

Environmental Product Declaration



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

HUVUD prefabricated wood-concrete walls

from

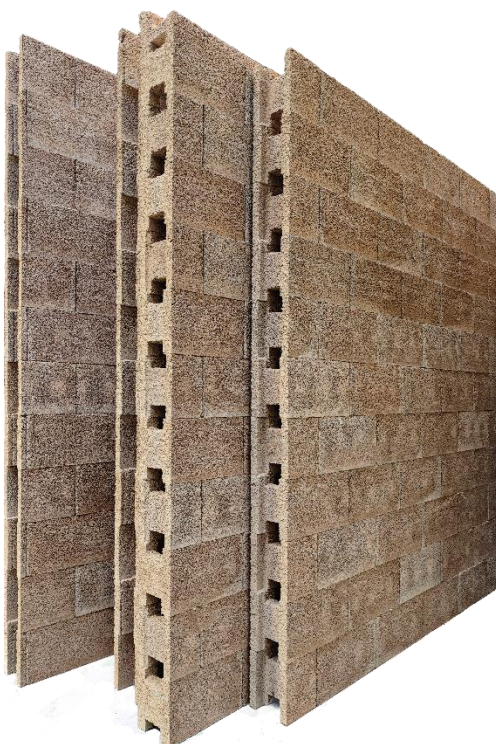
UAB Huvud Prefab



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Programme operator:	Rakennustieto Oy
Type of EPD:	EPD of multiple products from a company
EPD registration number:	RTS_453_26
Issue date:	2026-02-09
Validity date:	2031-02-09



GENERAL INFORMATION

MANUFACTURER INFORMATION

Manufacturer	UAB Huvud Prefab
Address	Vilties St. 11, Kuprioniškės village, LT-13279, Vilnius District, Lithuania
Contact details	info@huvud.eu
Website	https://huvud.eu/

PRODUCT IDENTIFICATION

Product name	HUVUD prefabricated wood-concrete walls
Place of production	Vilties St. 11, Kuprioniškės village, LT-13279, Vilnius District, Lithuania
UN CPC code	37520 – Boards, blocks and similar articles of vegetable fibre, straw or wood waste agglomerated with mineral binders.

EPD INFORMATION

Program operator	Rakennustieto Oy
Reference standard	EN 15804:2012+A2:2019/AC:2021 and ISO 14025
EPD type	EPD of multiple products from a company
Period for data	February 2024 - January 2025
PCR	RTS PCR (Version 121124)
EPD author	Urtė Valdavičė, UAB "Vesta Consulting"
EPD verification	Independent verification of this EPD and data, according to ISO 14025: o Internal verification <input type="checkbox"/> External verification <input checked="" type="checkbox"/>
EPD verifier	Mari Kirss, Meetripuu OÜ

The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but registered in different EPD programmes 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.

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

UAB HUVUD Prefab, established in 2020, manufactures prefabricated wood-concrete wall elements based on permanent formwork blocks for residential, public, and commercial buildings. The company operates in the construction products and prefabricated structural elements sector and is part of the HUVUD Group.

Manufacturing is carried out under controlled factory conditions using an industrialised production approach. UAB HUVUD Prefab operates integrated management systems in accordance with ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018.

PRODUCT DESCRIPTION

HUVUD prefabricated wood-concrete walls are a permanent formwork system intended for the formation of cast-in-place concrete walls.

The declared product consists of prefabricated wood-concrete wall elements assembled and bonded in the factory from certified wood-concrete permanent formwork blocks in accordance with project drawings. Structural adhesives are used to ensure system stability. Reinforcement installation and concrete infill are carried out on-site in accordance with project-specific requirements.

The wall system is used for external and internal load-bearing and non-load-bearing walls in residential, public, and commercial buildings, including both above-ground and below-ground applications.

Further information regarding the products and their description can be found at <https://huvud.eu/produktas>

Main technical performance characteristics (with concrete infill):

Parameter	Value
Dimensions	Height up to 3,25 m; length up to 3,5 m; thickness 150–300 mm (depending on product type)
Bulk density (without concrete infill)	550 - 620 kg/m ³
Tensile strength perpendicular to the plane	> 0,15 N/mm ²
Sound insulation (Rw)	52 - 62 dB
Thermal transmittance (U-value)	0,67 - 1,25 W/m ² K
Water vapour diffusion resistance	μ = 2 (humid conditions); μ = 8 (dry conditions)
Reaction to fire class	A2-s1, d0
Fire resistance	REI 180 min

Conversion factors from declared unit (1 kg) to 1 m² wall are presented in **Annex**.

PRODUCT COMPOSITION

Product Material	Weight, %	Post-consumer material, weight-%	Biogenic material, weight-%	Biogenic material, kg C/DU
Wood-cement blocks	99,8	0	32,00	0,18
Structural adhesives	0,2	0	0	0
Total	100	0	32,00	0,18

Note. Wood-cement blocks GWP-biogenic -31,7 kg CO₂e / m², density 48 kg / m²

The product is supplied without concrete infill and reinforcement.

Packaging materials are not used. Products are transported on trucks and secured using reusable metal transport racks, in which the wall elements are packed and transported.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0	-
Minerals	99,80	EU
Fossil materials	0,20	EU
Bio-based materials	0	-

Note. The wood-cement blocks consist of mineralised wood chips bound with mineral binders and are classified as mineral-based within the scope of this EPD, as the wood fraction is mineralised and no longer functions as a bio-based material.

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0.1 % (1000 ppm).

PRODUCT LIFE-CYCLE

MANUFACTURING (A1-A3)

A1: This module considers the extraction of raw materials.

A2: The raw materials are transported to the manufacturing plant. In this case the model includes road transportation of each raw material.

A3: This module includes the manufacture of products. It has considered all the energy consumption in the production plant.

MANUFACTURING PROCESS

The manufacturing process is carried out under controlled factory conditions and includes Factory Production Control (FPC) procedures to ensure consistent product quality and dimensional accuracy.

1. Raw materials preparation

The production process begins with the preparation of raw materials, including woodchips and cement blocks, PUR (polyurethane reactive) adhesive. All materials are inspected to ensure they meet the required quality standards before use.

2. Application of PUR adhesive to the vertical edge

PUR adhesive is applied evenly along the vertical edge of each cement block using a dispensing system to ensure strong bonding during assembly.

3. Block positioning

The blocks are accurately positioned according to the design specifications. Proper alignment is essential to maintain structural integrity and dimensional accuracy of the final product.

4. Application of PUR adhesive to the horizontal edge

Once the blocks are correctly positioned, PUR adhesive is applied to the horizontal edge to bond the blocks securely and complete the structural connection.

5. Construction of the specified segment

The assembled blocks form a segment of the required design and dimensions. The adhesive is allowed to cure to achieve the necessary strength and stability.

6. Cutting segments to the required length

After curing, the constructed segment is cut into pieces of the required length using a cutting machine. Cutting parameters are adjusted to ensure precision and a clean surface finish.

7. Product labelling

Each finished segment is labelled with product identification details, including batch number, dimensions, and production date, for traceability and quality control purposes.

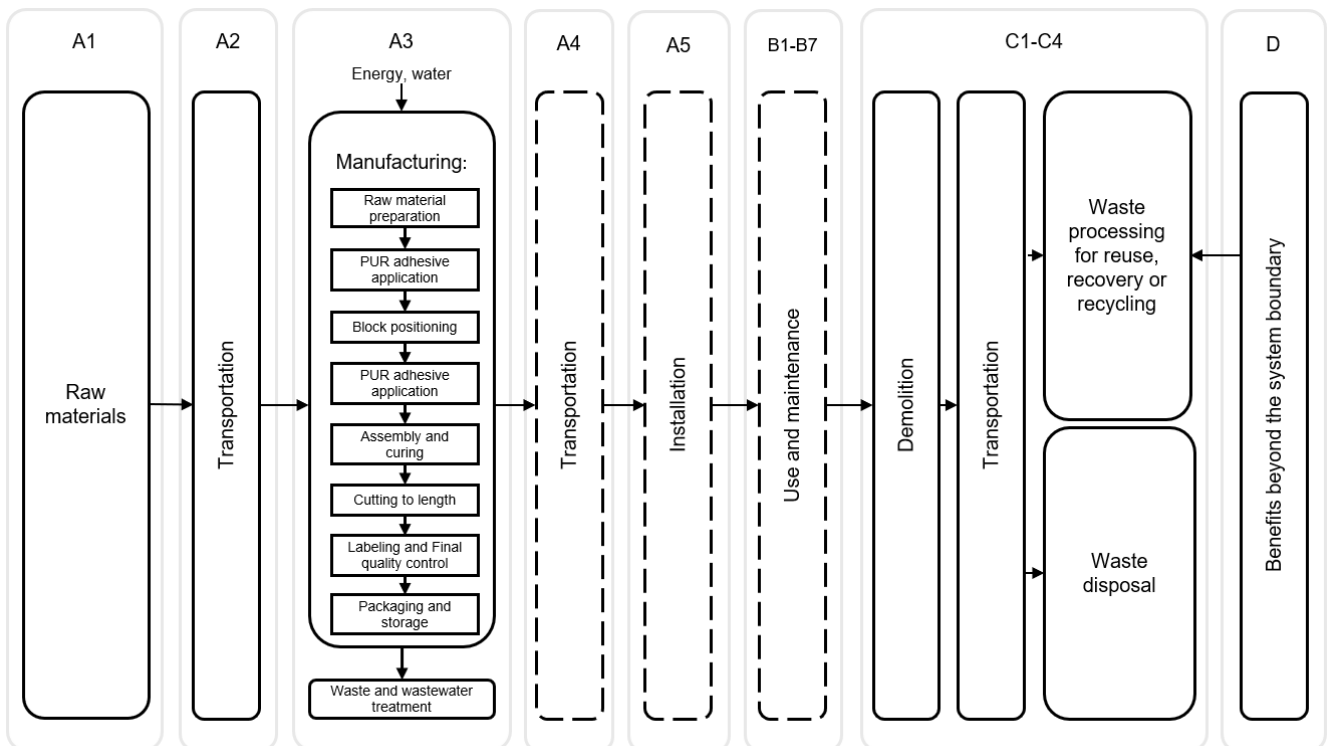
8. Finished goods quality control

All finished segments undergo a quality inspection to verify conformity with dimensional tolerances, bonding strength, and overall appearance. Nonconforming items are removed from the production line.

9. Finished goods packaging

Approved products are packaged according to standard packaging procedures to protect them during storage and transportation. The packaged goods are then prepared for shipment.

The manufacturing process diagram is presented below.



Note. The dashed lines indicated that construction and use stage (A4–A5, B1–B7 modules) were not assessed, as their inclusion is not mandatory for this type of EPD.

TRANSPORT AND INSTALLATION (A4-A5)

A4: This EPD does not cover the Transport module.

A5: This EPD does not cover the Installation module. Reinforcement installation and concrete infill are carried out on-site in accordance with project-specific requirements, therefore is out of scope of this EPD.

PRODUCT USE AND MAINTENANCE (B1-B7)

B1-B7: This EPD does not cover the Use stage.

PRODUCT END OF LIFE (C1-C4, D)

C1: Deconstruction, dismantling, demolition

Demolition is assumed to be done by mobile machinery (10,0 kWh/tonne, (Erlandsson & Peterson, 2015)).

C2: Transport of the discarded product to the processing site

It is estimated that there is no mass loss during the use of the product, therefore the end-of-life product is assumed to have the same weight as the declared product. Transportation distance to the closest treatment facilities. is estimated as 80 km and the transportation method is assumed as lorry which is the most common option.

C3: Waste processing for reuse, recovery, and/or recycling

According to the European Commission Waste Framework Directive, by 2020 the preparation for re-use, recycling, and other material recovery of non-hazardous construction and demolition waste shall reach a minimum of 70 % by weight. Therefore, it is assumed that 70 % of the prefabricated wood-concrete wall waste is recycled.

The environmental benefits associated with the substitution of primary materials are reported in Module D. A yield factor of 0,9 is applied, assuming 10 % material losses during the recovery process.

C4: Discharge (disposal)

Module C4 includes the landfilling of the minor share of material that cannot be recovered, mainly fines and debris separated during mechanical treatment. It is assumed that 30% of product is treated as inert mineral waste and disposed of at a licensed landfill facility.

D: Benefits and loads beyond the system boundary

In the context of end-of-life scenario D, recovered construction and demolition waste is assumed to be processed into secondary aggregates, substituting primary unbound aggregates. The environmental impacts of wall crushing and aggregate processing are included in the assessment.

LIFE-CYCLE ASSESSMENT

DECLARED UNIT

Declared unit	1 kg
Mass per declared unit	1 kg

SYSTEM BOUNDARY

The scope of the EPD is cradle to gate with modules C1-C4 and module D. The covered life-cycle modules listed in the following table. Geographical scope is Europe.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
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		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = ND

DATA QUALITY

The EPD covers products manufactured at the Huvud Prefab plant in Vilnius dist. (Lithuania), which provided data for the period of February 2024 - January 2025. The data collection has been done internally and thoroughly. The data is based on yearly production amounts and extrapolations of measurements on specific machines and plants. The EPD covers raw material supply, product production and end-of-life in Europe geographical scale. The product is manufactured under controlled factory conditions by assembling and bonding wood-cement permanent formwork blocks into prefabricated wall elements in accordance with project drawings and FPC procedures. The site is powered by residual mix energy, additionally Liquefied Petroleum Gas for mobile machinery use. Background data was sourced from the ecoinvent 3.11 database. No poor or very poor data was found during the assessment of relevant data using PEF method (EN 15804:2012+A2:2019, Annex E, only E.2). The data quality assessment is done in accordance with EN 15941:2024 and is assessed in terms of precision, completeness, representativeness, consistency, and sources of data. Overall, the data quality can be described as good. The EN 15804 reference package used is based on EF 3.1.

The share of primary data is calculated based on the contribution of manufacturer-specific activity data to the GWP-GHG results for modules A1–A3. In this EPD, primary data refers to activity data collected directly from the manufacturer (e.g. material quantities, energy consumption and transport distances), while environmental impacts are calculated using secondary emission factors and background datasets. Processes are classified as

primary when manufacturer-specific activity data are applied, even if background datasets are used for emission modelling. The indicator is reported as a simplified transparency measure and does not represent a comprehensive assessment of data quality nor enable comparison across different product categories. The calculated share of primary data is 33,17 %.

CUT-OFF CRITERIA

The study does not exclude any modules or processes that are mandatory according to the Standards and PCR. No hazardous materials or substances are excluded. All major raw materials and energy inputs, as well as emissions and outputs from the unit processes for which data is available, are fully included in the calculation. In line with the PCR, the total excluded input and output flows do not exceed 5% of energy use or mass across the life cycle. Reusable metal transport racks used for packaging and transporting the wall elements are excluded from the assessment, as they represent returnable, multi-use packaging systems with a long service life and negligible contribution when allocated to a single declared unit.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. In this study, as per EN 15804, allocation is conducted in the following order: 1) Allocation should be avoided; 2) Allocation should be based on physical properties (e.g. mass, volume) when the difference in revenue is small; 3) Allocation should be based on economic values.

The allocations in the Ecoinvent 3.11 datasets used in this study follow the Ecoinvent system model 'Allocation, cut-off, 15804:2012+A2:2019. The methodological choices for allocation for reuse, recycling and recovery have been set according to the polluter pays principle (PPP). Scenarios included in the LCA are based on realistic scenarios which are currently in use and are representative for one of the most likely scenario alternatives. The environmental impacts of capital goods (e.g., production equipment, recycling machinery) and infrastructure (e.g., recycling facilities, transportation systems) have not been included in this assessment.

BIOGENIC CARBON CONTENT

There biogenic carbon content in the product is 0,659 kg CO_{2e} / kg product or 0,18 kg C / kg product, assuming 1 kg biogenic carbon in the product is equivalent to the uptake of 44/12 kg of CO₂.

CALCULATION RULES FOR AVERAGING DATA

The EPD is an EPD of multiple products, based on the average results of the product group. The material composition of the product is consistent across the declared product family and does not significantly vary with wall thickness or geometry. As a result, environmental impacts are calculated on a mass-based approach and are representative for all declared wall types. Differences between product variants relate primarily to dimensional characteristics and total mass per square metre, while the composition per kilogram remains comparable.

The difference in GWP-GHG results for modules A1-A3 between the declared product variants is below 10%, as variations in wall thickness and size have a minor influence on raw material demand per kilogram of product and the associated production emissions. Accordingly, the use of an average product value is considered appropriate, allowing for streamlined analysis and decision-making while maintaining a fair and representative description of the declared product family. The average values were calculated based on production-mass-weighted data.

ENVIRONMENTAL PERFORMANCE

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).

A comma (“,”) is used as the decimal separator throughout this report. ND = Module Not declared.

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Indicator	Unit	Results per declared unit													
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ eq.	-4,10E-01	ND	ND	ND	ND	ND	ND	ND	ND	3,62E-03	8,62E-03	4,91E-01	2,11E-01	-6,08E-03
GWP – fossil	kg CO ₂ eq.	2,87E-01	ND	ND	ND	ND	ND	ND	ND	ND	3,62E-03	8,61E-03	3,08E-03	1,88E-03	-6,08E-03
GWP – biogenic	kg CO ₂ eq.	-6,97E-01	ND	ND	ND	ND	ND	ND	ND	ND	6,90E-07	1,95E-06	4,88E-01	2,09E-01	5,01E-06
GWP – LULUC	kg CFC 11 eq.	2,94E-04	ND	ND	ND	ND	ND	ND	ND	ND	3,71E-07	3,85E-06	3,15E-07	1,08E-06	-5,79E-06
Ozone depletion pot.	mol H ⁺ eq.	1,99E-08	ND	ND	ND	ND	ND	ND	ND	ND	5,38E-11	1,27E-10	4,57E-11	5,23E-11	-4,77E-11
Acidification potential	kg P eq.	8,26E-04	ND	ND	ND	ND	ND	ND	ND	ND	3,24E-05	2,94E-05	2,75E-05	1,31E-05	-3,80E-05
EP-freshwater ²⁾	kg N eq.	7,66E-06	ND	ND	ND	ND	ND	ND	ND	ND	1,17E-07	6,70E-07	9,90E-08	1,64E-07	-2,09E-06
EP-marine	mol N eq.	2,47E-04	ND	ND	ND	ND	ND	ND	ND	ND	1,51E-05	9,65E-06	1,28E-05	5,05E-06	-9,09E-06
EP-terrestrial	kg NMVOC eq.	2,64E-03	ND	ND	ND	ND	ND	ND	ND	ND	1,65E-04	1,05E-04	1,40E-04	5,51E-05	-1,10E-04
POCP (“smog”) ³⁾	kg Sb eq.	7,60E-04	ND	ND	ND	ND	ND	ND	ND	ND	4,94E-05	4,33E-05	4,20E-05	1,99E-05	-3,04E-05
ADP-minerals & metals ⁴⁾	MJ	1,34E-06	ND	ND	ND	ND	ND	ND	ND	ND	1,30E-09	2,40E-08	1,11E-09	2,80E-09	-3,66E-08
ADP-fossil resources	m ³	2,36E+00	ND	ND	ND	ND	ND	ND	ND	ND	4,72E-02	1,25E-01	4,01E-02	4,60E-02	-7,54E-02
Water use ⁵⁾	kg CO ₂ eq.	4,61E-02	ND	ND	ND	ND	ND	ND	ND	ND	1,21E-04	6,17E-04	1,03E-04	2,02E-03	-9,51E-03

Note. 1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Results per declared unit															
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	D
Particulate matter	Incidence	8,46E-09	ND	ND	ND	ND	ND	ND	ND	ND	9,25E-10	8,62E-10	5,99E-09	3,02E-10	-6,00E-10
Ionizing radiation ⁶⁾	kBq U235e	1,88E-02	ND	ND	ND	ND	ND	ND	ND	ND	2,01E-05	1,09E-04	1,71E-05	2,75E-05	-5,22E-04
Ecotoxicity (freshwater)	CTUe	3,45E+00	ND	ND	ND	ND	ND	ND	ND	ND	2,69E-02	1,77E-02	2,29E-02	3,07E-02	-1,79E-01
Human toxicity, cancer	CTUh	9,99E-11	ND	ND	ND	ND	ND	ND	ND	ND	3,69E-13	1,42E-12	3,14E-13	3,40E-13	-1,67E-12
Human tox. non-cancer	CTUh	3,27E-09	ND	ND	ND	ND	ND	ND	ND	ND	5,80E-12	8,09E-11	4,93E-12	7,65E-12	-4,91E-11
SQP ⁷⁾	-	4,30E+00	ND	ND	ND	ND	ND	ND	ND	ND	3,12E-03	1,26E-01	2,65E-03	9,03E-02	-7,03E-02

Note. 6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low dose ionizing radiation on 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; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Results per declared unit															
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	D
Renew. PER as energy ⁸⁾	MJ	3,76E-01	ND	ND	ND	ND	ND	ND	ND	ND	2,96E-04	1,71E-03	2,52E-04	4,30E-04	-6,95E-03
Renew. PER as material	MJ	7,46E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-5,22E+00	-2,24E+00	0,00E+00
Total use of renew. PER	MJ	7,83E+00	ND	ND	ND	ND	ND	ND	ND	ND	2,96E-04	1,71E-03	-5,22E+00	-2,24E+00	-6,95E-03
Non-re. PER as energy	MJ	2,29E+00	ND	ND	ND	ND	ND	ND	ND	ND	4,72E-02	1,25E-01	4,01E-02	4,60E-02	-7,54E-02
Non-re. PER as material	MJ	6,13E-02	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-4,29E-02	-1,84E-02	0,00E+00
Total use of non-re. PER	MJ	2,36E+00	ND	ND	ND	ND	ND	ND	ND	ND	4,72E-02	1,25E-01	-2,85E-03	2,76E-02	-7,54E-02
Secondary materials	kg	1,26E-01	ND	ND	ND	ND	ND	ND	ND	ND	1,95E-05	5,32E-05	1,66E-05	1,14E-05	1,20E-01
Renew. secondary fuels	MJ	6,56E-07	ND	ND	ND	ND	ND	ND	ND	ND	5,12E-08	6,76E-07	4,35E-08	2,39E-07	-6,17E-07
Non-ren. secondary fuels	MJ	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m ³	1,27E-04	ND	ND	ND	ND	ND	ND	ND	ND	3,02E-06	1,85E-05	2,57E-06	4,75E-05	-2,20E-04

Note. 8) PER = Primary energy resources

END OF LIFE – WASTE

Results per declared unit															
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	D
Hazardous waste	kg	1,78E-03	ND	ND	ND	ND	ND	ND	ND	ND	5,29E-05	2,12E-04	4,50E-05	5,23E-05	-6,10E-04
Non-hazardous waste	kg	1,23E-01	ND	ND	ND	ND	ND	ND	ND	ND	7,71E-04	3,92E-03	6,55E-04	3,00E-01	-1,15E-02
Radioactive waste	kg	2,08E-05	ND	ND	ND	ND	ND	ND	ND	ND	4,93E-09	2,66E-08	4,19E-09	6,71E-09	-1,26E-07

END OF LIFE – OUTPUT FLOWS

Results per declared unit															
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	ND	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	3,90E-02	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	7,00E-01	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

ADDITIONAL INDICATOR – GWP-GHG

Results per declared unit															
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ e	2,87E-01	ND	ND	ND	ND	ND	ND	ND	ND	3,62E-03	8,61E-03	3,08E-03	1,88E-03	-6,08E-03

Note. 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.

SCENARIO DOCUMENTATION

MANUFACTURING ENERGY SCENARIO DOCUMENTATION

Scenario parameter	Value kg CO ₂ e / kWh	Source
Electricity, residual mix	0,73	Data sources: ecoinvent 3.11 Country: Lithuania
Propane, burned in building machine	0,33	Data sources: ecoinvent 3.11 Country: world

END OF LIFE SCENARIO DOCUMENTATION

Scenario parameter	Value
Collection process – kg collected separately	1,00
Collection process – kg collected with mixed waste	0
Recovery process – kg for re-use	0,70
Recovery process – kg for recycling	0
Recovery process – kg for energy recovery	0
Disposal (total) – kg for final deposition	0,30
Scenario assumptions e.g. transportation	Transported 80 km with an average lorry.

Note. Yield factor = 0,9 (assuming 10% of material is lost in the recovery process)

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- EN 15804+A2 Sustainability in construction works – Environmental product declarations – Core rules for the product category of construction products.
- ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations Principles and procedures.
- ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.
- ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.
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ANNEX

Conversion factors from declared unit (1 kg) to 1 m² Huvud wall

Environmental impacts per 1 m² of wall are calculated by multiplying the declared unit results (per 1 kg) by the corresponding **HUVUD wall** mass per square metre.

The declared results of this EPD cover the HUVUD wall blocks only and explicitly **exclude concrete infill and reinforcement**. Therefore, the conversion factors presented relate solely to the wall block component.

The amount of concrete infill per square metre is provided as additional information only, to support project-specific wall assessments where concrete infill is modelled separately using appropriate datasets. Concrete infill is outside the scope of this EPD and is not included in the declared environmental impact results.

Wall type	Wall thickness	Huvud wall (kg/m ²)	Concrete fill (l/m ²)
HUVUD-N15	150 mm	47,79-64,00	75
HUVUD-N17	170 mm	80,00	94
HUVUD-N18	180 mm	56,26	100
HUVUD-N20	200 mm	71,23-88,00	105
HUVUD-N22	220 mm	65,08	121
HUVUD-N25	250 mm	83,33	130
HUVUD-I25	250 mm	79,65-88,00	145
HUVUD-I30	300 mm	84,83	184
HUVUD-TW30	300 mm	108,96-136,00	154

Note. The wall mass values presented in this table are based on the reference supplier data used in the assessment and refer exclusively to the HUVUD wall blocks. Differences in wall mass per square metre between suppliers arise from variations in block geometry and material distribution within the wall system. In particular, the amount of wood-cement material per square metre and the size of cavities for concrete infill differ between block designs, resulting in different block masses even for similar wall thicknesses. In addition, differences in the density of the wood-cement matrix, influenced by the cement-to-wood ratio and material compaction, can further affect the total block mass per square metre. These design and material differences directly influence the scaled results when converting from the declared unit to 1 m² of wall.