

# Environmental Product Declaration

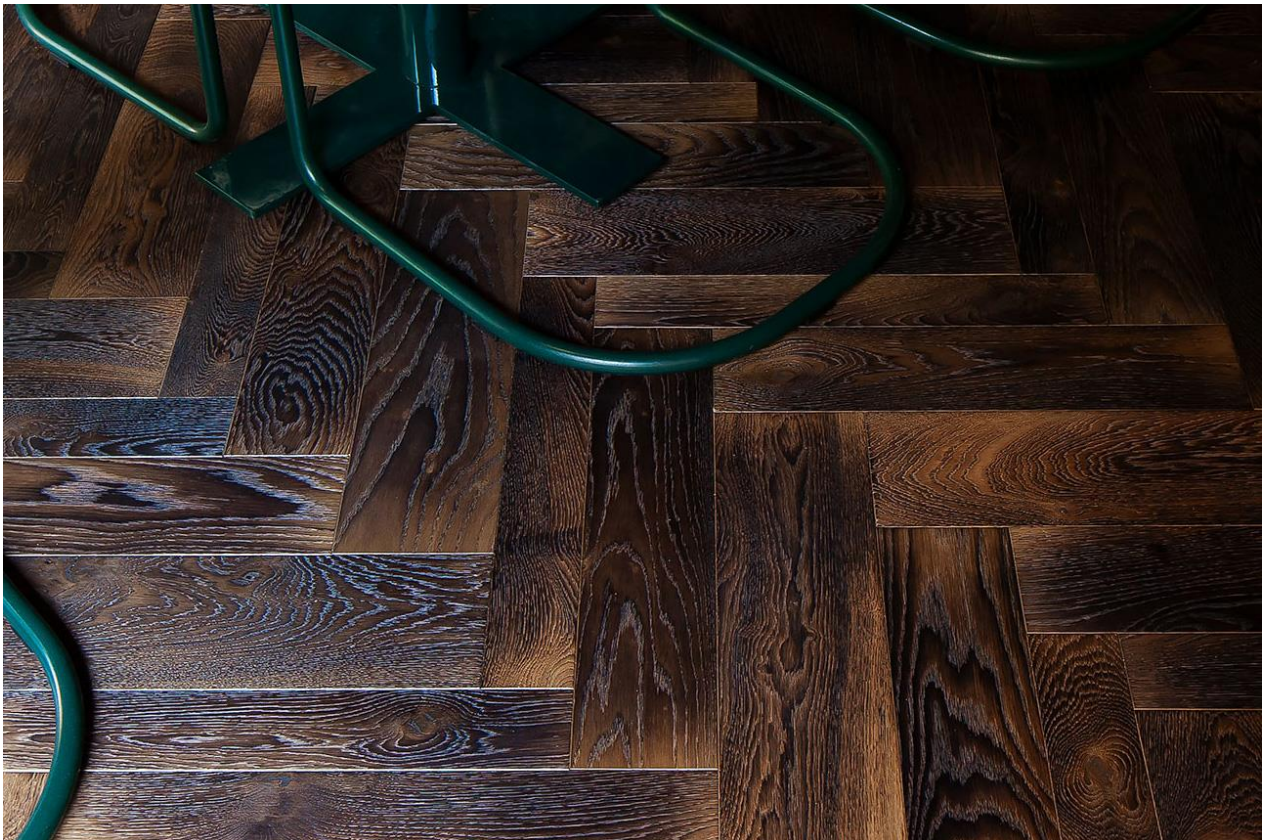


of multiple products, based on a representative product  
In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

## Parkettstav

Programme:	The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a>
Programme operator:	EPD International AB, Box 210 60, SE-100 31 Stockholm
EPD registration number:	EPD-IES-0013439
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*An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)*



## General information

### Programme information

<b>Programme:</b>	The International EPD® System
<b>Address:</b>	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
<b>Website:</b>	<a href="http://www.environdec.com">www.environdec.com</a>
<b>E-mail:</b>	<a href="mailto:info@environdec.com">info@environdec.com</a>

<b>Accountabilities for PCR, LCA and independent, third-party verification</b>
<b>Product Category Rules (PCR)</b>
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): PCR 2019:14 Construction products (EN 15804:A2) (version 1.3.4) and c-PCR-006 Wood and wood-based products for use in construction (EN 16485)
PCR review was conducted by: The Technical Committee of the International EPD® System. A full list of members available on <a href="http://www.environdec.com">www.environdec.com</a> . The review panel may be contacted via <a href="mailto:info@environdec.com">info@environdec.com</a> .
<b>Life Cycle Assessment (LCA)</b>
LCA accountability: Anna Carstens, brands & values GmbH, <a href="mailto:info@brandsandvalues.com">info@brandsandvalues.com</a>
<b>Third-party verification</b>
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:  <input checked="" type="checkbox"/> EPD verification by individual verifier  Third-party verifier Doc. Ing. Jan Weinzettel, <a href="mailto:weinzettel@seznam.cz">weinzettel@seznam.cz</a>  Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier:  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

## Company information

Owner of the EPD: Almedals Trägolvsaktiebolag

Contact: [info@almedalsgolv.se](mailto:info@almedalsgolv.se) Arendalsvägen 33B, 434 39 Kungsbacka

Description of the organisation: Almedals Trägolvsaktiebolag is a manufacturer of solid wood floorings and interiors.

Description of the manufacturing process: Production process involves: Drying, planing, grooving, sanding, cutting. Surface treatment with hard wax oil.

Product-related or management system-related certifications:

PEFC Chain of Custody (CoC) – Individual (certificate number, BV-PEFC-COC-008575-2, license number PEFC/05-37-214)

FSC Chain of Custody (CoC) (certificate number BV-COC-140860, license number FSC-C140860)

Name and location of production site(s): Wiefelstede, Lower Saxony, Germany

## Product information

Product name: Almedals Parkettstavar

Product identification: DIN EN 13226

Product description:

Almedals solid hardwood planks and staves.

The product is a solid plank or stave floor, which is ready to be installed in accordance with Almedals Trägolvs laying instructions. The floors are intended for indoor use. Each plank and stave is tongued and grooved on all four sides. The staves may be delivered as right- and left-hand staves if required. The planks and staves are supplied with a finished presanded surface and bevelled edges as standard. Filling occurs. Prefinished with hardwax oil. Almedals prefinished or presanded floor planks and staves mean significant time savings compared to planks and staves that must be sanded on site.

Declared product(s):

Solid Hardwood staves

- 16/21 mm thickness
- Lengths 400 – 1200 mm
- Widths 95 / 115 / 140 / 180 mm
- May also be delivered as Chevron staves

UN CPC code: 3121

Geographical scope: Europe

## LCA information

Type of EPD: Representative EPD; the representative and simultaneously worst-case thickness of 21 mm was declared

Declared unit: 1 m<sup>2</sup> of Parkettstav including surface treatment (thickness 21 mm, 13.066 kg/m<sup>2</sup>)

Reference service life: > 50 years, unlimited with good care

Time representativeness: Data was collected for the year 2021

Database(s) and LCA software used: LCA for Experts (Version 10.7) and Sphera LCA content (Content Version 2023.1)

Description of system boundaries: Cradle to gate with options, modules C1–C4, module D and with optional modules (A1–A3 + C + D and additional modules A4 and A5).

### LCA scenarios and assumptions:

Surface treatment was included in module A1-A3.

In module A4, transport to the warehouse is modelled.

In module A5, the waste treatment of the packaging materials is modelled. Cardboard is recycled, plastic is incinerated and metals recycled.

For waste treatment in module C3, incineration is modelled.

Loads and benefits resulting from recycling and incineration in modules A5 and C3 are assigned to module D.

For transports to waste treatment in modules A5 and C2, a distance of 100 km is assumed.

Cut-off criteria: It can be assumed that the cut-off criterion on mass inputs and primary energy at the unit process level (1%) and at the information module level (5%) are met.

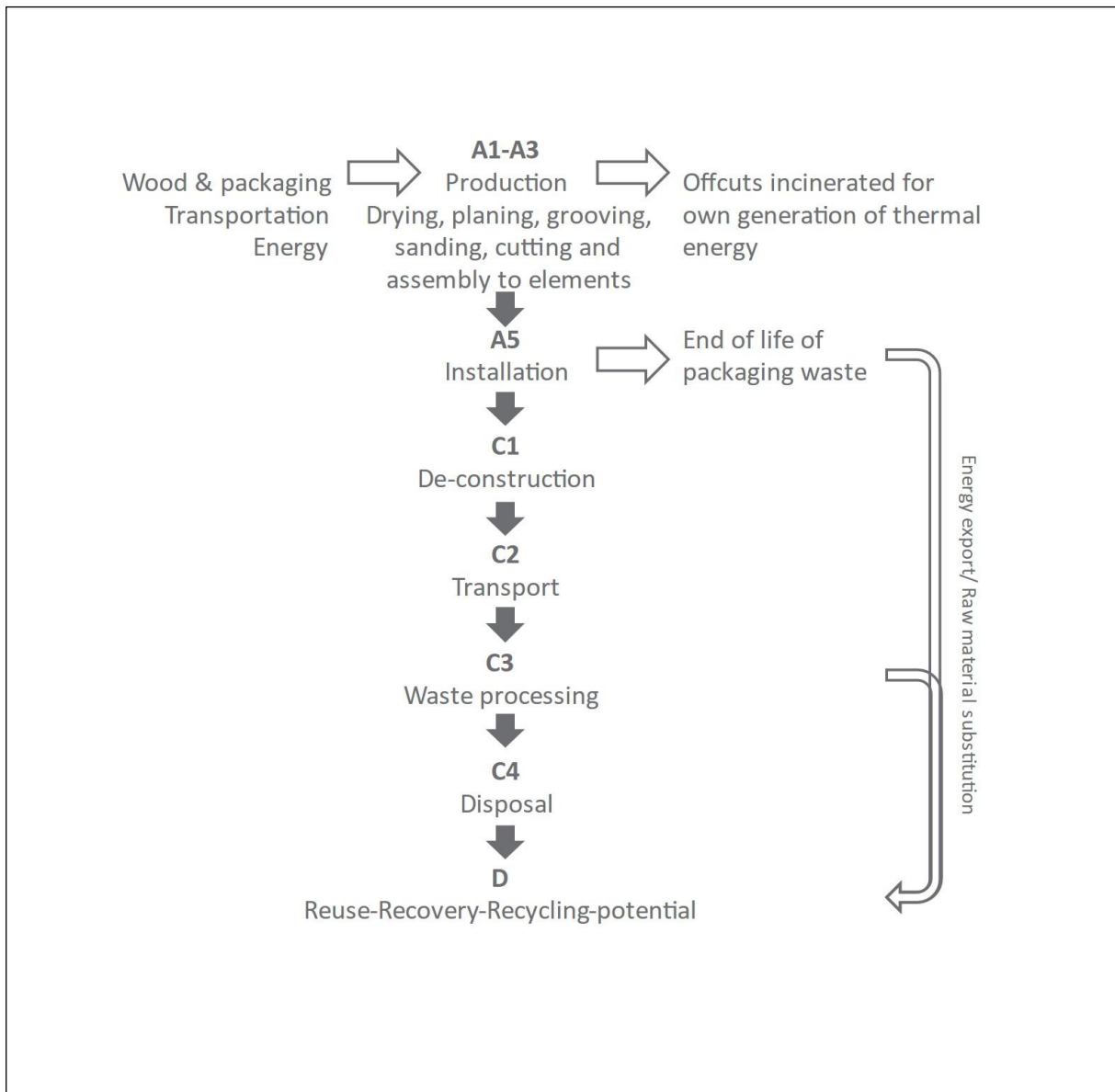
No primary data for infrastructure and capital goods was collected. Machinery and other infrastructure and capital goods used by the manufacturer is therefore not included.

The generic LCA datasets include infrastructure and capital goods based on relevance and for energy datasets.

Allocations: Total annual amounts for inputs and outputs were collected during data gathering. Energy and off-cuts were assigned to the products based on m<sup>2</sup>, packaging materials were assigned to the products based on m<sup>3</sup>.

For secondary materials, the cut-off approach was applied. Therefore, the input of secondary materials is burden free and no credits for the share of secondary materials at the end of life are given.

System diagram:



**Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):**

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery- Recycling- potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	EU	EU	DE	EU	EU								EU	EU	EU	EU	EU
Specific data used	0%					-	-	-	-	-	-	-	-	-	-	-	-
Variation - products	< 10%					-	-	-	-	-	-	-	-	-	-	-	-
Variation - sites	0%					-	-	-	-	-	-	-	-	-	-	-	-

Variation in the GWP-GHG indicator in module A1-A3 mainly results from the range of thicknesses in which the products are available (16 mm and 21 mm). 21 mm was chosen as the representative product based on sales volume and also corresponds to the “worst-case product”.

The following electricity inputs were modelled:

- Germany: Green electricity (3 g CO<sub>2</sub> eq/kWh)
- Own generated energy from solar power (0 g CO<sub>2</sub> eq/kWh)

## Content information

The following tables give the content information of the declared product. Where applicable, the range of the products covered by the EPD is given in brackets.

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% of product	Biogenic material, kg C/declared unit
Oak	13 (9.905 - 13)	0%	99%	6.133 (4.673 - 6.133)
Hardwax oil	0.066 (0.066 - 0.066)	0%	0%	
<b>TOTAL</b>	<b>13.066</b> <b>(9.971 - 13.066)</b>	<b>0%</b>	<b>99%</b>	<b>6.133</b> <b>(6.133 - 6.133)</b>
Packaging materials	Weight, kg	Weight-% (versus the product)	Biogenic material, kg C/declared unit	
Wood pallets	0.290	2.22% (2.22% - 2.91%)	0.135	
Film (polyethylene)	0.036	0.28% (0.28% - 0.36%)	0.000	
Straps	0.014	0.11% (0.11% - 0.14%)	0.000	
Closure sleeve	0.002	0.02% (0.02% - 0.02%)	0.000	
Cardboard	0.009	0.07% (0.07% - 0.09%)	0.004	
<b>TOTAL</b>	<b>0.352</b>	<b>2.69%</b> <b>(2.69% - 3.53%)</b>	<b>0.138</b>	

Dangerous substances from the candidate list of SVHC for Authorisation	EC No.	CAS No.	Weight-% per functional or declared unit
Not applicable			

# Results of the environmental performance indicators

## Disclaimers:

- The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.
- The results of modules A1-A3 should not be used without considering the results of the C-modules (C1, C2, C3 and C4).
- Version EF 3.1. of the of EU-JRC characterization factors was applied.
- The variability of the declared indicator results over the modules A-C compared to the declared product is declared in the last column of each table.
- The results of the modules A4, A5, C1-C4, D are scalable by product weight.

## Mandatory impact category indicators according to EN 15804

Results per declared unit										
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D	Variability A-C
GWP-fossil	kg CO <sub>2</sub> eq.	5.49E+00	7.46E-01	1.62E-01	0.00E+00	1.29E-01	3.60E-01	0.00E+00	-6.30E+00	0%/-13%
GWP-biogenic	kg CO <sub>2</sub> eq.	-2.28E+01	2.13E-03	5.07E-01	0.00E+00	3.80E-04	2.25E+01	0.00E+00	-3.14E-02	0%/-3%
GWP-luluc	kg CO <sub>2</sub> eq.	2.42E-01	6.56E-03	3.21E-05	0.00E+00	1.19E-03	8.26E-05	0.00E+00	-4.11E-04	0%/-2%
GWP-total	kg CO <sub>2</sub> eq.	-1.71E+01	7.54E-01	6.68E-01	0.00E+00	1.30E-01	2.28E+01	0.00E+00	-6.33E+00	0%/-12%
ODP	kg CFC 11 eq.	2.43E-10	9.49E-14	7.93E-15	0.00E+00	1.67E-14	2.10E-12	0.00E+00	-4.96E-11	0%/-2%
AP	mol H <sup>+</sup> eq.	5.24E-02	5.92E-03	3.04E-05	0.00E+00	5.50E-04	3.48E-03	0.00E+00	-7.90E-03	0%/-9%
EP-freshwater	kg P eq.	8.40E-05	2.60E-06	1.44E-08	0.00E+00	4.69E-07	5.95E-07	0.00E+00	-1.02E-05	0%/-4%
EP-marine	kg N eq.	2.31E-02	2.87E-03	1.02E-05	0.00E+00	2.58E-04	1.00E-03	0.00E+00	-2.31E-03	0%/-9%
EP-terrestrial	mol N eq.	2.56E-01	3.17E-02	1.51E-04	0.00E+00	2.89E-03	1.44E-02	0.00E+00	-2.47E-02	0%/-9%
POCP	kg NMVOC eq.	1.92E-01	5.77E-03	2.32E-05	0.00E+00	4.99E-04	2.74E-03	0.00E+00	-6.43E-03	0%/-10%
ADP-minerals&metals*	kg Sb eq.	2.01E-06	4.70E-08	2.97E-10	0.00E+00	8.44E-09	1.97E-08	0.00E+00	-4.64E-07	0%/-5%
ADP-fossil*	MJ	9.80E+01	1.01E+01	6.58E-02	0.00E+00	1.75E+00	5.33E+00	0.00E+00	-1.16E+02	0%/-13%
WDP*	m <sup>3</sup>	6.21E-01	8.62E-03	1.46E-02	0.00E+00	1.55E-03	2.33E+00	0.00E+00	-6.02E-01	0%/-21%
Acronyms	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 = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption									

\* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.



## Additional mandatory and voluntary impact category indicators

### Results per declared unit

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D	Variability A-C
GWP-GHG	kg CO2 eq.	5.73E+00	7.52E-01	1.62E-01	0.00E+00	1.30E-01	3.60E-01	0.00E+00	-6.30E+00	0%/-12%

### Results for the "best-case product" (16 mm Parkettstav)

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq.	5.20E+00	5.74E-01	1.23E-01	0.00E+00	9.90E-02	2.75E-01	0.00E+00	-4.81E+00

Note: The indicator GWP-GHG accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO<sub>2</sub> is set to zero.

## Resource use indicators

### Results per declared unit

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D	Variability A-C
PERE	MJ	5.06E+02	7.04E-01	4.86E+00	0.00E+00	1.27E-01	2.01E+02	0.00E+00	-3.39E+01	0%/-9%
PERM	MJ	2.05E+02	0.00E+00	-4.85E+00	0.00E+00	0.00E+00	-2.00E+02	0.00E+00	0.00E+00	-
PERT	MJ	7.11E+02	7.04E-01	8.21E-03	0.00E+00	1.27E-01	1.33E+00	0.00E+00	-3.39E+01	0%/-9%
PENRE	MJ	9.45E+01	1.02E+01	2.23E+00	0.00E+00	1.75E+00	6.79E+00	0.00E+00	-1.16E+02	0%/-13%
PENRM	MJ	3.63E+00	0.00E+00	-2.17E+00	0.00E+00	0.00E+00	-1.46E+00	0.00E+00	0.00E+00	-
PENRT	MJ	9.82E+01	1.02E+01	6.60E-02	0.00E+00	1.75E+00	5.33E+00	0.00E+00	-1.16E+02	0%/-13%
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-03	-
RSF	MJ	0.00E+00	0.00E+00	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	0.00E+00	0.00E+00	-
FW	m3	3.82E-02	7.72E-04	3.45E-04	0.00E+00	1.39E-04	5.49E-02	0.00E+00	-2.75E-02	0%/-17%

Acronyms  
 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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

## Waste indicators

Results per declared unit										
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D	Variability A-C
Hazardous waste disposed	kg	-1.98E-08	3.15E-11	5.69E-13	0.00E+00	5.43E-12	1.20E-10	0.00E+00	-6.18E-09	0%/5%
Non-hazardous waste disposed	kg	9.46E-02	1.52E-03	6.34E-04	0.00E+00	2.67E-04	4.18E-01	0.00E+00	-5.69E-02	0%/-20%
Radioactive waste disposed	kg	6.41E-03	1.87E-05	1.22E-06	0.00E+00	3.28E-06	3.02E-04	0.00E+00	-8.99E-03	0%/-11%

The negative result for the indicator "Hazardous waste disposed" in modules A1-A3 results from the dataset used to model green electricity

## Output flow indicators

Results per declared unit										
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D	Variability A-C
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Material for recycling	kg	0.00E+00	0.00E+00	2.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Materials for energy recovery	kg	0.00E+00	0.00E+00	5.05E-02	0.00E+00	0.00E+00	1.31E+01	0.00E+00	0.00E+00	-
Exported energy, electricity	MJ	0.00E+00	0.00E+00	3.38E-01	0.00E+00	0.00E+00	2.96E+01	0.00E+00	0.00E+00	0%/-24%
Exported energy, thermal	MJ	0.00E+00	0.00E+00	6.00E-01	0.00E+00	0.00E+00	5.33E+01	0.00E+00	0.00E+00	0%/-24%

## Other environmental performance indicators

Results per declared unit									
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	Disease incidence	ND	ND	ND	ND	ND	ND	ND	ND
IRP	kBq U235 eq.	ND	ND	ND	ND	ND	ND	ND	ND
ETP-fw	CTUe	ND	ND	ND	ND	ND	ND	ND	ND
HTP-c	CTUh	ND	ND	ND	ND	ND	ND	ND	ND
HTP-nc	CTUh	ND	ND	ND	ND	ND	ND	ND	ND
SQP	dimensionless	ND	ND	ND	ND	ND	ND	ND	ND
Acronyms	PM = Particulate matter emissions; IRP = Ionizing radiation, human health; ETP-fw = Eco-toxicity - freshwater; HTP-c = Human toxicity, cancer effect; HTP-nc = Human toxicity, non-cancer effects; SQP = Land use related impacts/Soil quality								

ND = not declared

## References

EN 15804:2012+A2:2019 + AC:2021: Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.

General Program Instructions of the International EPD® System. Version 4.0.

ISO 14025:2006-07: Environmental labels and declarations - Type III environmental declarations - Principles and procedures

PCR 2019:14. Construction products. Version 1.3.4

PCR 2019:14-c-PCR-006 Wood and wood-based products for use in construction (EN 16485). Version 2024-04-30.