

Environmental Product Declaration



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

WISA® Birch plywood, uncoated

from

UPM Plywood Oy



Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
Type of EPD:	EPD of multiple products, based on a representative product: WISA®-Birch , WISA®-Birch LG, WISA®-Birch LG Special, WISA®-Birch Maxi, WISA®-Birch PQ, WISA®-Birch Premium, WISA®-Birch Special
EPD registration number:	EPD-IES-0010542:004 (S-P-10542)
Version date:	2025-12-15
Validity date:	2030-12-15
<i>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</i>	



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
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Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): PCR 2019:14 Construction products, version 2.0.1
PCR review was conducted by: Rob Rouwette (chair), Noa Meron (co-chair). The Technical Committee of the International EPD System. A full list of members is available on www.environdec.com . The review panel may be contacted via support@environdec.com .
c-PCR: c-PCR-006 (to PCR 2019:14) Wood and wood-based products for use in construction (EN 16485:2014) UN CPC 031, 311, 312, 313, 314, 315, 316, 319, version 1.0.0.

Third-party Verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:
☒ Individual EPD verification without a pre-verified LCA/EPD tool Third-party verifier: Hannu Karppi, Ramboll Finland Oy Approved by: International EPD System
Procedure for follow-up of data during EPD validity involves third party verifier:
☐ Yes ☒ 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:

UPM Plywood Oy
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15140 Lahti, Finland
www.wisaplywood.com

Contact:

Sanna Kontinen,
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Description of the organisation:

UPM Plywood offers high quality WISA® plywood and veneer products for construction, vehicle flooring, LNG shipbuilding, parquet manufacturing and other industrial applications. In 2024 UPM Plywood sales was EUR 430 million and it had 1,598 employees. UPM has three plywood mills and one veneer mill in Finland and one plywood mill in Estonia.

Names and locations of production sites:

- ✓ UPM Joensuu Plywood mill
Sirkkalantie 17
80100 Joensuu
- ✓ UPM Savonlinna Plywood mill
Schaumanintie 1
57200 Savonlinna
- ✓ UPM Otepää Plywood mill
Tehase 2
67404 Otepää

Product-related or management system-related certifications:

- ✓ FSC and PEFC CoC
- ✓ ISO 9001, ISO 14001 & ISO 45001
- ✓ CE marking according to EN 13986:2004+A1:2015 with AVCP 2+ & 4 (depending on the product)
- ✓ M1 emission classification (depending on the product)

Address and contact information of the LCA practitioner:

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PRODUCT INFORMATION

Product name: WISA® uncoated birch plywood.

This is a name for a range of different plywood products, see Table 1. This is an EPD of multiple products, based on a representative product, WISA®-Birch. The results presented in this EPD for 1 m³ of representative uncoated birch plywood are weighted according to the production volumes at the three mills in Finland and Estonia.

Table 1. Products included in the results of this average EPD.

Product group	Product	Features
WISA® uncoated birch plywood	WISA®-Birch (representative product) WISA®-Birch LG WISA®-Birch LG Special WISA®-Birch Maxi WISA®-Birch PQ WISA®-Birch Premium WISA®-Birch Special	Basic uncoated birch plywood board.

Up-to-date information on products is available at www.wisaplywood.com

Product identification:

WISA-Plywood products are marked with CE-marking containing unambiguous code of Declaration of Performance, i.e. UPM007CPR.



UN CPC code: 31410

Product description:

WISA® Plywood products are sustainable material for permanent constructions and infrastructure. Panels are strong, stiff and lightweight and hence suitable for multiple different uses in building and construction applications, such as roofing, flooring and wall sheeting.

As permanent component of building or infrastructure, plywood boards are primarily used in dry indoor or moderately humid conditions (reference in-use conditions), such as in roofing, flooring and wall sheeting. According to research results and experience, glued timber products, such as plywood, will have around the same service life expectations than solid wood in dry and moderately humid conditions. If installed properly and moisture exposure is low or moderate, the service life of the plywood board is 100 years at minimum.

Name and location of production site(s):

Joensuu (Finland), Savonlinna (Finland) and Otepää (Estonia). See page 3.

CONTENT DECLARATION

Composition of representative WISA® uncoated birch plywood and accompanying packaging are presented in Table 2 below. The material composition of the product is identical for all products represented by this EPD.

Typical amounts of packaging materials differ from product to product, but the same materials are used: plywood and cardboard are used for protection, products are covered with wrap, and the products are stacked on wooden pallets or bed timber and fastened with banding.

There are no SVHC substances in the product.

Table 2. WISA® uncoated birch plywood composition and packaging (representative product WISA®-Birch).

Product components	Mass, kg	Biogenic material, mass-% of product	Biogenic material, kg C/product
Wood, birch	574.6	100 %	302.8
Moisture	61.9	0 %	0
Adhesive resin	30.6	0 %	0
Hardeners and fillers	12.2	0 %	0
Others (i.e. composing adhesives, fillers)	0.7	0 %	0
TOTAL	680.0	84.5 %	302.8
Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C/product
Wood	6.8	1.0 %	3.4
Plywood	5.7	0.8 %	2.5
Cardboard	0.5	0.1 %	0.2
Polyester band	0.1	0.0 %	0
Polyethylene wrap	0.8	0.1 %	0
TOTAL	13.9	2.0 %	6.1

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

LCA INFORMATION

Declared unit: 1 m³ of representative WISA® uncoated birch plywood board from cradle to grave

Conversion factor to mass: 680 kg/m³

Reference service life:

100 years. As permanent component of building or infrastructure, plywood boards are primarily used in dry indoor or moderately humid conditions (reference in-use conditions), such as in roofing, flooring and wall sheeting. According to research results and experience, glued timber products, such as plywood, will have around the same service life expectations than solid wood in dry and moderately humid conditions. If installed properly and moisture exposure is low or moderate, the service life of the plywood board is 100 years at minimum.

Time representativeness:

Manufacturer-specific data (module A3) represents year 2024. Time representativeness of secondary data used is very good.

Geographical scope:

WISA® uncoated birch plywood products are manufactured in Finland and Estonia and modules A1–A3 mostly represent these locations. Plywood products are used across Europe and therefore modules A4–A5, B, C (end-of-life stage) and D (avoided burdens) represent specific destination countries in Europe, where the representative product was exported in 2024.

Databases and LCA software used: LCA for Experts software version 10.9 is used for modelling and calculation of results. Used databases include Sphera Professional 2025.2 and Ecoinvent 3.11 (cut-off system model). Results are calculated with the software (EF Reference Package 3.1 for EN 15804).

Description of system boundaries:

The type of this EPD is type c) Cradle to grave and module D (A + B + C + D). Therefore, all life cycle stages are included. See Table 3 and Figure 1 below for information on declared modules and descriptions further below.

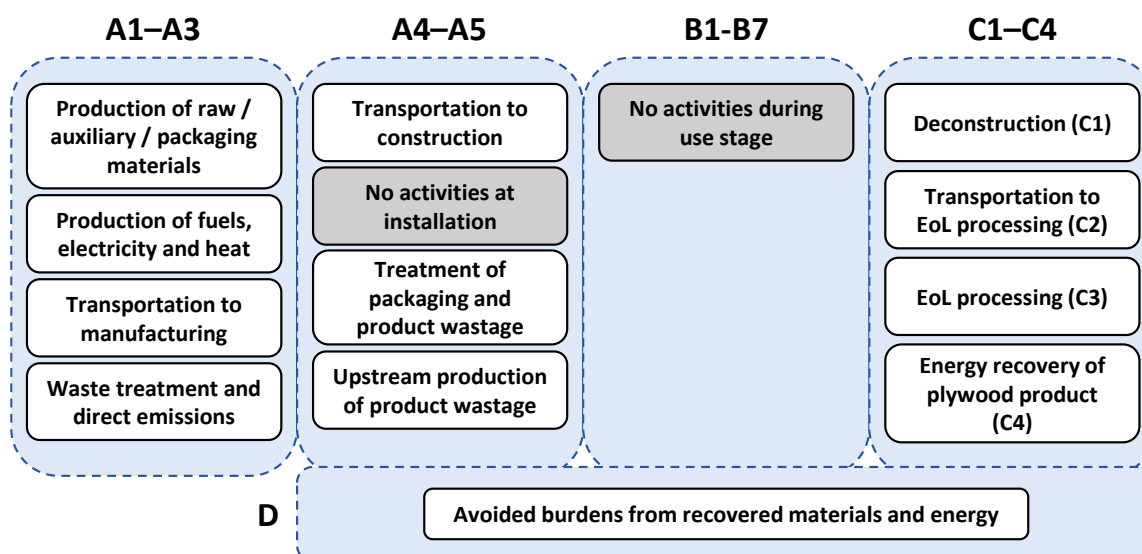


Figure 1. Process flow diagram.

Table 3. Modules declared, geographical scope, share of specific data 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	X	X	X	X	X	X	X	X	X	X	X	X
Geography	FI, EE, EU			EU													EU
Specific data used ¹	< 10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	< 8 %			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	< 58 %			-	-	-	-	-	-	-	-	-	-	-	-	-	-

EE = Estonia; EU = Europe; FI = Finland.

Module A1 includes the production of raw materials used in the manufacturing of plywood products. Birch logs are sourced from Finland and Estonia according to mill locations.

Module A2 comprises of transportation processes up to the plywood mill gates. Most of the materials are shipped to the mills by road and few materials are also shipped by sea.

Module A3 includes direct emissions of the manufacturing processes at the plywood mills, production of auxiliary and packaging materials, production of used energy, treatment of solid wastes and pre-treatment of wastewater. Plywood mills have onsite energy plants that use wood residues from plywood manufacturing as fuel. Electricity used in manufacturing is produced 100% with nuclear power and its emission factor is 0.005 kg CO₂ eq./kWh (GWP-GHG). Plywood manufacturing process is depicted in Figure 2 below (note: coating line processes are not related to uncoated plywood products).

Module A4 describes the transportation of plywood products to end users in multiple European countries. In module A5 the plywood products are installed/used in construction (no significant inputs are identified to be used in construction). Plywood wastage and product packaging are directed to waste treatment in module A5. Upstream production of plywood loss is included in module A5.

¹ 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.

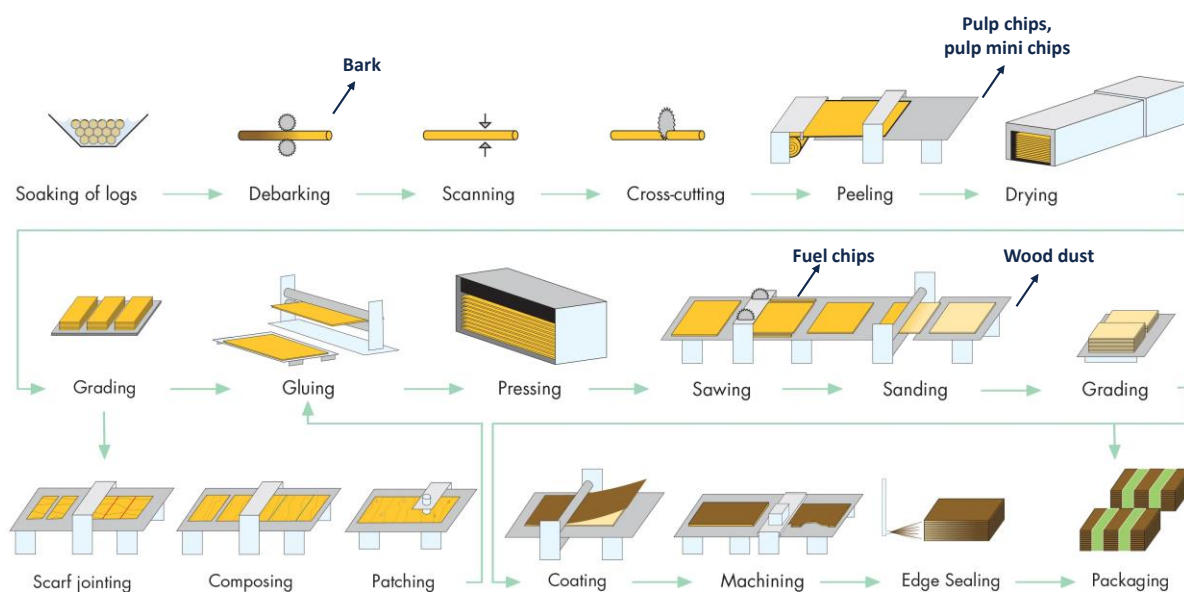


Figure 2. Manufacturing process flow diagram. Coating line is not included for uncoated plywood products.

Modules B1–B7 describe the use stage of plywood board installed in a building; the plywood does not require maintenance or create additional material or energy consumption, and therefore the environmental impacts in module B are estimated to be insignificant and presented as zero. Default data from the PCR is used to for modules C1–C4, which describe the deconstruction of the plywood (C1), transportation to waste processing (C2), waste processing (C3) and disposal (C4). Plywood is assumed to be recovered as energy, of which burdens belong to module C4, as energy efficiency of energy recovery is < 60 %. Module D describes the material and energy resource recovery across the life cycle.

Table 4. Modeling data pertaining to modules A4-C4.

Module	Module information
A4	997 km by road (Truck-trailer, Diesel, Euro VI A-C, 34 - 40t gross weight; 61 % utilization rate) 597 km by sea (Container ship, 52 134 dead weight tonnage; 70 % utilization rate)
A5	Use of materials, energy and water and emissions to air assumed minor (cut-off). Input of additional plywood product and accompanying packaging to cover loss: 34.7 kg Wastes: Wood: 7.2 kg (energy recovery) Plywood (packaging and 5 % product wastage): 40.0 kg (energy recovery) Cardboard: 0.5 kg (recycling) Polyester band: 0.1 kg (energy recovery) Polyethylene wrap: 0.8 kg (energy recovery)
B1–B7	No activities (estimated to be insignificant and presented as 0).
C1	Deconstruction of wood (Excavator, 100 kW, construction)
C2	Average transport distance 128 km (Truck, Diesel, Euro V, 14 - 20t gross weight; 50 % utilization rate)
C3	Loading and unloading at sorting facility, mechanical sorting, and chipping of wood
C4	100 % energy recovery of plywood (energy efficiency < 60 %)
D	Quality ratios of recovered materials are accounted for. Default efficiency of energy recovery are 25-27 % for heat, 14-16 % for electricity (Sphera). District heating mix (A5/CC4) and country-specific electricity grid mix (A5/C4) are assumed to be avoided.

Cut-off criteria:

The sum of excluded flows do not exceed 1% of the total inputs or outputs (by mass or by energy), or 5 % by environmental impacts. The flows knowingly excluded are as follows:

- Capital equipment, infrastructure, and employee commute.
- A3: Paper sticker packaging, and small auxiliary chemicals to onsite energy plants.
- A5: Production of screws and use of screwdriver in construction stage.
- B1: Emissions to air during use stage are very minor and assumed to be zero.

Allocation:

The recommended allocation procedure described in the PCR is followed. Allocation is avoided in the calculation of raw materials, packaging materials and energy consumption. Economic allocation is applied for other general flows regarding the manufacturing stage. Polluter pays principle is used in waste and recovery operations.

Data quality:

Primary data of UPM Plywood represents year 2024 and annual production inventory data is used as the basis of calculation. Modeling data is obtained from Sphera Professional 2025.2 and Ecoinvent 3.11 databases. Ecoinvent 3.12 database is applied to model Finland-specific birch raw material. Time-related, geographical and technological representativeness are assessed before using secondary data and overall, the data quality is good.

Share of specific data is < 10 % (see below table). Variation between products (< 8 %) is based on detailed modelling. Variation between sites (< 58 %) is determined on the specific impacts of modules A2-A3 (without product packaging).

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Onsite production of heat	Collected data; Database	EPD owner; Sphera 2025.2; Ecoinvent 3.11	2024	Primary data	4%
Total share of primary data, of GWP-GHG results for A1-A3					4%

ENVIRONMENTAL PERFORMANCE

The declared indicators in this section represent average WISA® uncoated birch plywood. 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).

Mandatory impact category indicators according to EN 15804

Results per 1 m ³ of representative WISA® uncoated birch plywood										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP-total	kg CO ₂ eq.	-1.01E+03	5.90E+01	3.76E+01	0	2.42E-01	1.18E+01	2.72E+00	1.15E+03	-4.00E+02
GWP-fossil	kg CO ₂ eq.	1.25E+02	5.83E+01	1.50E+01	0	2.39E-01	1.16E+01	2.69E+00	4.20E+01	-3.96E+02
GWP-biogenic	kg CO ₂ eq.	-1.13E+03	1.37E-01	2.25E+01	0	5.64E-04	2.85E-02	4.45E-03	1.11E+03	-3.49E+00
GWP-luluc	kg CO ₂ eq.	3.86E-01	5.65E-01	5.22E-02	0	2.42E-03	1.22E-01	1.73E-02	2.63E-02	-4.96E-01
ODP	kg CFC 11 eq.	5.01E-07	1.11E-11	2.46E-08	0	3.90E-14	1.97E-12	2.98E-12	1.28E-10	-5.71E-09
AP	mol H ⁺ eq.	5.14E-01	1.53E-01	4.82E-02	0	1.21E-03	7.40E-02	1.01E-02	1.85E-01	-7.81E-01
EP-freshwater	kg P eq.	5.15E-03	1.50E-04	2.69E-04	0	6.34E-07	3.20E-05	4.60E-06	2.04E-05	-1.06E-03
EP-marine	kg N eq.	1.98E-01	6.86E-02	1.81E-02	0	5.79E-04	3.66E-02	4.69E-03	5.41E-02	-2.35E-01
EP-terrestrial	mol N eq.	2.09E+00	7.34E-01	2.06E-01	0	6.26E-03	3.99E-01	5.08E-02	7.75E-01	-2.67E+00
POCP	kg NMVOC eq.	5.92E-01	1.69E-01	4.99E-02	0	1.57E-03	7.03E-02	1.29E-02	1.49E-01	-5.51E-01
ADP-minerals&metals*	kg Sb eq.	6.95E-05	3.78E-06	3.94E-06	0	1.56E-08	7.90E-07	1.37E-07	1.47E-06	-5.28E-05
ADP-fossil*	MJ	6.47E+03	7.62E+02	3.81E+02	0	3.01E+00	1.52E+02	3.57E+01	2.74E+02	-5.23E+03
WDP*	m ³	7.63E+00	2.83E-01	9.11E+00	0	1.08E-03	5.43E-02	8.79E-02	1.22E+02	-2.39E+01

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 experienced with the indicator.

Additional mandatory and voluntary impact category indicators

Results per 1 m ³ of representative WISA® uncoated birch plywood										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP-GHG ²	kg CO ₂ eq.	1.21E+02	5.90E+01	1.48E+01	0	2.42E-01	1.18E+01	2.72E+00	4.21E+01	-4.00E+02
PM	Disease incidences	3.62E-06	2.85E-06	4.17E-07	0	1.41E-08	3.19E-07	1.35E-07	1.24E-06	-6.32E-06
IRP**	kBq U ²³⁵ eq.	1.45E+02	2.06E-01	7.28E+00	0	8.17E-04	4.12E-02	1.20E-01	2.34E+00	-3.57E+01
ET-freshwater*	CTUe	2.20E+03	9.54E+02	1.68E+02	0	3.92E+00	1.98E+02	2.97E+01	1.08E+02	-1.06E+03
HTP-c*	CTUh	1.00E-07	1.30E-08	6.46E-09	0	5.28E-11	2.67E-09	4.43E-10	1.13E-08	-9.17E-08
HTP-n*	CTUh	1.58E-06	7.03E-07	1.60E-07	0	2.96E-09	1.49E-07	2.29E-08	5.86E-07	-3.23E-06
SQL*	Pt	6.53E+04	3.12E+02	3.23E+03	0	1.33E+00	6.73E+01	1.01E+01	8.29E+01	-6.53E+03
GWP-GHG = Global Warming Potential greenhouse gases; PM = Particulate Matter; IRP = Ionizing Radiation Potential; ET-freshwater = Ecotoxicity freshwater; HTP-c = Human Toxicity Potential cancer; HTP-n = Human Toxicity Potential non-cancer; SQL = Soil Quality Index										

* 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 experienced with the indicator.

** Disclaimer: This impact category deals mainly with the eventual impact of low dose ionizing radiation of 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.

² 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 1 m ³ of representative WISA® uncoated birch plywood										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE	MJ	1.06E+04	5.40E+01	1.21E+03	0	2.27E-01	1.15E+01	2.54E+00	9.27E+03	-4.44E+03
PERM	MJ	9.40E+03	0	-2.09E+02	0	0	0	0	-9.19E+03	0
PERT	MJ	2.00E+04	5.40E+01	9.99E+02	0	2.27E-01	1.15E+01	2.54E+00	7.33E+01	-4.44E+03
PENRE	MJ	6.13E+03	7.62E+02	4.24E+02	0	3.01E+00	1.52E+02	3.57E+01	7.23E+02	-5.23E+03
PENRM	MJ	4.84E+02	0	-3.60E+01	0	0	0	0	-4.48E+02	0
PENRT	MJ	6.62E+03	7.62E+02	3.88E+02	0	3.01E+00	1.52E+02	3.57E+01	2.74E+02	-5.23E+03
SM	kg	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m ³	1.35E+00	2.79E-02	2.75E-01	0	1.12E-04	5.67E-03	2.76E-03	2.86E+00	-1.66E+00

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 1 m ³ of average WISA® coated birch plywood										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
HWD	kg	1.28E+00	3.18E-08	6.27E-02	0	1.21E-10	6.10E-09	2.70E-09	1.45E-07	-5.82E-06
NHWD	kg	8.91E+00	1.05E-01	1.97E+00	0	4.21E-04	2.12E-02	6.85E-03	2.17E+01	-1.12E+01
RWD	kg	1.45E+00	1.46E-03	7.20E-02	0	5.69E-06	2.87E-04	1.28E-03	1.48E-02	-3.37E-01

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed

Output flow indicators

Results per 1 m ³ of representative WISA® uncoated birch plywood										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	2.41E+01	0	5.16E-01	0	0	0	0	0	0
MER	kg	1.10E+00	0	0	0	0	0	0	0	0
EEE	MJ	0	0	1.13E+02	0	0	0	0	1.54E+03	0
EET	MJ	0	0	2.03E+02	0	0	0	0	2.77E+03	0

CRU = Components for re-use; MFR = Material for recycling; MER = Materials for energy recovery; EEE = Exported energy, electricity; EET = Exported energy, thermal

Additional LCA results (other environmental performance results) of the product(s)

Since this is an EPD of multiple products, based on a representative product, the LCA results for A-C for each included product and the variations from declared results to the minimum and maximum result are presented in below table and described here. The following differences create variation in LCA results:

- A1: raw materials from different suppliers at the mills and amount of birch procured,
- A2-A3: shares of production at the three plywood mills (differences in mill inventories),
- A3, A5: amounts of packaging materials, and
- A4: shipping locations (distances).

LCA result of one declared unit product (A-C)	Unit	Min	Representative	Max	Variation to min (%)	Variation to max (%)
GWP-total	kg CO ₂ eq.	2.32E+02	2.56E+02	2.73E+02	-10 %	+6 %
GWP-fossil	kg CO ₂ eq.	2.31E+02	2.55E+02	2.72E+02	-10 %	+6 %
GWP-biogenic	kg CO ₂ eq.	3.12E-01	4.63E-01	5.34E-01	-39 %	+14 %
GWP-luluc	kg CO ₂ eq.	8.49E-01	1.17E+00	1.35E+00	-32 %	+14 %
ODP	kg CFC 11 eq.	4.86E-07	5.26E-07	6.73E-07	-8 %	+25 %
AP	mol H ⁺ eq.	9.09E-01	9.85E-01	1.10E+00	-8 %	+11 %
EP-freshwater	kg P eq.	5.45E-03	5.62E-03	6.41E-03	-3 %	+13 %
EP- marine	kg N eq.	3.21E-01	3.81E-01	4.40E-01	-17 %	+14 %
EP-terrestrial	mol N eq.	3.55E+00	4.26E+00	4.91E+00	-18 %	+14 %

POCP	kg NMVOC eq.	8.94E-01	1.04E+00	1.20E+00	-15 %	+14 %
ADP-minerals&metals*	kg Sb eq.	7.68E-05	7.96E-05	9.44E-05	-4 %	+17 %
ADP-fossil*	MJ	7.38E+03	8.08E+03	9.46E+03	-9 %	+16 %
WDP*	m ³ world eq.	1.34E+02	1.39E+02	1.40E+02	-4 %	+1 %
GWP-GHG	kg CO ₂ eq.	2.13E+02	2.52E+02	2.73E+02	-16 %	+8 %
PM	Disease incidences	8.26E-06	8.59E-06	9.48E-06	-4 %	+10 %
IRP	kBq U ²³⁵ eq.	1.27E+02	1.55E+02	1.92E+02	-20 %	+22 %
ETP-fw	CTUe	2.78E+03	3.66E+03	4.02E+03	-27 %	+9 %
HTP-c	CTUh	8.77E-08	1.34E-07	1.65E-07	-42 %	+21 %
HTP-nc	CTUh	2.92E-06	3.20E-06	3.99E-06	-9 %	+22 %
SQI	Pt	6.32E+04	6.90E+04	9.07E+04	-9 %	+27 %

ADDITIONAL ENVIRONMENTAL INFORMATION

There are no harmful substances released to air, water or ground during the use of the product. Regarding indoor air quality the plywood boards have (depending on the product) M1 emission classification granted by the Building Information Foundation RTS sr (Rakennustietosäätiö RTS sr). M1 stands for low emissions.

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
AVCP	Assessment and Verification of Constancy of Performance
c-PCR	Complementary Product Category Rules
CEN	European Committee for Standardization
CLC	Co-location centre
CoC	Chain of Custody
CPC	Central product classification
EE	Estonia (geography)
EF	Environmental Footprint
EN	European Norm (Standard)
EPD	Environmental Product Declaration
EU	Europe (geography)
FI	Finland (geography)
FSC	Forest Stewardship Council
GPI	General Programme Instructions
IES	The International EPD® System

ISO	International Organization for Standardization
LCA	Life cycle assessment
PCR	Product Category Rules
PEFC	Programme for the Endorsement of Forest Certification
SVHC	Substances of Very High Concern
UN	United Nations
Impact indicators	
ADP	Abiotic depletion potential (Resource use)
AP	Acidification potential
CTU	Comparative Toxic Unit
EP	Eutrophication potential
ETP	Ecotoxicity potential (-fw, freshwater)
GHG	Greenhouse gas
GWP	Global warming potential
HTP	Human toxicity potential (-c, cancer; -nc, non-cancer)
IRP	Ionising radiation potential
Luluc	Land use and land use change

ODP	Ozone depletion potential
PM	Particulate matter
POCP	Photochemical ozone creation potential
SQI	Potential soil quality index (Land use)
WDP	Water deprivation potential (Water use)
Inventory indicators	
CRU	Components for re-use
EEE	Exported electrical energy
EET	Exported thermal energy
FW	Use of net fresh water
HWD	Hazardous waste disposed
MER	Material for energy recovery
MFR	Materials for recycling
NHWD	Non-hazardous waste disposed
NRSF	Use of non-renewable secondary fuels
PENRE	Non-renewable primary energy resources used as energy carriers
PENRM	Non-renewable primary energy resources used as materials

PENRT	Total use of non-renewable primary energy resources
PERE	Use of renewable primary energy used as energy carriers
PERM	Renewable primary energy resources used as materials
PERT	Total use of renewable primary energy resources
RWD	Radioactive waste disposed
SM	Input of secondary material
RSF	Use of renewable secondary fuels
Chemical compounds	
CFC 11	Trichlorofluoromethane
CO ₂	Carbon dioxide
H	Hydrogen (*, cation)
N	Nitrogen
NMVOC	Non-methane volatile organic compound
P	Phosphorus
Sb	Antimony
U ²³⁵	Uranium-235

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VERSION HISTORY

Original Version of the EPD, 2023-10-25

Revision 1, 2024-05-17

Differences versus the previously published version: List of products included in the average EPD; Database versions used in modelling; Information pertaining to module A4; Composition of average product and packaging materials; Results of the environmental performance indicators.

Revision 2, 2025-12-15

Differences versus the previously published version: Updated PCR and c-PCR; EPD is for representative product (not average product); Update to raw materials, packaging, mill inventories; Updates to modelling data from databases; Information pertaining to modules C1-C4; Upstream production of product loss in A5 and mass of product to modules C1-C4.

