00	-3,33E-07
AP	mol H ⁺ eq.	6,70E-02	0,00E+00	1,90E-04	3,04E-03	0,00E+00	-2,97E-02
EP-freshwater	kg P eq.	1,78E-03	0,00E+00	6,48E-07	1,32E-05	0,00E+00	-3,45E-04
EP-marine	kg N eq.	1,89E-02	0,00E+00	4,87E-05	1,27E-03	0,00E+00	-5,61E-03
EP-terrestrial	mol N eq.	2,25E-01	0,00E+00	5,38E-04	1,36E-02	0,00E+00	-7,21E-02
POCP	kg NMVOC eq.	1,30E-01	0,00E+00	3,29E-04	3,49E-03	0,00E+00	-2,46E-02
ADPm ¹	kg Sb eq.	6,41E-05	0,00E+00	2,24E-07	6,73E-07	0,00E+00	-1,34E-04
ADPf ¹	MJ	7,44E+01	0,00E+00	9,90E-02	2,25E+00	0,00E+00	-5,03E+01
WDP ¹	m ³ world eq. deprived	2,47E+00	0,00E+00	5,73E-03	1,30E-01	0,00E+00	-1,24E+00
Caption	GWP-total = Global Warming Potential – total; GWP-fossil = Global Warming Potential – fossil fuels; GWP-biogenic = Global Warming Potential – biogenic; GWP-luluc = Global Warming Potential – land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water use						
Disclaimer	¹ The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1 m ² single stave floor – 22 mm oak							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PM	[Disease incidence]	7,66E-07	0,00E+00	7,79E-09	3,01E-08	0,00E+00	-1,83E-07
IRP ²	[kBq U235 eq.]	3,67E-01	0,00E+00	5,31E-04	2,20E-02	0,00E+00	-6,76E-01
ETP-fw ¹	[CTUe]	6,55E+01	0,00E+00	2,85E-01	3,29E+00	0,00E+00	-3,36E+01
HTP-c ¹	[CTUh]	4,81E-08	0,00E+00	5,13E-10	5,05E-09	0,00E+00	-2,86E-08
HTP-nc ¹	[CTUh]	4,42E-07	0,00E+00	7,73E-10	3,11E-08	0,00E+00	-1,41E-07
SQP ¹	-	8,86E+03	0,00E+00	1,21E+00	1,03E+00	0,00E+00	-1,19E+02
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality						
Disclaimers	¹ The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator. ² 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.						

RESOURCE USE PER 1 m ² single stave floor – 22 mm oak							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PERE	[MJ]	1,51E+03	0,00E+00	1,86E-02	5,99E-01	0,00E+00	-1,01E+02
PERM	[MJ]	2,25E+02	0,00E+00	0,00E+00	-2,25E+02	0,00E+00	0,00E+00
PERT	[MJ]	1,73E+03	0,00E+00	1,86E-02	-2,24E+02	0,00E+00	-1,01E+02
PENRE	[MJ]	1,73E+02	0,00E+00	1,20E+00	4,58E+00	0,00E+00	-1,59E+02
PENRM	[MJ]	4,39E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,77E+02	0,00E+00	1,20E+00	4,58E+00	0,00E+00	-1,59E+02
SM	[kg]	1,55E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	1,26E-01	0,00E+00	2,23E-04	4,77E-03	0,00E+00	-2,95E-02
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water						

WASTE CATEGORIES AND OUTPUT FLOWS PER 1 m ² single stave floor – 22 mm oak							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
HWD	[kg]	4,14E-02	0,00E+00	3,37E-05	1,27E-01	0,00E+00	-1,26E-02
NHWD	[kg]	3,02E+00	0,00E+00	1,03E-01	1,45E-01	0,00E+00	-7,16E-01
RWD	[kg]	2,67E-04	0,00E+00	3,62E-07	1,77E-05	0,00E+00	-3,50E-04
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	0,00E+00	0,00E+00	0,00E+00	4,25E+01	0,00E+00	0,00E+00
EET	[MJ]	0,00E+00	0,00E+00	0,00E+00	4,65E+01	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy						

BIOGENIC CARBON CONTENT PER 1 m ² single stave floor – 22 mm oak		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	7,18E+00
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

Additional information

LCA interpretation

A1 has the largest contribution in GWP-Bio and GWP-luluc, which is caused by the raw wood input from biogenic carbon sequestered in the wood and the land use for cultivation and harvesting of the wood. A2 has noticeable impact on the GWP-total due to the large amount of raw logs as input in A1. A3 has the largest contribution to GWP-total in A1-A3. This is primarily caused the use of electricity in the different production processes.

Technical information on scenarios

End of life (C1-C4)

Scenario information	Value	Unit
Collected separately	12,1 – 15,5	kg
Collected with mixed waste	-	kg
For reuse	-	kg
For recycling	-	kg
For energy recovery	12,1 – 15,5	kg
For final disposal	-	kg
Assumptions for scenario development	-	As appropriate

Re-use, recovery and recycling potential (D)

Scenario information/Material	Value	Unit
Displaced material	-	kg
Energy recovery from waste incineration, electrical	33,1 – 42,5	MJ
Energy recovery from waste incineration, thermal	36,2 – 46,5	MJ


Indoor air

The EPD does not give information on release of dangerous substances to indoor air because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.1.

Soil and water

The EPD does not give information on release of dangerous substances to soil and water because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.2.

References

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LCA software / background data	<i>SimaPro v. 9.6.0.1</i> Ecoinvent database Version 3.10 LCA-method: <i>Cut-off by classification</i> <i>EF 3.1 is used.</i> <i>EN 15804 reference package 3.1</i>
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General programme instructions

General Programme Instructions, version 2.0, spring 2020
www.epddanmark.dk

EN 15804

DS/EN 15804 + A2:2019 - "Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products"

DS/EN 16485

DS/EN 16485:2014 – "Rundtræ og savet træ – Miljøvaredeklaration – Produktkategoriregler for træ og træbaseret produkter til konstruktionsbrug"

EN 15942

DS/EN 15942:2011 – "Sustainability of construction works – Environmental product declarations – Communication format business-to-business"

ISO 14025

DS/EN ISO 14025:2010 – "Environmental labels and declarations – Type III environmental declarations – Principles and procedures"

ISO 14040

DS/EN ISO 14040:2008 – "Environmental management – Life cycle assessment – Principles and framework"

ISO 14044

DS/EN ISO 14044:2008 – "Environmental management – Life cycle assessment – Requirements and guidelines"