ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ČSN ISO 14025:2010
and EN 15804:2021+A2:2019+AC:2021

Organization	**2 MAX,s.r.o.**
Industry Program Operator	CENIA, Czech Environmental Information Agency, Executive Body of NPEZ Agency
Author	Technický a zkušební ústav stavební Praha, s.p.
Declaration No.:	3015-EPD-030064863
Publication Date	2023-06-05
Valid until	2028-06-05 dle EN 15804+A2:2019





Wood panels

1. General Information Declaration

2 MAX, s.r.o.	**Wood panels**
Programme: „National programme of environmental labelling“ - CR **Industry operator:** CENIA, Czech Environmental Information Agency, Executive body of the NPEZ Agency, Moskevská 1523/63, Praha 10, 101 00, www.cenia.cz ,	**Name and address of the manufacturer:** **2 MAX, s.r.o.** Luční 432/16e 796 04 Prostějov, CZ
EPD registration number: **3015-EPD-030064863**	**Declared unit:** **1 m^3 of average product – Wood panels**
Product category rules: EN 15804+A2:2019 as core PCR EN 16485:2014 **Publication Date:** 2023-06-06 **Valid until:** 2028-06-05 in accordance with EN 15804**+**A2:2019	**Product:** **Wood panels**

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.

With regard to the possibility of comparing products **in the life cycle assessment of buildings** on the basis of their EPD, which is carried out by determining their contribution to the environmental properties of the building, it is necessary that the EPD of the construction products in question be prepared in accordance with the requirements of the standard **EN 15804+A2:2019** *Sustainability of construction works – Environmental product declaration – Core rules for the product category of construction products* and using PCR **EN 16485:2014** *Round and sawn timber - Environmental Product Declarations - Product category rules for wood and wood-based products for use in construction*. **EN 16449:2014** *Wood and wood-based products - Calculation of the biogenic carbon content of wood and conversion to carbon dioxide* is also used.

Our panels are produced from solid hardwood timber which is 8per cent dried with ±2per 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.

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.

1.1. Product data

1.1.1. Product

Our panels are produced from solid hardwood timber which is 8per cent dried with ±2per 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.

1.1.2. Product data sheet

Main production range:

Panels are produced from solid hardwood such as OAK, BEECH, ASH, WALLNUT, etc.

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

Our panels are produced from solid hardwood timber which is 8per cent dried with ±2per 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.

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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 m2 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).

Product packaging:

The finished plates are individually wrapped in heat-shrinkable foils and placed on transport pallets. The corners of the boards are protected against damage with protective rolls made of hard paper.

The entire palette is covered with manual stretch film and PET tape. This is the joint ready for the expedition.

1.1.3. Rules for use

Wooden panels are a high-quality wooden product made of natural material used in interiors for the production of furniture, stairs, floors, kitchen accessories such as cutting boards, bowls, sideboards, worktops for workshops, etc.

See also https://www.2 MAX.cz/drevovyroba/cz/m/vyrobky-ze-sparovky/

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 atmosphere.

Due to the nature of the product, its use is not expected to have any negative effects on the environment, nor to pollute water, air or soil.

Reference lifetime

The reference life for this type of product is not specifically declared.

1.1.4. Delivery method

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.

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

1.1.5. Basic raw materials and auxiliary materials

Solid hardwood timber such as OAK, BEECH, ASH, WALLNUT

Glue One-component PVA adhesive - One-component PVA adhesive

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.

1.1.6. Production

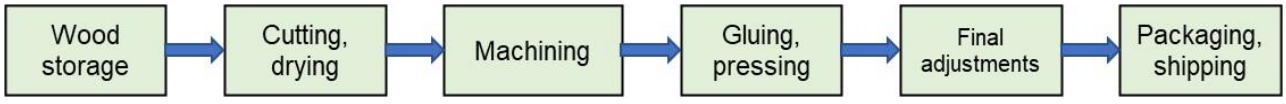
The input raw material is wood material in the form of logs. This is cut into slats, slats and then cut into blanks.

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 schematically in Fig. 1:

Giant. 1: Schematic of the manufacturing process



1.1.7. Waste management

Waste generated during the production process is collected according to type and reported according to regulations.

Possibility to recycle used products (at the end of their service life)

After the end of the building's useful life, the material can be sorted together with the other wooden parts of the building as part of the controlled demolition of the building.

Furthermore, the material can be handled in the following way:

- Crush and use as wood chips for incinerators
- Crush and use as material for wood briquette or pellet presses

1.2. LCA: Calculation rules

1.2.1. Declared unit

The declared unit shall be 1 m³ of the average product — Wood panels.

All inputs and outputs of this report were considered as consumption or production related to the production of 1 m³ of the mentioned product.

Table 1 Declared unit and conversion factors

Identification	Unit	Value
Declared unit	m^3	1
Conversion factor from kg	kg	670
Average bulk weight	kg/m^3	670

2. System boundary according to the modular approach

The boundary of the product life cycle system consists of **the information module A1 – A3 "Production phase", "End of life cycle phase" C1-C4 and D** in accordance with EN 15804+A2:2019. The project report includes all relevant processes for the EPD type "***From cradle to gate with modules C1-C4 and module D*** "(cradle to gate with modules C1–C4 and module D).

Information on product system boundaries is shown in Table 2.

Table 2: Information about product system boundaries – information modules

Information about product system boundaries – information modules (**X** = Included, **ND** = module not declared)																
Production stage			**Construction stage**		**Usage stage**							**End-of-life stage**				**Additional information beyond the life cycle**
Supply of mineral resources	Transport	Production	Transport to the construction site	Construction/installation process	Usage	Maintenance	Repair	Replacement	Reconstruction	Operational energy consumption	Operating water consumption	Demolition/deconstruction	Transport	Waste treatment	Removal	Benefits and costs beyond the system. Potential for reuse, recovery, and recycling
A1	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
X	**X**	**X**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**X**	**X**	**X**	**X**	**X**

The system boundary is set to include both those processes that provide material and energy inputs to the system and subsequent production and transport processes up to the factory gate, and the treatment of all waste resulting from these processes.

The production stage 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 supplier to manufacturer, waste collection
- **A3 -** production of products, production of auxiliary materials and semi-finished products, energy consumption, including treatment of waste, up to reaching end-of-waste or after the last material residues have been removed during the production phase.

Data for the period 2022 provided by 2 MAX, s.r.o. is used.

The end-of-life stage includes modules:

- **C1,** deconstruction, demolition; of the product from the building, including its dismantling or demolition, including the initial classification of materials at the site of construction
- **C2,** transport to the waste treatment site; transport of the discarded product as part of the waste treatment, e.g., to the recycling site, and transport of the waste, e.g., to the final disposal site.
- **C3,** treatment of waste for re-use, recovery and/or recycling, e.g., collection of waste fractions from deconstruction, treatment of waste from material flows intended for re-use, recycling, and energy recovery.
- **C4,** disposal of waste, including its pre-treatment and management of the disposal site

The benefits and costs beyond the product system are set out in Module D.

Module D includes:

- **D,** potential for reuse, recovery and/or recycling, expressed in net impacts or benefits.

The boundaries of the product system are considered in such a way that they **include only production processes, not administrative activities**.

As scenarios for the end of the life cycle of the products (C1-C4, D), the data resulting from the expert assessment of the possibility of reprocessing a part of these products after the deconstruction of the building were used. These schemes are:

Module C1

The decomposition and/or dismantling of the wooden panels is part of the decomposition of the whole building. In this case, only the costs of electrical energy associated with disassembly and the creation of wood waste for further use are considered.

Module C2

Transport from the dismantled building takes place by truck with a capacity of 7.5 - 16 t (EURO 6; one-way loading) up to a distance of 100 km to the place of further processing.

Module C3

A scenario where 100% of the product is crushed for further energy use is assumed.

Module C4

Landfilling is not considered in this scenario.

Potential for reuse, recovery, and recycling (D)

In the scenario of module D, the possibility of energy utilization of waste is taken into account.

2.1. Preconditions and measures taken

Information modules **A4 to A5**, which are intended to provide additional information beyond the production stage, have not been included in the LCA due to the difficult availability of input data and are therefore not declared.

Information modules from the **usage stage B1 to B7** are also not declared.

The reference lifetime of the products is also not declared because of unavailability of representative data on the operating conditions in the usage stage of the product.

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 and emissions according to the plant records were taken. For all inputs and

outputs considered, transport costs were considered or differences in transport distances were recognised.

From the point of view of the waste produced, only the waste clearly related to production activities was included in the analysis.

For some input data, due to their complexity in obtaining them, alternative methods have been chosen in the form of a qualified calculation based on the available information. Some input data was converted into units that were needed for the selected generic process data in the environmental impact assessment calculation program.

These are:

- Energy data relating to **diesel** expressed in CU – were determined by calculation based on data on diesel consumption in litres and a coefficient of 0,845 kg/l for diesel and an energy value of 42,6 MJ/kg.
- Data on the production of **waste** were taken from the continuous register of waste for the reference period.

2.2. Cut-off criteria

The processes required for the installation of production equipment and the construction of infrastructure were not included in the analysis. Administrative processes are not included either – inputs and outputs are balanced on the production stage.

2.3. Sources of environmental data

All inputs and outputs were entered in SI units, namely:

- Material and auxiliary inputs and product outputs in kg, pcs, m^3
- Sources used as energy input (primary energy), in MWh or MJ and GJ, including renewable energy sources (hydropower, wind energy)
- Water consumption in kg or m^3
- Inputs related to transport in km (distance), tkm (material transfer) and in kg (diesel consumption)
- Time was stated in practical units depending on the scale of the assessment: minutes, hours, days, years.

The time range of the required specific data provided by 2 MAX, s.r.o., for the purpose of this report was set as a representative period **2022**. For this period, all available data were provided by the organization for their further processing.

The basic source of the necessary data from the area of production, purchasing, maintenance, etc. was the information system, or operational records from maintenance activities. To determine waste production, the annual report on waste production from the ISPOP system and operational records for the given production plant were used. Only those types of waste related to the production phase were included in this report, as waste destined for landfill.

For the following inputs it was proceeded this way (direct data not available):

- Distances on the transport of inputs and outputs (waste) – data from Google maps were used

For the complete analysis of environmental parameters were used:

- computing software SimaPro, version 9.4 SimaPro Analyst (database Ecoinvent version 3.8)

2.4. Data quality

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

Time period: For specific data, manufacturer's data from 2022 have been used. This is due to significant technological changes in the production process. For generic data, the data of the Ecoinvent version database 3.8 have been used. Based on the evaluation in accordance with EN 15804+A2, Annex E, tab. E.1 the generic data used meet the quality level - very good.

Technological aspect: Data corresponding to the current production of individual types of sub-products and corresponding to the current state of new technologies in the plant used have been used.

Based on the evaluation in accordance with EN 15804+A2, Annex E, tab. E.1 the generic data used meet the level of quality - very good.

Completeness and complexness aspect: Most of the input data is based on consumption balances, which are precisely recorded in the information system. As part of the completeness check, the company 2 MAX, s.r.o. was visited, and it was checked whether all used inputs/outputs are entered in the records. The reliability of the source of specific data is determined by the uniformity of the methodology of the information system collection method.

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

Consistency aspect: Uniform aspects are used throughout the scope of the report (allocation rules, age of data, technological scope of validity, time scope of validity, geographical scope of validity).

Credibility aspect: All important data were checked to ensure cross-comparison of weight balances.

2.5. Period considered

As the period of the required specific data, provided by 2 MAX, s.r.o.,, for the purpose of this report, a calendar period **2022** was determined as a representative period.

2.6. Allocation

In the balance of inputs, their direct monitoring was used at individual centres, or allocation based on weight was used.

2.7. Comparability

Environmental product declarations from different programmes may not be comparable. Comparison or assessment of EPD data is only possible if all compared data reported in accordance with EN 15804+A2:2019 have been determined according to the same rules.

2.8. Product variability

The resulting data are given for **1 m^3 of the average product — Wood panels**.

2.9. LCA: Results

Information on environmental impacts is indicated in the following tables. The individual results for the impact categories are presented in Tables 3 and 4. Tables 5 to 7 provide additional environmental information. They are related to the declared unit (DJ) – **1 m^3 of the average product — Wood panels**.

The impact assessment was carried out using the characterisation factors used in the European Life Cycle Reference Database (ELCD) provided by the European Commission – Directorate-General of the Joint Research Centre – Institute for Environment and Sustainability.

Table 3: Parameters describing **the basic environmental impacts**

Ultimately LCA – Parameters describing basic environmental impacts (DJ = 1 m³ of the product)							
Indicator	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
Global warming potential (**GWP-total**)	kg CO_2 Eq.	-1,87E+03	4,48E-02	6,82E+01	1,31E+01	0,00E+00	3,01E+02
Global warming potential (**GWP-fossil**)	kg CO_2 eq.	5,35E+02	4,48E-02	6,80E+01	1,14E+01	0,00E+00	1,32E+02
Global warming potential (**GWP-biogenic)**)	kg CO_2 eq.	-2,41E+03	-2,51E-05	6,92E-02	1,65E+00	0,00E+00	1,51E+02
Global warming potential from land use and land-use change (**GWP-luluc**)	kg CO_2 eq.	1,47E+00	0,00E+00	4,07E-02	1,53E-02	0,00E+00	6,91E-01
Stratospheric ozone depletion potential (**ODP**)	kg CFC 11 eq.	1,79E-05	6,91E-13	1,48E-05	1,62E-06	0,00E+00	1,29E-05
Acidification potential, Cumulative exceedance (**AP**)	mol H+ eq.	3,90E+00	3,57E-04	2,65E-01	6,34E-02	0,00E+00	2,49E+00
Eutrophication potential, proportion of nutrients entering fresh water (**freshwater EP**)	kg P eq.	2,16E-02	9,29E-10	6,32E-03	5,77E-03	0,00E+00	3,96E-02
Eutrophication potential, proportion of nutrients entering seawater (**seawater EP**)	kg N eq.	5,25E-01	3,93E-05	7,26E-02	1,75E-02	0,00E+00	1,08E+00
Eutrophication potential, Cumulative overshoot (**soil EP**)	mol N eq.	5,61E+00	4,25E-04	7,92E-01	1,80E-01	0,00E+00	1,21E+01
Ground-level ozone formation potential (**POCP**)	kg NMVOC eq.	1,97E+00	1,19E-04	2,48E-01	5,12E-02	0,00E+00	3,32E+00
Raw material depletion potential for **non-fossil sources (ADP-minerals and metals)**)	kg Sb eq.	3,80E-04	5,29E-10	4,23E-04	3,67E-05	0,00E+00	6,21E-04
Raw material depletion potential for fossil resources (**ADP-fossil fuels**)	MJ, calorific value	7,31E+03	5,96E-01	1,01E+03	2,04E+02	0,00E+00	1,53E+03
Water scarcity potential (for users), water scarcity weighted by water scarcity (**WDP**)	m3 eq. scarcity	4,22E+02	4,16E-02	3,92E+00	5,94E-01	0,00E+00	1,64E+01

Table 4 Parameters describing **additional environmental impacts**

LCA result – Parameters indicating additional environmental impacts (DJ = 1 m³ of the product)							
Indicator	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
Potential occurrence of disease due to particulate matter emissions (**PM**)	Occurrence of the disease	4,56E-05	3,97E-09	4,30E-06	7,60E-07	0,00E+00	4,02E-04
Potential effect of human exposure to the isotope U235 (**IRP**)	kBq U235 eq.	4,99E+01	4,36E-03	5,64E+00	3,54E+00	0,00E+00	1,19E+01
Potential comparative toxic unit for ecosystems (**ETP-fw**)	CTUe	2,86E+03	1,70E-01	8,87E+02	1,40E+02	0,00E+00	2,30E+04
Potential comparative toxic unit for humans (**HTP-c**)	CTUh	4,02E-06	2,12E-10	8,79E-07	1,46E-07	0,00E+00	1,95E-05
Potential comparative toxic unit for humans (**HTP-nc**)	CTUh	1,13E-07	2,99E-12	3,73E-08	8,62E-09	0,00E+00	2,86E-07
Potential Soil Quality Index (**SQP**)	dimensionless	1,36E+05	1,33E-02	4,94E+02	9,93E+01	0,00E+00	9,07E+04

Table 5: Parameters describing **resource consumption**

LCA result – Parameters describing resource consumption (DJ = 1 m³ of the product)							
Parameter	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
Consumption of renewable primary energy, excluding energy sources used as raw materials **(PERE)**	MJ	2,69E+04	7,16E-03	2,15E+01	2,17E+01	0,00E+00	1,93E+04
Consumption of renewable primary energy sources used as raw materials (**PERM**)	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total consumption of renewable primary energy sources (primary energy and primary energy sources used as raw materials) (**PERT**)	MJ	2,69E+04	7,16E-03	2,15E+01	2,17E+01	0,00E+00	1,93E+04
Consumption of non-renewable primary energy, excluding energy sources used as raw materials (**PENRE**)	MJ	7,89E+03	6,45E-01	1,07E+03	2,15E+02	0,00E+00	1,63E+03
Consumption of non-renewable primary energy sources used as raw materials (**PENRM**)	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total consumption of non-renewable primary energy sources (primary energy and primary energy sources used as raw materials) (**PENRT**)	MJ	7,89E+03	6,45E-01	1,07E+03	2,15E+02	0,00E+00	1,63E+03
Consumption of secondary raw materials (**SM**)	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Consumption of renewable secondary fuels (**RSF**)	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Consumption of non-renewable secondary fuels (**NRSF**)	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net potable water consumption (**FW**)	m³	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 6 Other environmental information **- waste category description**

LCA result — Other environmental information — waste category description (DJ = 1 m³ of the product)							
Parameter	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed of (**HWD**)	kg	3,62E-05	0	0	0	0	0
Other waste disposed of (**NHWD**)	kg	0	0	0	0	0	0
Radioactive waste disposed of (**RWD**)	kg	0	0	0	0	0	0

Table 7 Other environmental information **- description of output flows**

LCA result - Other environmental information - description of output flows (DJ = 1 m³ of the product)							
Parameter	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
Construction units for reuse (**MFR**)	kg	0	0	0	0	0	0
Materials for recycling (**MER**)	kg	1,37E+01	0	0	6,67E+02	0	0
Materials for energy recovery (**EEE**)	kg	2,12E+01	0	0	0	0	6,67E+02
Exported energy (**EET**)	MJ per energy carrier	0	0	0	0	0	1,26E+04

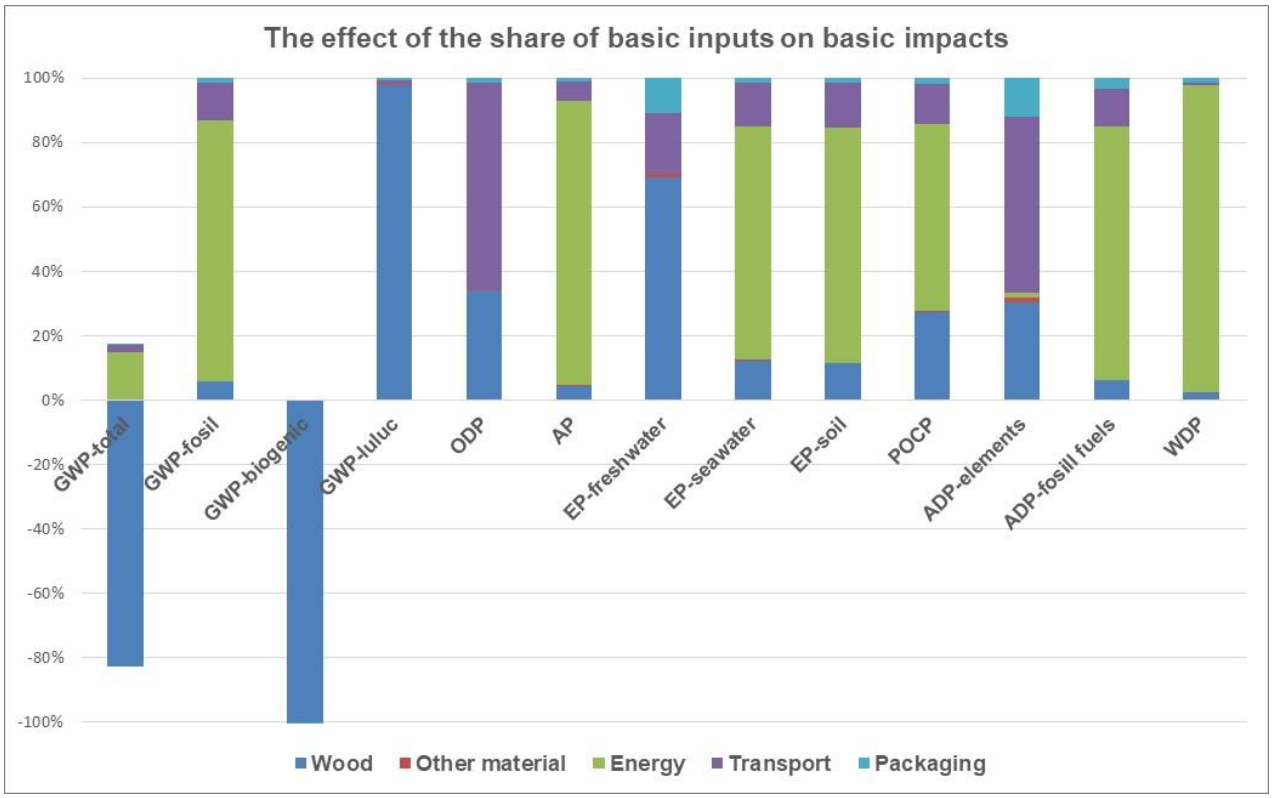
Table 8 Information describing the **biogenic carbon content** of the plant gate

LCA result – Information describing the biogenic carbon content at the plant gate (DJ = 1 m^3 of the product)		
Parameter	**Unit**	**At the plant gate**
Biogenic carbon content of the product	kg C	2,98E+02
Biogenic carbon content in the appropriate packaging	kg C	4,50E+00

2.9.1. LCA: Interpretation

The impact of basic groups of inputs on basic environmental impacts is shown in Figure 3:

Figure. 3 Impact of the share of basic inputs on the basic impacts



It is clear from the figure that **wood itself** (product and packaging) and **electricity** and its energy mix (CZ) have a very significant influence on environmental impacts. To a lesser extent, the effect of **transport** is also applied.

3. LCA: scenarios and other technical information

Information modules A4, A5 and B1-B7 were not included in the LCA analysis.

4. LCA: Additional information

EPD does not include additional documentation related to the declaration of supplementary information.

5. References

ČSN ISO 14025:2010 Environmentální značky a prohlášení - Environmentální prohlášení typu III - Zásady a postupy (Environmental labels and declarations - Type III environmental declarations - Principles and procedures)

ČSN EN 15804+A2:2020 Udržitelnost staveb - Environmentální prohlášení o produktu - Zásadní pravidla pro produktovou kategorii stavebních výrobků (Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products)

ČSN EN ISO 14040:2006 Environmentální management - Posuzování životního cyklu - Zásady a osnova (Environmental management - Life Cycle Assessment - Principles and Framework)

ČSN EN ISO 14044:2006 Environmentální management - Posuzování životního cyklu – Požadavky a směrnice (Environmental management - Life Cycle Assessment – Requirements and guidelines)

ČSN ISO 14063:2007 Environmentální management - Environmentální komunikace - Směrnice a příklady (Environmental management - Environmental communication - Guidelines and examples)

ČSN EN 15643-1:2011 Udržitelnost staveb - Posuzování udržitelnosti budov - Část 1: Obecný rámec (Sustainability of construction works - Sustainability assessment of buildings - Part 1: General framework)

ČSN EN 15643-2:2011 Udržitelnost staveb - Posuzování udržitelnosti budov - Část 2: Rámec pro posuzování environmentálních vlastností (Sustainability of construction works - Assessment of buildings - Part 2: Framework for the assessment of environmental performance)

ČSN EN 15942:2013 Udržitelnost staveb - Environmentální prohlášení o produktu - Formát komunikace mezi podniky (Sustainability of construction works - Environmental product declarations - Communication format business-to-business)

TNI CEN/TR 15941:2012 Udržitelnost staveb - Environmentální prohlášení o produktu - Metodologie výběru a použití generických dat (Sustainability of construction works - Environmental product declarations - Methodology for selection and use of generic data)

ILCD handbook - JRC EU, 2011

Zákon č. 541/2020 Sb. v platném znění (Zákon o odpadech) / Act. No. 541/2020 Coll., as amended (Waste Act)

Vyhláška č. 8/2021 Sb. Katalog odpadů – Katalog odpadů / Decree No. 8/2021 Coll. Waste catalogue – Waste catalogue

Nařízení Evropského parlamentu č. 1907/2006 o registraci, hodnocení, povolování a omezování chemických látek a o zřízení Evropské agentury pro chemické látky - REACH (registrace, evaluace a autorizace chemických látek) / 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

Nařízení Evropského parlamentu a Rady (ES) č. 1272/2008 o klasifikaci, označování a balení látek a směsí, o změně a zrušení směrnic 67/548/EHS a 1999/45/ES a o změně nařízení (ES) č. 1907/2006 (nařízení CLP) / Regulation (EC) No 1272/2008 of the European Parliament and of the Council 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 (CLP Regulation)

SimaPro LCA Package, Pré Consultants, the Netherlands, www.pre-sustainability.com

Ecoinvent Centre, www.Ecoinvent.org

Explanatory documents are available from the head of Technical Support of 2 MAX, s.r.o.

6. EPD verification

CEN standard EN 15804+A2 serves as the core PCR	
Independent verification of the declaration and data, according to EN ISO 14025:2010: ☐ Internal ☒ External	
Third party verifier: Technický a zkušební ústav stavební Praha, s.p. Prosecká 811/76a, Praha 9, 190 00 Czech Republic Certification Body for EPD, accredited by CAI - Czech Accreditation Institute, under No. 95/2023	Vrbová TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p. Akreditovaný ZÚS Certifikační orgán č. 3015

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