

# Environmental Product Declaration

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

## *Wood panels*

from

**2 MAX,s.r.o.**



Programme:	"National Environmental Labeling Program" - Czech Republic (NPEZ)
Programme operator:	Ministry of the Environment of the Czech Republic
EPD type:	EPD of a single product from a manufacturer/service provider
EPD registration number:	<b>3015-EPD-030069989</b>
Publication date:	2026-03-27
Valid until:	2031-03-27



*An EPD should provide current information and may be updated if conditions change.*



## General information

### Programme information

<b>Programme:</b>	"National Environmental Labeling Program" - Czech Republic (NPEZ)
<b>Address:</b>	Ministry of the Environment of the Czech Republic Department of Voluntary Instruments 100 10 Praha 10, Vršovická 1442/65
<b>Website:</b>	<a href="http://www.mzp.cz">www.mzp.cz</a> , <a href="http://www.cenia.cz">www.cenia.cz</a>
<b>E-mail:</b>	<a href="mailto:info@mzp.cz">info@mzp.cz</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): <i>EN 15804:2012+A2:2019/AC:2021 a EN 16485:2014 Round and sawn timber - Environmental Product Declarations - Product category rules for wood and wood-based products for use in construction</i>	
<b>Life Cycle Assessment (LCA)</b>	
LCA accountability: 2 MAX, s.r.o.	
<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 accredited certification body Third-party verification: <b>Technický a zkušební ústav stavební Praha, s.p.</b> is an approved certification body accountable for the third-party verification. 190 00 Praha 9, Prosecká 811/76a, CZ The certification body is accredited by: <b>Českým institutem pro akreditaci, o.p.s., Osvědčení č. 102/2026</b>	
Verifier: Ing. Lenka Vrbová	 
Procedure for follow-up of data during EPD validity involves third party verifier: <input type="checkbox"/> Ano <input checked="" type="checkbox"/> ne	

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: 2 MAX, s.r.o.**

Mostkovice 529, 798 02 Mostkovice, CZ

IČO: 25537342

<https://www.2max.cz/drevovyroba/cz/>

#### Contact:

Luděk Janeček

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### **Description of the organisation:**

The company 2 MAX, s.r.o. was founded in 1998. In 2004, as part of business diversification, the company decided to expand its activities to include wood production, more precisely the production of joint boards, or joint. Since 2005, we have been successfully trading **Wood panels** not only within the Czech Republic, but mainly in the countries of Western Europe, especially in Scandinavia.

We implement these deals with our partner company V.I.S. Export-Import spol. s.r.o.

Since 2010, when we purchased a new CNC machine, we have also been manufacturing complete staircases and their parts from jointer board, including surface treatment and packaging.

As part of the environmental policy, the company processes all wood waste into wood briquettes. We sell wooden briquettes retail and wholesale not only in the Czech Republic, but also abroad.

Our philosophy is the production of a finished product from logs, i.e. complete processing from raw input material to the final product, which is surface treated, packaged and ready for the end customer.

#### Product-related or management system-related certifications:

When selling, we state that our products meet the EU **TR no. 995/2010**, which is a standard that talks about the origin of the material. The standard **EN 15497:2014 Structural finger jointed solid timber - Performance requirements and minimum production requirements** is also partially used.

#### Name and location of production site(s):

**2 MAX, s.r.o.**

Mostkovice 529, 798 02 Mostkovice, CZ

## Product information

### **Product name: Wood panels**

#### Product identification:

Wood panels

The most commonly required dimensions:

Thickness:

16, 18, 20 mm

27, 30 mm

40, 41, 42 mm

51 mm

Width:

up to 1050 mm

Length:

FIX panels (edged glued panels) up to 2,5 m

CINK panels (finger jointed panels) up to 6 m

#### **Product description:**

Our panels are produced from solid hardwood timber which is 8per cent dried with  $\pm 2$ per cent tolerance. The panel contains lamellas which are finger jointed from several pieces of timber - F/J panels or lamellas which are just edged glued - EG panels. We produce both types of panels in various dimensions and ranges of quality.

In our production you can see hardwood such as OAK, BEECH, ASH, CHERRY, WALLNUT and MAPLE which are sourced from the forests of the Czech Republic and other European countries.

Our panels are produced in the following range of quality:

**A/B** - colour matched, without knots and sapwood, two black small knots up to 1 mm on 1 m<sup>2</sup> are allowed

**B/C** - colour unmatched, sapwood allowed up to 20 per cent of surface, healthy knots up to 15 mm are allowed

**C/D (SAB)** - colour unmatched, without a sapwood and knots limit, wood defects such as hard rot, small insect defects, cracks, etc. are allowed. The panels are usually used as work boards - tool shop desks, etc.

The manufacturer is PEFC certified (verification of the consumer chain of wooden products).

UN CPC code:

31410 Wooden boards and panels

Geographical scope:

The generic data used from the Ecoinvent database are used with validity for the Czech Republic (e.g. energy inputs) and in the event that data for the Czech Republic are not available, data valid for the EU or according to the location of the supplier are used. Based on the evaluation according to EN 15804+A2, Annex E, tab. E.1 the generic data used meet the quality level - medium.

Product packaging:

The finished boards are individually wrapped in heat-shrinkable foil and stacked on transport pallets. The corners of the boards are protected against damage by protective corners made of hard paper. The entire pallet is wrapped with hand stretch film and PET tape. This prepares the joint for shipment.

Environment and health during use

Under normal conditions of use, these products do not cause any adverse health effects or release volatile organic compounds into the air. Due to the nature of the product, its use is not expected to have any negative environmental impacts or to cause water, air or soil pollution.

## LCA information

### Functional unit / declared unit:

The declared unit is 1 m<sup>3</sup> of the average manufactured product – Wood panels.

Designation	Unit	Value
Declared unit	m <sup>3</sup>	1
Conversion factor to 1 kg	kg	670
Average bulk weight	kg/m <sup>3</sup>	670

### Reference service life:

The reference lifetime for this type of product is not specifically declared,

### Time representativeness:

For specific data, the manufacturer's data for the **year 2025** is used. For generic data, data from the Ecoinvent database version 3.11 is used. Based on the evaluation according to EN 15804+A2, Annex E, tab. E.1 the generic data used meet the quality level - very good.

### Database(s) and LCA software used:

SimaPro Craft calculation software, version 10.2, Ecoinvent database version 3.11.

GWP-GHG from electricity production: 0.526 kg CO<sub>2</sub> eq/kWh (CZ residual mix-2024).

### Description of system boundaries:

“Cradle to gate with options, modules C1–C4, module D and with optional modules”

#### **The production phase includes the following modules:**

- **A1 - extraction and processing of raw materials** and production of packaging from input raw materials
- **A2 - transport of input raw materials** from the supplier to the manufacturer, waste removal
- **A3 - production of products**, production of auxiliary materials and semi-finished products, energy consumption, including waste processing until reaching a state where it ceases to be waste or after removal of the last material residues during the production phase.

#### **The construction phase includes the following modules:**

- **A4 - transport to the construction site**. Transport is carried out by truck with a capacity of 16-24 t (EURO 6). The transportation of the declared product unit (1 m<sup>3</sup>, 670 kg) over a distance of 1 km is considered.
- **A5 - installation into the building** including the delivery of all materials, products and energy, waste treatment until it ceases to be waste or after the last material residues have been removed during the construction phase. The intake of biogenic carbon as biogenic CO<sub>2</sub> in the packaging in module A1-A3 is balanced here by the same amount of biogenic CO<sub>2</sub> emissions. If this module is declared, the disposal of packaging is also addressed within it: LDPE foil, PET strapping, wooden pallets - woodchip production, electricity for crushing - EU mix, 0.02352 kWh/1kg woodchips.

#### **The end-of-life phase includes modules:**

- **C1**, deconstruction, demolition; of a product from a building including its dismantling or demolition, including the initial sorting of materials at the construction site. Decomposition and/or dismantling of the product is part of the demolition of the entire building. The consumption of electricity (EU mix) is assumed to be 0.053089 kWh.
- **C2**, transport to the waste processing site; transport of the discarded product as part of waste processing, e.g. to a recycling site. Transport from the dismantled building is carried out by a truck with a load capacity of 16-24 t (EURO 6) to the recycling center (100%, for chipping), the estimated transport distance according to calculations is 50 km.
- **C3**, waste treatment for reuse, recovery and/or recycling; e.g. collection of waste fractions from deconstruction, and treatment of waste from material streams intended for reuse (0%), recycling (100%) and energy. The loads from the necessary treatment for further use are

included. This includes the crushing of wood into chips, 670kg, 0.02352 KWh per 1kg of wood. The offset of biogenic carbon in the product is also included here.

- **C4**, Waste disposal including pre-treatment and management of the disposal site. Landfilling of the product is not considered.

**Benefits and costs beyond the product system boundary are presented in module D.**

Module D includes:

- **D**, potential for reuse, recovery and/or recycling, expressed in net impacts or benefits. In the module D scenario, benefits from energy use are considered. According to the calorific value, the process of heat production from brown coal is considered here. The offset of biogenic carbon not included in the benefits is also considered here - the value from the calculation of the HEAT process; this is because biogenic carbon is already offset in processes C3 and A5).

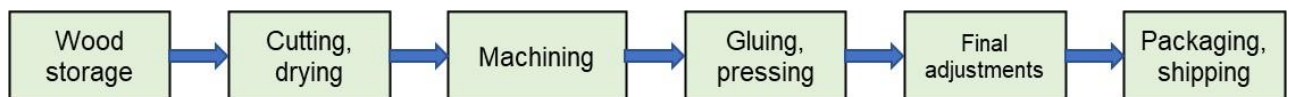
Production:

The input raw material is wood material in the form of logs. This is cut into slats, slats and then cut into blanks.

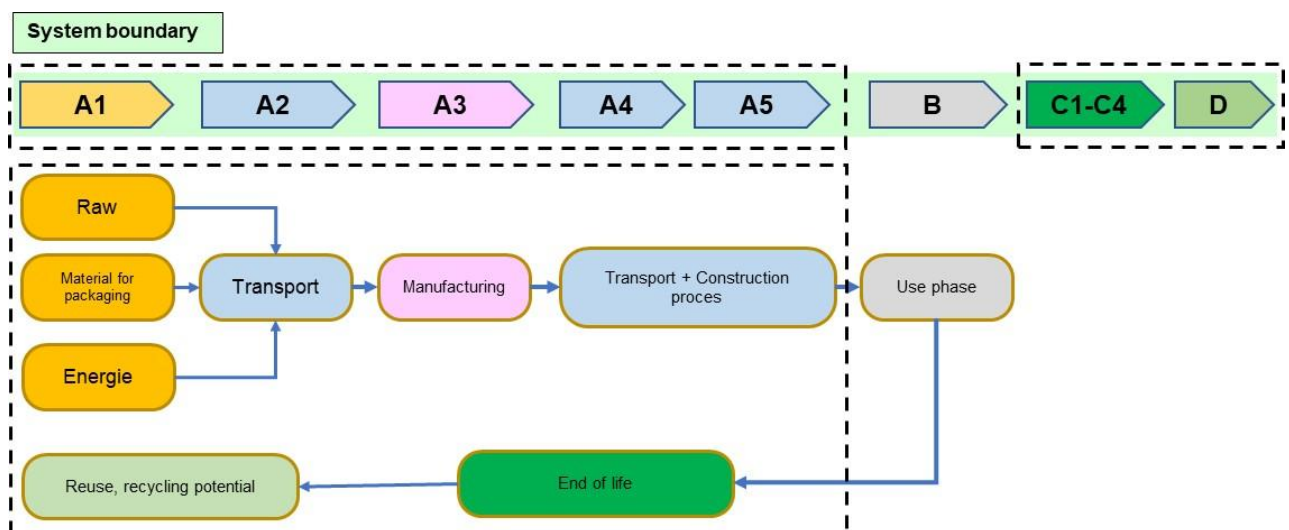
The blanks are dried in dryers to 8-10% moisture. After that, they are processed further. First, it is machined on a four-sided cutter (planer). The planed blanks continue to the line of the length extension. Here, teeth are milled into the faces of the blanks, which fit together. In the extension press, the blanks are joined (due to the applied glue and pressure) and are extended to the required length. This will create slats. The slats must be planed again on all four sides. These lamellas are glued into plates of the required width on multi-story or high-frequency presses. Water-based adhesives are used for all gluing. The plates are leveled on a wide belt sander. After leveling, defects in the wood, such as cracked and falling out knots, are repaired with putty and sanded again, this time with a manual sander. According to the customer's wishes, the plates are modified with a radius, chamfering of the edges or coated with a special vegetable oil.

The finished plates are individually wrapped in foil and placed on transport pallets. This is the joint ready for the expedition. Waste generated during production (shavings, sawdust...) is removed from the machines by suction, which flows into filters. Here, air is separated from solid particles and returned to the production hall. As a result, there is no heat leakage. This waste is used to heat production halls and wood dryers. In case of surplus to make wood briquettes.

The production process is shown in the following diagram:



System diagram:



More information:

Information modules from the use phase **B1 to B7** are also not declared, as these types of products, assuming correct use, do not require maintenance, repair or replacement during the normal life time in the use phase. They also do not require energy or water consumption during the use phase.

For the study, all operational data related to the consumption of main and auxiliary materials for the production of the product, energy data, diesel consumption and the distribution of annual waste production and emissions according to plant records were taken. In terms of produced waste, only those wastes that are clearly related to production activities were included in the analysis.

The processes required for the installation of production equipment and the construction of infrastructure were not included in the analysis. Also, administrative processes are not included – inputs and outputs are balanced per production phase.

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**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	GLO	GLO, EU	EU, CZ	EU	EU								EU	EU	EU	EU	GLO, EU
Specific data used	> 90 %					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	< 5 %					-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0 %					-	-	-	-	-	-	-	-	-	-	-	-

The data used to calculate the EPD conforms to the following principles:

**Technological point of view:** Data corresponding to the current production of individual types of partial products of the plant and corresponding to the current state of the technologies used are used.

Based on the evaluation according to EN 15804+A2, Annex E, tab. E.1 the generic data used meet the quality level - very good.

**The aspect of completeness and completeness:** Most of the input data is based on consumption balances, which are precisely recorded in the manufacturer's information system. The reliability of the source of specific data is determined by the uniformity of the collection methodology of the information system.

**Consistency point of view:** Uniform points of view are used throughout the report (allocation rules, age of data, technological scope of validity, temporal scope of validity, geographical scope of validity).

Credibility aspect: All important data were checked for adherence to cross-comparison of mass balances.

The GWP-GHG variability between the sub-products included (see Product Description) is less than 5 %. Production takes place at only one production site.

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.

## Content information

Product components	Weight kg	Post-consumer material, weight-%	Biogenic carbon content in kg C/DU
Hardwood	664,6	0	2,97E+02
Glue One-component PVA adhesive	5,4	0	0,00E+00
TOTAL	670,0	0	2,97E+02
Packaging materials	Weight kg	Weight-% (versus the product)	Biogenic carbon content in kg C/DU
Packaging - PE plastic	2,79	0,417	0,00E+00
Packaging - pallets	16,74	2,499	7,47E+00
TOTAL	19,54	2,916	7,47E+00
Dangerous substances from the candidate list of SVHC for Authorisation	EC No.	CAS No.	Weight-% per functional or declared unit (DU)
They are not	-	-	-

Substances listed on the list of substances of very high concern subject to authorization by the European Chemicals Agency are not contained in the product in declarable quantities.

## Results of the environmental performance indicators

**Mandatory impact category indicators according to EN 15804:2012+A2:2019/AC:2021** (characterisation factors based on EF 3.1 package)

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> ekv.	2,28E+02	1,58E-01	5,15E+00	ND	ND	ND	ND	ND	ND	ND	1,77E-02	7,89E+00	5,25E+00	0,00E+00	-2,21E+03
GWP-biogenic	kg CO <sub>2</sub> ekv.	-1,13E+03	7,24E-05	1,52E-01	ND	ND	ND	ND	ND	ND	ND	6,05E-04	3,62E-03	1,13E+03	0,00E+00	0,00E+00
GWP- luluc	kg CO <sub>2</sub> ekv.	6,32E-01	4,93E-05	4,20E-04	ND	ND	ND	ND	ND	ND	ND	5,27E-05	2,46E-03	1,56E-02	0,00E+00	-5,78E-01
GWP - total	kg CO <sub>2</sub> ekv.	-9,02E+02	1,58E-01	5,30E+00	ND	ND	ND	ND	ND	ND	ND	1,83E-02	7,90E+00	1,14E+03	0,00E+00	-2,21E+03
ODP	kg CFC 11 ekv.	1,26E-06	3,47E-09	3,75E-09	ND	ND	ND	ND	ND	ND	ND	2,95E-10	1,73E-07	8,77E-08	0,00E+00	-5,67E-06
AP	mol H <sup>+</sup> ekv.	1,62E+00	3,21E-04	1,53E-03	ND	ND	ND	ND	ND	ND	ND	8,78E-05	1,60E-02	2,61E-02	0,00E+00	-5,39E+00
EP-freshwater	kg P ekv.	8,82E-03	1,06E-05	1,31E-04	ND	ND	ND	ND	ND	ND	ND	1,63E-05	5,30E-04	4,84E-03	0,00E+00	-4,81E+00
EP- marine	kg N ekv.	2,46E-01	7,58E-05	8,39E-04	ND	ND	ND	ND	ND	ND	ND	1,55E-05	3,79E-03	4,61E-03	0,00E+00	-2,27E+00
EP - terrestrial	mol N ekv.	2,64E+00	8,18E-04	5,30E-03	ND	ND	ND	ND	ND	ND	ND	1,33E-04	4,09E-02	3,95E-02	0,00E+00	-1,42E+01
POCP	kg NMVOC ekv.	9,82E-01	5,13E-04	1,69E-03	ND	ND	ND	ND	ND	ND	ND	4,26E-05	2,56E-02	1,27E-02	0,00E+00	-7,79E+00
ADP- minerals& metals*	kg Sb ekv.	2,02E-04	5,39E-07	4,91E-07	ND	ND	ND	ND	ND	ND	ND	3,75E-08	2,70E-05	1,11E-05	0,00E+00	-8,38E-04
ADP-fossil*	MJ	3,24E+03	2,23E+00	4,17E+00	ND	ND	ND	ND	ND	ND	ND	4,11E-01	1,11E+02	1,22E+02	0,00E+00	-2,43E+04
WDP*	m <sup>3</sup>	5,60E+03	7,91E-03	-6,89E-02	ND	ND	ND	ND	ND	ND	ND	3,88E-03	3,95E-01	1,15E+00	0,00E+00	-7,41E+01

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.  
Disclaimer: If module C is included then when assessing the results of A1-A3, also take into account the results of modules C.

## Additional mandatory and voluntary impact category indicators

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>1</sup>	kg CO <sub>2</sub> ekv.	2,29E+02	1,58E-01	5,15E+00	ND	ND	ND	ND	ND	ND	ND	1,78E-02	7,90E+00	5,28E+00	0,00E+00	-2,21E+03
PM	Disease incidence	2,67E-05	9,95E-09	9,96E-09	ND	ND	ND	ND	ND	ND	ND	3,02E-10	4,97E-07	8,95E-08	0,00E+00	-1,57E-04
IRP	kBq U235 ekv.	2,03E+01	3,24E-03	8,69E-02	ND	ND	ND	ND	ND	ND	ND	1,15E-02	1,62E-01	3,43E+00	0,00E+00	-7,11E+01
ETP- fw	CTUe	4,47E+02	3,24E-01	2,46E+00	ND	ND	ND	ND	ND	ND	ND	3,91E-02	1,62E+01	1,16E+01	0,00E+00	-8,65E+03
HTP-c	CTUh	4,01E-08	2,44E-11	2,34E-10	ND	ND	ND	ND	ND	ND	ND	2,57E-12	1,22E-09	7,64E-10	0,00E+00	-2,05E-06
HTP- nc	CTUh	6,99E-07	1,29E-09	1,03E-08	ND	ND	ND	ND	ND	ND	ND	1,22E-10	6,46E-08	3,62E-08	0,00E+00	-3,39E-05
SQP	dimensionless	6,33E+04	1,13E+00	1,64E+00	ND	ND	ND	ND	ND	ND	ND	5,80E-02	5,67E+01	1,72E+01	0,00E+00	-3,22E+03
Acronyms	<p><b>GWP-GHG</b> = this indicator includes all greenhouse gases except biogenic uptake and emissions of carbon dioxide 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, <b>PM</b> = Potential incidence of disease due to PM emissions, <b>IRP</b> = Potential Human exposure efficiency relative to U235, <b>ETP-fw</b> = Potential Comparative Toxic Unit for ecosystems, <b>HTP-c</b> = Potential Comparative Toxic Unit for humans, <b>HTP-nc</b> = Potential Comparative Toxic Unit for humans, <b>SQP</b> = Potential soil quality index</p>															

## Resource use indicators

<sup>1</sup> 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 CO<sub>2</sub> is set to zero.

**Results per functional or declared unit**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	7,95E+02	4,08E-02	6,95E-01	ND	ND	ND	ND	ND	ND	ND	9,08E-02	2,04E+00	2,70E+01	0,00E+00	-8,98E+02
PERM	MJ	1,18E+04	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,26E+04	4,08E-02	6,95E-01	ND	ND	ND	ND	ND	ND	ND	9,08E-02	2,04E+00	2,70E+01	0,00E+00	-8,98E+02
PENRE	MJ	2,28E+03	1,72E-01	2,38E+00	ND	ND	ND	ND	ND	ND	ND	3,02E-01	8,58E+00	8,97E+01	0,00E+00	-2,02E+04
PENRM	MJ	1,60E+02	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	2,44E+03	1,72E-01	2,38E+00	ND	ND	ND	ND	ND	ND	ND	3,02E-01	8,58E+00	8,97E+01	0,00E+00	-2,02E+04
SM	kg	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	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	ND	ND	ND	ND	ND	ND	ND	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	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m <sup>3</sup>	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+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

**Additional environmental information - Waste indicators**

**Results per functional or declared unit**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1,09E-01	5,19E-05	3,36E-02	ND	ND	ND	ND	ND	ND	ND	1,31E-05	2,59E-03	3,90E-03	0,00E+00	-6,88E-01
Non-hazardous waste disposed	kg	2,11E+01	9,03E-02	8,51E-01	ND	ND	ND	ND	ND	ND	ND	8,84E-04	4,51E+00	2,62E-01	0,00E+00	-9,68E+01
Radioactive waste disposed	kg	9,26E-04	8,05E-07	2,23E-05	ND	ND	ND	ND	ND	ND	ND	2,97E-06	4,02E-05	8,81E-04	0,00E+00	-1,99E-02

**Additional environmental information - Output flow indicators**

**Results per functional or 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	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	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	2,82E+00	ND	ND	ND	ND	ND	ND	ND	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	1,67E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	6,70E+02	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,40E+03
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-3,98E+03

*The result tables shall only contain values or the letters "ND" (Not Declared). It is not possible to specify ND for mandatory indicators. ND shall only be used for voluntary parameters that are not quantified because no data is available.*

## Other environmental performance indicators

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## Additional environmental information

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## Differences versus previous versions

### **This is a new version of the EPD, 2026-03-27**

The original version of the EPD was numbered 3015-EPD-030064863 dated 2023-06-05

The revision of the original EPD was carried out due to changes in production (different input data values). At the same time, the determination of environmental indicators was already carried out according to the updated principles and the EF 3.1 package.

# ABBREVIATIONS

Abbreviation	Definition
<b>General abbreviations</b>	
EN	European standard
EPD	Environmental product declaration
EF	Environmental footprint
GPI	General guidelines for the environmental labelling program (in the Czech Republic – NPEZ)
ISO	International Organization for Standardization
LCA	Life cycle assessment
LCI	Life cycle inventory analysis
LCIA	Life cycle impact assessment
DJ / DU	Declared unit
ILCD	International Reference Life cycle data system
PCR	Product category rules
c-PCR	Additional rules for product categories
PRICE	European Committee for Standardization
CPC	Central Product Classification (Central Product Classification)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
GRI	Global Reporting Initiative
National	Undeclared
<b>Environmental impact indicators (EN 15804)</b>	
Greenhouse gas	a gas in the atmosphere that absorbs and emits infrared radiation, thereby contributing to the warming of the planet (CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O and others)
GWP	Global warming potential (kg CO <sub>2</sub> eq.)
GWP-fossil	Global warming potential from fossil fuels (kg CO <sub>2</sub> eq.)
GWP-biogenic	Global warming potential from biogenic sources (kg CO <sub>2</sub> eq.)
GWP-luluc	Global warming potential due to land use and land use change (kg CO <sub>2</sub> (eq.))
ODP	Stratospheric ozone depletion potential (kg CFC-11 equivalent)
AP	Acidification potential, cumulative exceedance (mol H <sup>+</sup> (eq.))
EP	Eutrophication potential
EP-freshwater	Freshwater eutrophication potential (kg P eq.)
EP-seawater	Seawater eutrophication potential (kg N eq.)
EP-soils	Land eutrophication potential (mol N eq.)
POCP	Ground-level ozone formation potential (kg NMVOC equivalent)
ADP	Potential for resource/raw material depletion
ADP - minerals and metals	Potential for depletion of non-fossil resources/raw materials (kg Sb equivalent)
ADP-fossil	Fossil resource/raw material depletion potential (MJ)
WDP	Water shortage potential (m <sup>3</sup> )
<b>Additional environmental impact indicators (EN 15804)</b>	
GWP-GHG	Global warming potential for greenhouse gases (kg CO <sub>2</sub> eq.). The indicator includes all greenhouse gases except biogenic uptake and emissions of carbon dioxide 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.

Abbreviation	Definition
PM	Potential incidence of diseases due to particulate matter emissions
IRP	Potential effect of human exposure to the isotope U235
ETP- fw	Potential toxicity benchmark for ecosystems
HTP-c	Potential human toxicity comparator – carcinogenic effects
HTP- oc	Potential human toxicity comparator - non-carcinogenic effects
SQP	Potential Soil Quality Index
<b>Resource utilization indicators</b>	
PERE	Renewable primary energy consumption excluding energy sources used as raw materials (MJ)
PERM	Consumption of renewable primary energy sources used as raw materials (MJ)
PERT	Total consumption of renewable primary energy sources (primary energy and primary energy sources used as raw materials) (MJ)
PENRE	Consumption of non-renewable primary energy excluding energy sources used as raw materials (MJ)
PENRM	Consumption of non-renewable primary energy sources used as raw materials (MJ)
PENRT	Total consumption of non-renewable primary energy sources (primary energy and primary energy sources used as raw materials) (MJ)
SM	Consumption of secondary raw materials (kg)
RSF	Consumption of renewable secondary fuels (MJ)
NRSF	Consumption of non-renewable secondary fuels (MJ)
FW	Net drinking water consumption (m <sup>3</sup> )
<b>Waste indicators</b>	
HWD	Hazardous waste removed (kg)
NHWD	Other waste removed (kg)
RWD	Radioactive waste removed (kg)
<b>Output flow indicators</b>	
CRU	Reusable building elements (kg)
MR	Materials to be recycled (kg)
MER	Materials for energy recovery (kg)
EEE	Exported energy, electricity (MJ)
EET	Exported thermal energy (MJ)
<b>Lifecycle phases/modules</b>	
A1	Mining and processing of raw materials, processing of input secondary raw materials
A2	Transport to the manufacturer
A3	Production
A4	Transport to the construction site
A5	Installation in a building
B1	Use or application of the installed product
B2	Maintenance
B3	Repair
B4	Exchange
B5	Reconstruction
B6	Operating energy consumption

Abbreviation	Definition
B7	Operating water consumption
C1	Deconstruction / Demolition
C2	Transportation to the waste processing site
C3	Waste treatment for reuse, recovery and/or recycling
C4	Removal
D	Reuse, recovery and recycling potential
<b>Other relevant terms</b>	
Substances of Very High Concern (SVHC)	Substances of very high concern
CAS number	An internationally recognized unique numerical code used in chemistry for chemical substances
CF	Characterization factor
RSL	Reference life span
MJ	Megajoule
kg	Kilogram
m <sup>3</sup>	Cubic meter
NMVOG	methane volatile organic compounds
Sat eq .	Antimony equivalents
P eq .	Phosphorus equivalents
Not equal .	Nitrogen equivalents
Equivalent to CFC-11	Chlorofluorocarbon-11 equivalents
CO <sub>2</sub> equivalent	Carbon dioxide equivalents
kg C	Kilograms of carbon
kg CO <sub>2</sub> eq .	Kilograms of carbon dioxide equivalent
OTE	OTE, as (in the Czech Republic) – energy market operator

## References

EN ISO 14025:2010 Environmental labels and declarations - Type III environmental declarations - Principles and procedures

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

EN 16485:2014 Round and sawn timber - Environmental Product Declarations - Product category rules for wood and wood-based products for use in construction

EN ISO 14040:2006 Environmental management - Life Cycle Assessment - Principles and Framework

EN ISO 14044:2006 Environmental management - Life Cycle Assessment – Requirements and guidelines

EN ISO 14063:2020 Environmental management - Environmental communication - Guidelines and examples

EN 15643:2021 Sustainability of construction works - Framework for assessment of buildings and civil engineering works

EN 15941:2024 Sustainability of construction works - Data quality for environmental assessment of products and construction work - Selection and use of data

EN 15942:2021 Sustainability of construction works - Environmental product declarations - Communication format business-to-business

EN 17672:2022 Sustainability of construction works - Environmental product declarations - Horizontal rules for business-to-consumer communication

EN 16908:2017+A1:2022 Cement and building lime - Environmental product declarations - Product category rules complementary to EN 15804

EN 16449:2014 Wood and wood-based products - Calculation of the biogenic carbon content of wood and conversion to carbon dioxide

ILCD General guide for Life Cycle Assessment (2010) - JRC EU

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives; CZ - Act No. 541/2020 Coll., as amended (Waste Act)

Decree No. 8/2021 Coll. Waste catalogue – Waste catalogue

Regulation (EC) No 1907/2006 of the European Parliament concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and establishing a European Chemicals Agency - REACH (Registration, Evaluation and Authorisation of Chemicals)

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

SimaPro LCA Package, Pré Consultants, the Netherlands, [www.pre-sustainability.com](http://www.pre-sustainability.com)

Ecoinvent Centre, [www.Ecoinvent.org](http://www.Ecoinvent.org)

EU PEF (EF reference package) - <https://eplca.jrc.ec.europa.eu/LCDN/EN15804.html>

Explanatory documents are available from the head of Technical Support of the EPD owner.