



Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

ALPI LIGNUM

ALPILignum Bespoke and ALPILignum Collection

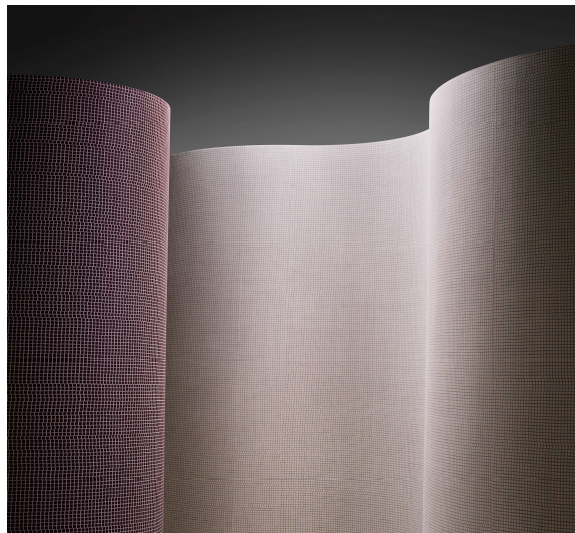
from

ALPI S.P.A.



Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
Type of EPD:	EPD of multiple products, based on several representative products
EPD registration number:	EPD-IES-0028314:001
Version date:	2026-06-02
Validity date:	2031-06-01

An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com



The list of products is at page 4.

GENERAL INFORMATION

Programme Information	
Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	support@environdec.com

Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): CONSTRUCTION PRODUCTS PCR 2019:14 VERSION 2.0.1
<p>PCR review was conducted by: The Technical Committee of the International EPD® System. See www.environdec.com/TC for a list of members. The review panel may be contacted via the Secretariat www.environdec.com/contact. Chair of the PCR review: Rob Rouwette (chair), Noa Meron (co-chair)</p>
<p>c-PCR: C-PCR-006 (TO PCR 2019:14), version 1.0.0. WOOD AND WOOD-BASED PRODUCTS FOR USE IN CONSTRUCTION (EN 16485:2014) PRODUCT GROUP CLASSIFICATION: UN CPC 031, 311, 312, 313, 314, 315, 316, 319</p>

Third-party Verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:
<input checked="" type="checkbox"/> Individual EPD verification without a pre-verified LCA/EPD tool Third-party verifier: Marcel Gomez Ferrer Marcel Gómez Consultoria Ambiental, info@marcelgomez.com Phone: +34 630 64 35 93 - Email: info@marcelgomez.com
Approved by: 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 published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit 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 identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

INFORMATION ABOUT EPD OWNER

Owner of the EPD: Alpi S.P.A.

Address: Viale della Repubblica 34, Modigliana – FC, Italy

Contact: Alex Cencin, email: alex.cencin@alpi.it

Address and contact information of the LCA practitioner commissioned by the EPD owner:
Esalex s.r.l., via della Selva 3/a, loc. Fenile, Fano (PU), Italy – www.esalex.eu – bettini@esalex.eu

Description of the organisation: Alpi S.p.A. is the first company in the world to industrialize the production process of wood composites. Alpi was founded in 1919 as workshop of fine cabinetry, and rapidly began an industrial leader in the production of decorative surfaces. In 1961 the company presented "ALPIlignum," the first composite veneer, a true revolution made possible by intensive technological research and an important background in fine woodworking, which rapidly led to growth on international markets. In 1975 the group opened its first facility in Cameroon to guarantee a constant supply of raw materials. Starting in the 1980s, with the entry of Vittorio Alpi, prestigious collaborations began with outstanding names in design, developing a deep bond between the company and the world of creativity.

Product-related or management system-related certifications: ISO 9001:2015 (certificate IT21/1109)

More information: www.alpi.it

PRODUCT INFORMATION

Product name: ALPILignum

Product identification:

ALPILignum Bespoke and ALPILignum Collection products, with the exception of composites, supported and polyurethane gluing.

The products included in the EPD are:

- Pale Ayous
- Dark Ayous
- Pale Basswood
- Dark Basswood
- Pale Poplar
- Dark Poplar.

Visual representation (e.g., an image) of the product



UN CPC code: **3151** *Veneer sheets and sheets for plywood and other wood sawn lengthwise, sliced or peeled, of a thickness not exceeding 6 mm*

Product description:

ALPILignum is a decorative surface made of reconstituted wood veneer. The product is available in thicknesses ranging from 0,42 mm to 2,8 mm, with 0,58 mm representing the standard supply thickness. ALPILignum is the base element of production at ALPI. Made of real wood, ALPILignum is a non-printed, designable product made by disassembling and reassembling the raw material (Ayous, Poplar, and Basswood) in infinite ways, creating a limitless number of wood types, pattern and colours – ranging from light to dark- for veneer. Peeling, dyeing, composition, glueing, pressing, squaring, cutting and testing form the production sequence of ALPILignum, through which the company creates its woods, offering different and novel textural effects inspired by the world of nature and that of design par excellence.

The ALPILignum Collection, available in stock, provides a vast range of types of wood. ALPI's ability to create woods with natural colors and grain is embodied by the Wood Collection. The Designer Collection by international creative talents, on the other hand, conveys a unique, original story in which different atmospheres can coexist: evocative and tactile in the reproductions of wood, innovative and dynamic in the patterns that cannot be found in nature. Thanks to its in-depth research and industrial culture, ALPI is, therefore, able to offer Bespoke wood at the service of design providing custom solutions and unlimited aesthetic variety.

Alpi offers for ALPILignum products a wide range of possible solutions depending on the colour, thickness, type of wood (Ayous, Basswood, Poplar); the EPD covers all possible combinations.


Name and location of production site:

ALPI SPA
Viale della Repubblica, 34
47015 Modigliana (FC) – Italy
www.alpi.it

Geographic scope: Global

The pretended communication of the EPD is B2B.

Technical characteristics of the product:

Technical characteristics	
Standard dimensions: Poplar based veneer	length 2200-2500 mm; width from 620 to 700 mm
Ayoux based veneer	length 2200-2500-2800-3150 mm; width 360 mm, from 620 to 760 mm
Basswood based veneer	length 2500-3150 mm; width 360 mm, from 620 to 700 mm
Thickness	from 0,42 mm to 2,8 mm
Variation in size / Width	-0 / +30 mm
Variation in size / Thickness	< 1,5 mm : +/- 0,05 mm; > 1,5 mm : +/- 4% (complies with standard ISO 18775)
Wood Density	Ayoux wood: 648 kg/m ³ Poplar wood: 607 kg/m ³ Basswood wood: 681 kg/m ³
Lightfastness	ALPIlignum is an uncoated product whose lightfastness depends on the chemical composition of the final varnish and how it is applied. Upon request, ALPI supplies a type of ALPIlignum that can reach values above 4 in grey scale (EN 15187:2007) if suitably varnished.
Formaldehyde Emission	The formaldehyde emission of ALPIlignum is category E1 according to the test requirements EN 717-1:2004.
Certification	 <p>The mark of responsible forestry FSC® C004666</p>

CONTENT DECLARATION

The mass (weight) of one unit of a product, as purchased or per declared unit:

The declared product is a decorative surface of 1 m² with a thickness of 0,58 mm. This thickness represents about 85% of ALPILignum production in the 2024. The product can be made of Ayous or Basswood or Poplar wood. The declared impacts are the average of products with different wood essence (in Ayous, Basswood, Poplar) with different colours, light or dark. The composition of the product can vary depending on the type of wood chosen, the colors, additives and glues added during production.

The mass can vary from 0,35 kg/m² to 0,40 kg/m², with an average mass of 0,37 kg/m².

Content of the product in the form of a list of materials and substances, and their mass:

Wood, bleaching additives, washing additives, dyeing additives, dyes, gluing substances.

The content of consumer packaging: wood pallet, metal strapping, LDPE film.

Information on the environmental and hazardous/toxic properties of a substances contained in the product:

During the life cycle of the product any hazardous substance listed in the “Candidate List of Substances of Very High Concern (SVHC) for authorization” has not been used in a percentage higher than 0,1% of the weight of the product

The declared content of 1 m² (for 0,58mm thickness):

Product content	Mass, kg	Mass, %	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material, kg C/product or declared unit
Wood	4,45E-02 - 1,55E-01	12,55% - 44,06%	0	6,27% - 22,03%	2,10E-02 - 8,87E-02
Bleaching additives	0,00 - 1,28E-01	0,00 % - 31,89%	0		0
Dyeing additives	4,08E-03 - 6,27E-02	1,16% - 16,61%	0	0,00% - 0,23%	0,00 - 9,46E-04
Dyes	1,21E-04 - 2,04E-02	0,03% - 5,09%	0		0
Washing additives	0,00 - 4,23E-03	0,00% - 1,19%	0		0
Gluing substances	1,24E-01 - 1,99E-01	30,7% - 49,66%	0	0,87% - 1,49%	2,89E-03 - 6,00E-03
TOTAL	3,34E-01 - 4,03E-01	100%	0	7,14% - 23,76%	2,38E-02 - 9,57E-02

Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C/product or declared unit
Wood pallet	6,90E-03	1,71% - 2,07%	3,45E-03
Metal strapping	4,40E-04	0,11% - 0,13%	0
LDPE film	1,14E-03	0,28% - 0,34%	0
Total	8,48E-03	2,10% - 2,54%	3,45E-03

1 kg biogenic carbon in the product/packaging is equivalent to the uptake of 44/12 kg of CO₂.

LCA INFORMATION

Declared unit: The declared unit of the study is 1 m² of decorative surface ALPILignum and with a useful life of 50 years and thickness of 0,58 mm.

The declared impacts are the average of the single impacts of representative products: light-coloured Ayous, dark-coloured Ayous, light-coloured Basswood, dark-coloured Basswood, light-coloured Poplar and dark-coloured Poplar with thickness 0,58 mm.

Conversion factor to mass:

Mass per declared unit: 0,37 kg/m² (Average weight)

Reference service life: 50 years

Time representativeness: primary data refer to 2024 year. The generic data has been updated in 2025 (Ecoinvent 3.11)

Geographical scope:

- A1: global
- A2: global
- A3: Italy
- A4: global
- C1-C4: global

Geographical representativeness: Primary data are derived from ALPI S.P.A. in Modigliana production sites. The secondary data are derived by database Ecoinvent 3.11 (RER or GLO records).

Technological representativeness: primary data are derived from processes and products of ALPI S.P.A. under study. The secondary data are derived from databases of ALPI similar technology.

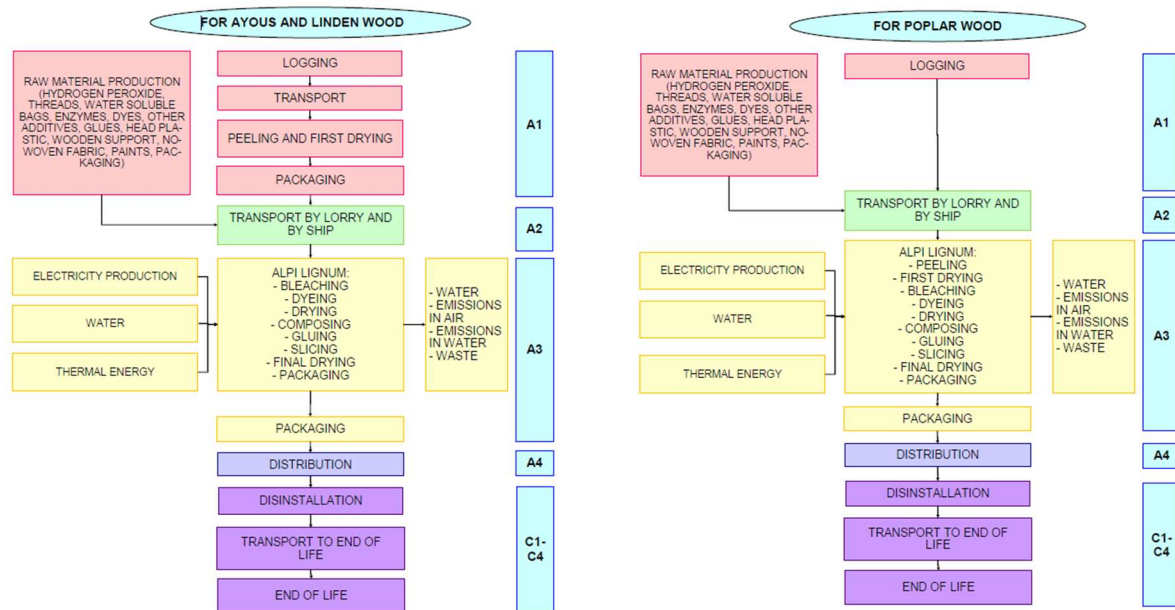
Database(s) and LCA software used: Ecoinvent 3.11 and SimaPro 10.2.0.3

Description of system boundaries:

Cradle to gate with options, modules C1–C4, module D and with optional modules A4, in accordance to paragraph 5.2 of EN 15804:2021, paragraph 6.3.2 in EN 16485:2014 and paragraph 2.2.2 of PCR 2019:14 Construction products: this choice was made because installation scenario isn't well known as it often involves another manufacturing phase outside ALPI

The product ALPILignum can be glued on different surfaces of different construction product. The use of product is not under Alpi control.

Process flow diagram:



More information:

- The allocation is applied in the LCA study: when necessary, mass allocation is used.
- Cut-off: at least 95% of the energy and materials used by module has been introduced, as well as 99% of the total use of energy and materials
- The modularity principle, as well as the polluter payer principle have been followed
- The long-term emissions have not been included.
- The next processes have not been included since its impact is not significant:
 - Environmental impact from infrastructure, construction, production equipment, and tools that are not directly consumed in the production process.
 - Personnel-related impacts, such as transportation to and from work.
- The impact methods used are:
 - Environmental footprint 3.1
 - Cumulative energy demand (LHV) v. 1.01 for resource use
 - EDIP 2003 v. 1.07 for waste production.

- Module A1 – Raw material supply: this module includes the extraction and production of raw material.

- Module A2 – Transport: this module includes the transportation of raw materials from the production site to Alpi. The specific distance from the supplier of each raw material is included in the study.

- Module A3 – Manufacturing: this module considers ALPI S.P.A. internal processes, including consumption of energy, resources, packaging and generation of waste and emissions in air and water. In 2024, Alpi purchased electricity with Guarantee of origin for 40% of the consumption. The rest electricity is modelled with Italian residual mix for medium voltage.

The climate impact (GWP-GHG indicator) of electricity purchased in the manufacturing process (A3) is: 0,42 kg CO2eq/kWh.

- Module A4 – Transport: this module considers the transport of product to customer site. The distances are calculated as average weighted of all transports of 2024 for construction sector; for the model the distances from ALPI S.P.A. client address are considered.

PARAMETER	DESCRIPTION / VALUE
Fuel type and consumption of vehicle or vehicle type used for transport e.g. long distance truck, boat, etc	From Ecoinvent Truck (16-32 metric ton): 0,0374 kg of diesel low sulfur for ton*km transported Ship: 0,0025 kg of heavy fuel oil for ton*km transported
Distance	The distances are calculated as weighted average of all transportation in Italy and abroad in 2024 for construction sector: - Truck: 428,60 km - Ship: 4421,41 km
Capacity utilisation (including empty returns)	From Ecoinvent database: Truck: 65,79% Ship: 70%
Bulk density of transported products (kg/m ³)	657,55 kg/m ³ (average) Ayous wood: 648 kg/m ³ Poplar wood: 607 kg/m ³ Basswood wood: 681 kg/m ³

- Module C1 – Deconstruction/demolition: The product is not separable from the other element: the impact of this module is considered negligible because ALPILignum weight is negligible compared to the other element.

- Module C2 – Transport to waste processing: the product is then transported to disposal; the scenario provides the transport for 80 km.

- Module C3 - Waste processing for reuse, recovery and/or recycling: the product is sent to landfill; any process of reuse, recovery and/or recycling isn't considered in the study.

- Module C4 - Disposal: the product is totally disposed in landfill.

PARAMETER	VALUE / DESCRIPTION
Collection process specified by type	Product waste are collected with 16-32 metric ton truck
Recovery system specified by type	There is no recovery, recycling or reuse
Disposal specified by type	100 % Landfill (average weight 0,37 kg)
Assumptions for scenario development (e.g. transportation)	16-32 metric ton truck EURO 5. Distance: 80 km

- Module D - Reuse-Recovery-Recycling potential: Module D calculates the potential environmental benefits of the recycling or reuse of materials. ALPILignum has not recycled materials. At the end-of-life the product goes to landfill (as defined by the scenario). The avoided impacts of electricity production and/or thermal energy recovery from landfill gas are very low and they can be considered negligible.

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

	Product stage			Distribution/ installation stage		Use stage							End-of-life stage				Beyond product life cycle
	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	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	GLO	GLO	IT	GLO	ND	ND	ND	ND	ND	ND	ND	ND	GLO	GLO	GLO	GLO	GLO
Share of primary data	46,78			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	-44% - +83%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data quality

A summary of the data quality assessment, in line with requirements of PCR in Section 4.6.4. and EN 15941 is listed below. The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

Please refer to Section 4.6.5.2 of the PCR for the table providing example for the declaration of data sources, reference years, data categories, and share of primary data:

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Manufacturing of raw materials	Database	Ecoinvent 3.11	2024	Secondary data	0,00%
Transport of raw materials	Collected data, database	Ecoinvent 3.11	2024	Primary data	3,06%
Generation of electricity used in manufacturing of product	Collected data, database	Ecoinvent 3.11	2024	Primary data	11,66%
Gas natural generation used in manufacturing of product	Collected data, database	Ecoinvent 3.11	2024	Primary data	29,19%
Water consumption	Collected data, database	Ecoinvent 3.11	2024	Primary data	0,00%
Fuel used in manufacturing of product	Collected data, database	Ecoinvent 3.11	2024	Primary data	0,39%
Packaging production	Collected data, database	Ecoinvent 3.11	2024	Secondary data	0%
Emissions in air and water	Test reports	Ecoinvent 3.11	2024	Primary data	2,48%
Waste from the manufacturing process	Collected data, database	Ecoinvent 3.11	2024	Secondary data	0,00%
Chemicals used in the wastewater plant	Collected data, database	Ecoinvent 3.11	2024	Secondary data	0,00%
Total share of primary data, of GWP-GHG results for A1-A3					46,78%

The EPD covers the production of ALPILignum from Alpi S.p.A., Italy, which provided data for the year 2024. Background data was sourced from the Ecoinvent 3.11. The data quality assessment is based on EN15804 Annex E Table E-1. In general, time representation of the dataset's selection is very good for the studied product, the technical representation is good, the geographical representation is good. No poor or very poor data was found during the assessment of relevant data. Overall quality of data for each phase is:

- A1 – Primary data: Good; Secondary data: Fair
- A2 - Primary data: Very good; Secondary data: Good
- A3 - Primary data: Very good; Secondary data: Good
- A4 - Primary data: Good; Secondary data: Fair
- C1-C4: Primary data: Fair; Secondary data: Fair.

ENVIRONMENTAL PERFORMANCE

LCA results of the product(s) - main environmental performance results

Mandatory impact category indicators according to EN 15804

Results per declared unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO ₂ eq.	2,01 E+00	4,27 E-02	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	4,84 E-03	0,00 E+00	7,37 E-01	0,00 E+00
GWP-fossil	kg CO ₂ eq.	2,72 E+00	4,27 E-02	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	4,84 E-03	0,00 E+00	7,58 E-03	0,00 E+00
GWP-biogenic	kg CO ₂ eq.	7,22 E-01	2,41 E-06	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	3,17 E-07	0,00 E+00	7,29 E-01	0,00 E+00
GWP-luluc	kg CO ₂ eq.	7,01 E-03	1,90 E-06	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	2,46 E-07	0,00 E+00	1,48 E-05	0,00 E+00
ODP	kg CFC 11 eq.	1,01 E-07	5,45 E-10	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	5,72 E-11	0,00 E+00	1,03 E-10	0,00 E+00
AP	mol H ⁺ eq.	9,36 E-03	5,76 E-04	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	1,37 E-05	0,00 E+00	6,90 E-05	0,00 E+00
EP-freshwater	kg P eq.	8,47 E-05	1,98 E-07	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	3,37 E-08	0,00 E+00	5,68 E-08	0,00 E+00
EP-marine	kg N eq.	3,46 E-03	1,51 E-04	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	4,72 E-06	0,00 E+00	3,34 E-05	0,00 E+00
EP-terrestrial	mol N eq.	2,96 E-02	1,67 E-03	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	5,20 E-05	0,00 E+00	3,55 E-04	0,00 E+00
POCP	kg NMVOC eq.	1,10 E-02	4,77 E-04	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	1,94 E-05	0,00 E+00	9,17 E-05	0,00 E+00
ADP-minerals&metals*	kg Sb eq.	2,73 E-06	2,30 E-09	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	3,95 E-10	0,00 E+00	1,80 E-09	0,00 E+00
ADP-fossil*	MJ	4,95 E+01	5,45 E-01	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	6,32 E-02	0,00 E+00	7,86 E-02	0,00 E+00
WDP*	m ³	2,49 E+00	5,29 E-04	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	8,40 E-05	0,00 E+00	1,92 E-03	0,00 E+00
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 on these results are high or as there is limited experience with the indicator.

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 the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3).

The packaging biogenic carbon and the energy inside the packaging is balanced in the A3 module.

Additional mandatory and voluntary impact category indicators

Results per declared unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG ¹	kg CO ₂ eq.	2,74 E+00	4,27 E-02	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	4,84 E-03	0,00 E+00	7,60 E-03	0,00 E+00
<i>Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017</i>																

Results per declared unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter emissions (PM)	Disease incidence	8,17 E-08	2,07 E-09	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	3,09 E-10	0,00 E+00	8,11 E-10	0,00 E+00
Ionizing radiation, human health (IRP)	kBq U235 eq.	4,13 E-02	4,18 E-05	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	4,91 E-06	0,00 E+00	1,20 E-05	0,00 E+00
Eco-toxicity - freshwater (ETP-fw)	CTUe	1,55 E+01	4,11 E-02	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	6,36 E-03	0,00 E+00	1,70 E-01	0,00 E+00
Human toxicity, cancer effect (HTP-c)	CTUh	7,01 E-09	4,23 E-12	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	3,43 E-13	0,00 E+00	1,06 E-09	0,00 E+00
Human toxicity, non-cancer effects (HTP-nc)	CTUh	1,33 E-08	2,02 E-10	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	3,09 E-11	0,00 E+00	7,40 E-10	0,00 E+00
Land use related impacts/Soil quality (SQP)	dimensionless	4,51 E+01	3,90 E-03	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	6,66 E-04	0,00 E+00	4,85 E-03	0,00 E+00

¹ This indicator 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 CO₂ is set to zero.

Resource use indicators

Results per declared unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	7,29 E+00	1,06 E-03	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	1,26 E-04	0,00 E+00	7,40 E+00	0,00 E+00
PERM	MJ	7,40 E+00	0,00 E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	0,00 E+00	0,00 E+00	- 7,40 E+00	0,00 E+00
PERT	MJ	1,47 E+01	1,06 E-03	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	1,26 E-04	0,00 E+00	5,26 E-04	0,00 E+00
PENRE	MJ	4,09 E+01	5,45 E-01	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	6,32 E-02	0,00 E+00	- 8,51 E+00	0,00 E+00
PENRM	MJ	8,59 E+00	0,00 E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	0,00 E+00	0,00 E+00	8,59 E+00	0,00 E+00
PENRT	MJ	4,95 E+01	5,45 E-01	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	6,32 E-02	0,00 E+00	7,87 E-02	0,00 E+00
SM	kg	0,00 E+00	0,00 E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
RSF	MJ	9,06 E-02	0,00 E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
NRSF	MJ	0,00 E+00	0,00 E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
FW	m ³	5,75 E-02	1,26 E-05	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	1,79 E-06	0,00 E+00	8,01 E-05	0,00 E+00
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	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	3,55 E-04	3,23 E-06	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	4,14 E-07	0,00 E+00	5,11 E-07	0,00 E+00
Non-hazardous waste disposed	kg	6,65 E-01	6,08 E-04	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	8,64 E-05	0,00 E+00	3,79 E-01	0,00 E+00
Radioactive waste disposed	kg	3,15 E-05	2,32 E-08	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	2,75 E-09	0,00 E+00	7,52 E-09	0,00 E+00

Output flow indicators

Results per declared unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00 E+00	0,00 E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
Material for recycling	kg	3,69 E-01	0,00 E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
Materials for energy recovery	kg	0,00 E+00	0,00 E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
Exported energy, electricity	MJ	0,00 E+00	0,00 E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
Exported energy, thermal	MJ	0,00 E+00	0,00 E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00

Additional LCA results (other environmental performance results) of the products

The EPD is for multiple products, based on several representative products (Pale Ayous, Dark Ayous, Pale Basswood, Dark Basswood, Pale Poplar, Dark Poplar) with the thickness of 0,58 mm, the principal thickness produced by Alpi for ALPILignum. On the specific request of clients Alpi can produce ALPILignum with different thicknesses from 0,42 mm to 2,8 mm. In the LCA study, the minimum impacts are calculated among the studied products with a thickness of 0,42 mm, while the maximum impacts are calculated among the products with a thickness of 2,8 mm.

LCA result of one declared unit product (A-C)	Unit	A1-C4 MIN %	Representative/ Average A1-C4	A1-C4 MAX %
GWP-total	kg CO2 eq.	-43,95	2,79E+00	82,81
GWP-fossil	kg CO2 eq.	-43,83	2,78E+00	82,79
GWP-biogenic	kg CO2 eq.	-80,93	7,57E-03	85,05
GWP-luluc	kg CO2 eq.	-52,45	7,03E-03	86,31
ODP	kg CFC-11 eq.	-44,09	1,02E-07	83,65
AP	mol H+ eq.	-46,73	1,00E-02	83,71
EP-freshwater	kg P eq.	-53,87	8,50E-05	84,15
EP-marine	kg N eq.	-43,27	3,65E-03	83,09
EP-terrestrial	mol N eq.	-44,53	3,17E-02	83,51
POCP	kg NMVOC eq.	-43,25	1,16E-02	82,73
ADP-minerals&metals*	kg Sb eq.	-40,07	2,74E-06	83,01
ADP-fossil*	MJ, net calorific value	-45,61	5,02E+01	83,25
WDP*	m3 world eq. deprived	-45,19	2,49E+00	83,11
GWP-GHG	kg CO2 eq.	-43,79	2,79E+00	82,79
PM	Disease incidence	-50,71	8,49E-08	86,43
IRP	kBq U235 eq.	-46,67	4,13E-02	83,67

ETP-fw	CTUe	-53,24	1,58E+01	82,34
HTP-c	CTUh	-37,52	8,07E-09	81,96
HTP-nc	CTUh	-47,07	1,42E-08	83,69
SQP	dimensionless	-56,66	4,51E+01	87,92
PERE	MJ, net calorific value	-62,45	1,47E+01	88,93
PERM	MJ, net calorific value	0,00	0,00E+00	0,00
PERT	MJ, net calorific value	-62,45	1,47E+01	88,93
PENRE	MJ, net calorific value	-17,36	3,30E+01	88,98
PENRM	MJ, net calorific value	-100,00	1,72E+01	0,00
PENRT	MJ, net calorific value	-45,61	5,02E+01	83,25
SM	kg	0,00	0,00E+00	0,00
RSF	MJ, net calorific value	-100,00	9,06E-02	93,05
NRSF	MJ, net calorific value	0,00	0,00E+00	0,00
FW	m3	-55,04	5,76E-02	83,65
Hazardous waste disposed	kg	-50,70	3,59E-04	84,52
Non-hazardous waste disposed	kg	-41,53	1,04E+00	82,81
Radioactive waste disposed	kg	-47,65	3,16E-05	83,73
Components for re-use	kg	0,00	0,00E+00	0,00
Materials for recycling	kg	-99,97	3,69E-01	80,53
Materials for energy recovery	kg	0,00	0,00E+00	0,00
Exported electrical energy	MJ, net calorific value	0,00	0,00E+00	0,00
Exported thermal energy	MJ, net calorific value	0,00	0,00E+00	0,00

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
EN	European Norm (Standard)
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
CEN	European Committee for Standardization
CLC	Co-location centre
CPC	Central product classification
GHS	Globally harmonized system of classification and labelling of chemicals
GRI	Global Reporting Initiative
SVHC	Substances of Very High Concern
ND	Not Declared
GWP	Global Warming Potential
GHG	Green House Gases
VOC	Volatile Organic Compounds
LCA	Life Cycle Assessment
PCR	Product Category Rules
RSL	Reference Service Life

REFERENCES

- General Programme Instructions of the International EPD® System. Version 5.0.1.
- PCR 2019:14. CONSTRUCTION PRODUCTS (EN 15804+A2. Version 2.0.1)
- UNI EN 16485:2014 Round and sawn timber - Environmental Product Declarations – Product category rules for wood and wood-based products for use in construction
- ISO 14040:2006 Environmental Management-Life Cycle Assessment - Principles and framework
- ISO 14044:2006 Environmental Management-Life Cycle Assessment-Requirements and guidelines
- ISO 14025:2010 Environmental labels and declarations-Type III Environmental Declarations-Principles and procedures
- EN EN15804:2012+A2:2019/AC:2021, Sustainability of construction works — Environmental product declarations
- Project report for life cycle assessment of ALPILignum, rev.2, 27/05/2026

VERSION HISTORY

Original Version of the EPD, 2026-06-02

