Environmental Product Declaration

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

PACKWALL BASIC

from

Flexibau s.r.o.

Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
Type of EPD:	EPD of a single product from a manufacturer/service provider
EPD registration number:	EPD-IES-0026055
Version date:	2025-12-01
Validity date:	2030-12-01

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

GENERAL INFORMATION

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

Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): Construction products, 2019:14, VERSION 2.0.1
PCR review was conducted by: The Technical Committee of the International EPD® System. A full list of members available on www.environdec.com. The review panel may be contacted via info@environdec.com.

Third-party Verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ **Individual EPD verification without a pre-verified LCA/EPD tool** Third-party verifier: *TZÚS Praha is an approved certification body accountable for the third-party verification 190 00 Praha 9, Prosecká 811/76a, CZ* Approved by: International EPD System Accredited by: Czech Accreditation Institute, o.p.s., Certificate no. 456/2024
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison.
For further information about comparability, see EN 15804 and ISO 14025.

INFORMATION ABOUT EPD OWNER

Owner of the EPD: Flexibau s.r.o.
Address: Flexibau, s.r.o., Na Poříčí 1079/3a, 110 00 Praha 1 – Nové Město, Czech Republic
Contact: info@flexibau.cz
Address and contact information of the LCA practitioner commissioned by the EPD owner, if applicable:
Barbora Nováková, Jiří Zlámal - Greenometer s.r.o.
Radlická 333/150, 150 00 Prague
Description of the organisation: Flexibau s.r.o. was established in 2015 and specializes in the production of PackWall boards - original boards made from beverage cartons. The company expanded the original intention of building prefabricated houses to multi-purpose use of this unique recycled material. Today Flexibau produces several types of boards suitable for a variety of applications in construction, interiors and furniture. Flexibau currently operates a production line for the processing of beverage cartons in Milevsko in South Bohemia. The production of recycled boards based on the PackWall idea is also being licensed in Australia, New Zealand and Sweden, and production of boards in Austria and Benelux is in the pipeline.
Product-related or management system-related certifications:

- European Technical Assessment (ETA) available according to EAD [210138-00-0504:2020].
- The product bears the CE marking, confirming its compliance with the relevant European directives and harmonized standards. The CE certification ensures that the product meets the legal requirements regarding safety, health, and environmental protection, and may be freely placed on the market within the European Union.
- Health safety certification confirming product is non-hazardous for indoor use.

PRODUCT INFORMATION

Product name: PACKWALL BASIC
Product identification: PackWall® Basic board, type Basic, thickness 12 mm, manufactured according to company technical specification PW-B/2024, CE marked in accordance with EN 13986:2004+A1:2015 (Wood-based panels for use in construction – Characteristics, evaluation of conformity and marking).
Visual representation (e.g., an image) of the product
UN CPC code: CPC 31449 – other fibreboards
Product description: The BASIC board is a basic type that can be modified in many ways for different construction applications.
It is an environmentally friendly alternative to fibreboard and plasterboard materials. Its practical qualities such as strength, durability, insulation and low deflection make it ideal for internal partitions and ceilings, sandwich panels, perimeter walls, flooring and levelling slabs, temporary fillings of building openings, building fences or roofing slabs.
BASIC can be coated, laminated, plastered, sanded, painted, wallpapered, tiled or sealed. It is easy to work with, easy to cut and drill.
Name and location of production site(s):
Flexibau Production Facility,Areál ZVVZ
hala 15, Sažinova 888,
399 01 Milevsko, Czech Republic
https://www.packwall.cz

CONTENT DECLARATION

Product content	Mass, kg	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material, kg C/product or declared unit
Waste beverage cartons	10	100%	67.00%	2.99
Drawing paper	0.41	0%	3.88%	0.00028
PE film	0.15	100%	0.00%	0
TOTAL	10.56	96.1%	63.6%	2.99

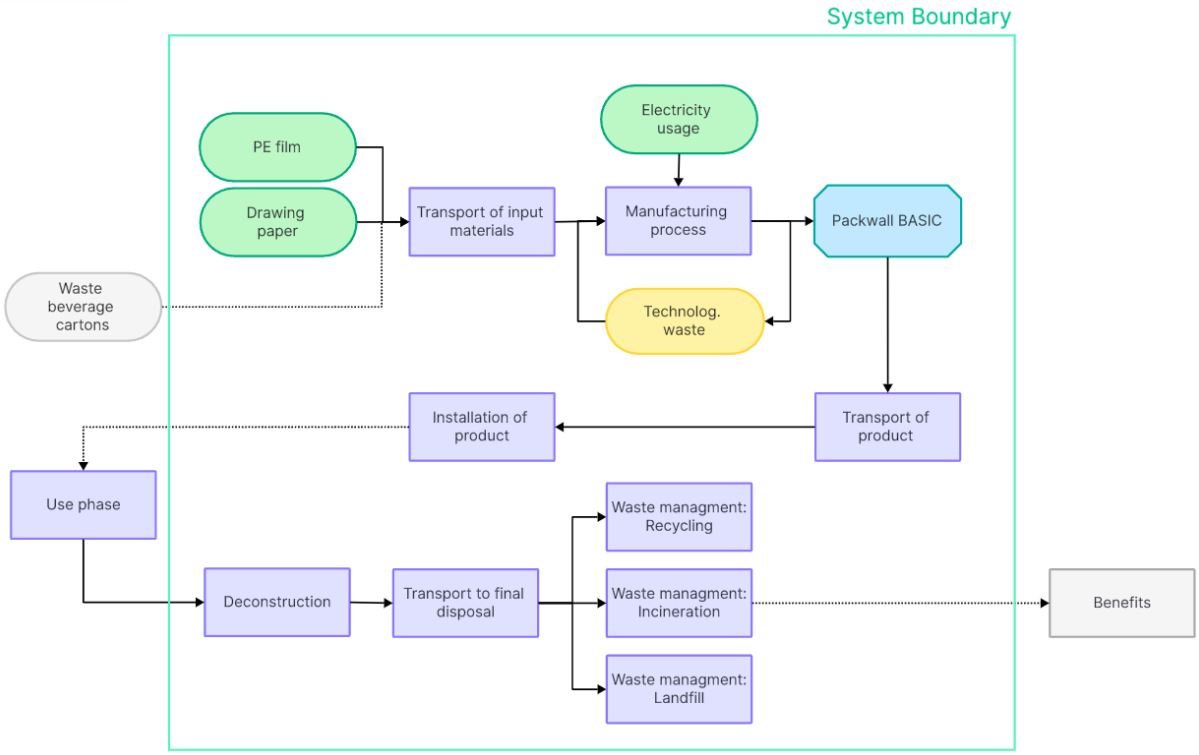
Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C/product or declared unit
EUR flat pallet	0.367	0.690%	0.03859
TOTAL	0.367	0.690%	0.03859

Hazardous substances from the candidate list of SVHC	EC No.	CAS No.	Mass-% per product or declared unit
N/A	N/A	N/A	N/A

LCA INFORMATION

Declared unit: 1m^2 (thickness: 12 mm) (mass:10.56 kg, $\frac{1}{10.56} = 0.095$ m^2 per kg)
Reference service life: 10 years
Time representativeness: Provided primary data, which were collected in 1Q 2025, are representative for 2024 annual production.
Geographical scope: Geographical scope of the manufacturing process is Czech Republic; all other modules are in the geographical scope of Europe.
Database(s) and LCA software used: OpenLCA v2.4.1, Ecoinvent v3.11 EN 15804GD, Impact assessment method: EN 15804GD + A2 (EF 3.1)
Description of system boundaries:
Cradle to gate with options, modules C1–C4, module D. Modules B1-B7 were excluded.

Process flow diagram:



More information:

Allocation: The main input material in the manufacturing of Packwall basic is waste beverage cartons (94.7% of mass). This material was accounted for in the form of waste in the LCA study according to the definition of end-of-waste status in the PCR, meaning the waste beverage carton was allocated 0 of the environmental impacts from its previous life cycle.

Summary of the data quality assessment: A data quality assessment was carried out in accordance with EN 15941 and PCR 2019:14 (Construction products). The assessment covers datasets that together contribute at least 80% of the results of the GWP-total indicator, which was selected as the reference indicator based on contribution analysis. Data quality was evaluated with respect to temporal, geographical and technological representativeness. Primary data were used for manufacturing processes under the operational control of the EPD owner (module A3), while background processes were modelled using established LCA databases.

The climate impact of electricity (GWP-GHG indicator): 0.71221 kg CO_2 eq./kWh

The total share of primary data contributing to the declared GWP-GHG results of modules A1-A3 :

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Generation of electricity used in manufacturing of product	Collected data	EPD owner	2024	Primary data	91.23%
Production of additional input materials	Database	Ecoinvent v3.11 EN 15804+A2	2024	Secondary data	8.56%

For downstream life-cycle stages, the following scenarios were modelled:

- A4 Transport: A default transport distance of 1 km to the client was assumed for comparability, with results scalable for specific project conditions.
- A5 Installation: Includes a material loss of 1% of total delivered area and use of auxiliary materials (steel screws, joint filler). Packaging waste and handling at installation are also accounted for.
- B Use stage: No maintenance, repair, energy consumption, or material inputs are required; the product remains passive throughout its service life.
- C1–C4 End-of-life: Modelled with selective distribution between treatment routes:
    - C3 Recycling: 3.17 kg of board material recycled.
    - C4 Disposal: 6.34 kg incinerated with energy recovery and 1.06 kg landfilled as inert material.
- Module D: Accounts for benefits beyond system boundaries from electricity (–12.9 MJ) and heat (–36.7 MJ) recovered during incineration with cogeneration.

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

	Product stage			Distribution/ installation stage		Use stage							End-of-life stage					Beyond product life cycle
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal		Reuse-Recovery-Recycling-potential
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**		**D**
Modules declared	X	X	X	X	X								X	X	X	X		X
Geography	RER	RER	CZ	RER	RER								RER	RER	RER	RER		RER
Share of primary data	>90%			-	-	-	-	-	-	-	-	-	-	-	-	-		-
Variation – products	0%			-	-	-	-	-	-	-	-	-	-	-	-	-		-
Variation – sites	0%					-	-	-	-	-	-	-	-	-	-	-		-

ENVIRONMENTAL PERFORMANCE

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

Mandatory impact category indicators according to EN 15804

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-total	kg CO_2 eq.	-6.39E+00	1.97E-03	8.40E-01	ND	ND	ND	ND	ND	ND	ND	3.82E-02	9.93E-02	3.24E-01	1.10E+01	-6.70E+00
GWP-fossil	kg CO_2 eq.	5.28E+00	1.97E-03	2.49E-01	ND	ND	ND	ND	ND	ND	ND	3.82E-02	9.92E-02	0.00E+00	2.16E-01	-6.69E+00
GWP-biogenic	kg CO_2 eq.	-1.17E+01	1.37E-06	5.91E-01	ND	ND	ND	ND	ND	ND	ND	7.73E-06	3.29E-05	3.24E-01	1.08E+01	-6.24E-03
GWP-luluc	kg CO_2 eq.	2.68E-03	6.64E-07	1.70E-04	ND	ND	ND	ND	ND	ND	ND	3.90E-06	4.54E-05	0.00E+00	6.73E-05	-1.30E-03
ODP	kg CFC 11 eq.	3.83E-08	4.30E-11	2.83E-09	ND	ND	ND	ND	ND	ND	ND	5.66E-10	1.34E-09	0.00E+00	3.03E-09	-1.45E-07
AP	mol H^+ eq.	1.65E-02	4.23E-06	1.09E-03	ND	ND	ND	ND	ND	ND	ND	3.40E-04	2.40E-04	0.00E+00	1.79E-03	-1.94E-02
EP-freshwater	kg P eq.	2.16E-03	1.37E-07	1.10E-04	ND	ND	ND	ND	ND	ND	ND	1.23E-06	1.08E-05	0.00E+00	2.78E-05	-1.44E-03
EP-marine	kg N eq.	4.86E-03	1.02E-06	2.70E-04	ND	ND	ND	ND	ND	ND	ND	1.60E-04	5.47E-05	0.00E+00	9.20E-04	-4.17E-03
EP-terrestrial	mol N eq.	4.75E-02	1.10E-05	2.64E-03	ND	ND	ND	ND	ND	ND	ND	1.74E-03	5.90E-04	0.00E+00	8.07E-03	-4.29E-02
POCP	kg NMVOC eq.	1.27E-02	6.71E-06	8.60E-04	ND	ND	ND	ND	ND	ND	ND	5.20E-04	3.20E-04	0.00E+00	2.07E-03	-1.52E-02
ADP-minerals&metals*	kg Sb eq.	6.47E-06	6.93E-09	1.78E-06	ND	ND	ND	ND	ND	ND	ND	1.40E-08	3.40E-07	0.00E+00	5.72E-07	-1.63E-05
ADP-fossil*	MJ	9.46E+01	2.80E-02	3.51E+00	ND	ND	ND	ND	ND	ND	ND	4.97E-01	1.38E+00	0.00E+00	1.67E+00	-1.09E+02
WDP*	m^3	1.14E+00	1.50E-04	9.89E-02	ND	ND	ND	ND	ND	ND	ND	1.28E-03	7.40E-03	0.00E+00	4.76E-01	-6.17E-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 on these results are high or as there is limited experienced with the indicator.

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

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

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[1]	kg CO_2 eq.	5.29E+00	1.97E-03	2.50E-01	ND	ND	ND	ND	ND	ND	ND	3.82E-02	9.93E-02	0.00E+00	2.17E-01	-6.69E+00
IRP	kBq U235 eq.	2.16E+00	3.38E-05	4.05E-02	ND	ND	ND	ND	ND	ND	ND	2.10E-04	1.12E-03	0.00E+00	2.94E-03	-1.29E+00
PM	Disease Incidence	8.62E-08	1.48E-10	1.35E-08	ND	ND	ND	ND	ND	ND	ND	8.83E-08	7.22E-09	0.00E+00	1.59E-08	-1.45E-07
SQP	Dimensionless	1.03E+02	1.68E-02	1.82E+00	ND	ND	ND	ND	ND	ND	ND	3.30E-02	8.21E-01	0.00E+00	7.66E-01	-1.22E+01
HTP-nc	CTUh	2.55E-08	1.77E-11	3.96E-09	ND	ND	ND	ND	ND	ND	ND	6.14E-11	8.62E-10	0.00E+00	2.07E-08	-2.98E-08
HTP-c	CTUh	6.78E-10	3.31E-13	1.81E-10	ND	ND	ND	ND	ND	ND	ND	3.89E-12	1.64E-11	0.00E+00	5.17E-10	-9.55E-10
ETP-fw	CTUe	1.25E+01	3.76E-03	1.79E+00	ND	ND	ND	ND	ND	ND	ND	2.70E-02	2.53E-01	0.00E+00	1.10E+01	-9.83E+00
Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017	GHG-GWP = Global warming potential except emissions and uptake of biogenic carbon; IRP = Ionizing radiation, human health; PM = Particulate matter emissions; SQP = Potential soil quality index; HTP-nc = Human toxicity, non-cancer effects; HTP-c = Human toxicity, cancer effects; ETP-fw = Eco-toxicity (freshwater)															

Resource use 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**
PERE	MJ	1.91E+01	4.60E-04	4.15E-01	ND	ND	ND	ND	ND	ND	ND	3.13E-03	1.94E-02	0.00E+00	6.35E-02	-3.66E+00
PERM	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
PERT	MJ	1.91E+01	4.60E-04	4.15E-01	ND	ND	ND	ND	ND	ND	ND	3.13E-03	1.94E-02	0.00E+00	6.35E-02	-3.66E+00
PENRE	MJ	9.46E+01	2.80E-02	3.51E+00	ND	ND	ND	ND	ND	ND	ND	4.97E-01	1.38E+00	0.00E+00	1.67E+00	-1.09E+02
PENRM	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
PENRT	MJ	9.46E+01	2.80E-02	3.51E+00	ND	ND	ND	ND	ND	ND	ND	4.97E-01	1.38E+00	0.00E+00	1.67E+00	-1.09E+02

[1] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.

SM	kg	4.80E-01	2.74E-05	2.12E-02	ND	ND	ND	ND	ND	ND	ND	2.80E-04	1.01E-03	0.00E+00	5.31E-03	-1.32E-01
RSF	MJ	1.12E-01	6.43E-06	4.40E-03	ND	ND	ND	ND	ND	ND	ND	2.95E-05	1.20E-04	0.00E+00	4.90E-04	-7.15E-02
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^3	3.09E-02	3.43E-06	1.95E-03	ND	ND	ND	ND	ND	ND	ND	3.18E-05	1.90E-04	0.00E+00	7.49E-03	-1.42E-02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water														

Waste indicators

Results per 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	2.65E-01	2.89E-05	4.46E-02	ND	ND	ND	ND	ND	ND	ND	4.40E-04	2.32E-03	0.00E+00	1.05E-01	-1.77E-01
Non-hazardous waste disposed	kg	2.47E+00	3.10E-04	1.02E+00	ND	ND	ND	ND	ND	ND	ND	3.26E-03	1.35E-02	0.00E+00	6.59E+00	-5.63E-01
Radioactive waste disposed	kg	5.11E-04	8.34E-09	9.88E-06	ND	ND	ND	ND	ND	ND	ND	5.20E-08	2.74E-07	0.00E+00	7.47E-07	-3.10E-04

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	1.95E-01	2.47E-05	2.53E-02	ND	ND	ND	ND	ND	ND	ND	2.30E-04	8.90E-04	0.00E+00	2.93E-03	-1.28E-01
Materials for energy recovery	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
Exported energy, electricity	MJ	3.08E-02	5.46E-06	2.32E-03	ND	ND	ND	ND	ND	ND	ND	2.31E-05	1.10E-04	0.00E+00	3.70E-04	-2.25E-02
Exported energy, thermal	MJ	5.20E-01	6.59E-06	8.94E-03	ND	ND	ND	ND	ND	ND	ND	1.10E-05	2.00E-04	0.00E+00	6.00E-04	-9.01E-02

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

Results for end-of-life stage scenarios if each scenario would be 100% (modules C3-C4)

Indicator	Unit	Incineration	Landfill	Recycling
GWP-total	kg CO_2 eq.	1.70E+01	3.06E-06	0.00E+00
GWP-fossil	kg CO_2 eq.	3.50E-01	6.26E-03	0.00E+00
GWP-biogenic	kg CO_2 eq.	1.67E+01	3.06E-06	1.08E+00
GWP-luluc	kg CO_2 eq.	1.10E-04	3.56E-06	0.00E+00
ODP	kg CFC 11 eq.	4.74E-09	1.74E-10	0.00E+00
AP	mol H^+ eq.	2.91E-03	4.38E-05	0.00E+00
EP-freshwater	kg P eq.	4.54E-05	5.48E-07	0.00E+00
EP-marine	kg N eq.	1.50E-03	1.68E-05	0.00E+00
EP-terrestrial	mol N eq.	1.31E-02	1.80E-04	0.00E+00
POCP	kg NMVOC eq.	3.33E-03	6.63E-05	0.00E+00
ADP-minerals&metals*	kg Sb eq.	9.37E-07	9.37E-09	0.00E+00
ADP-fossil*	MJ	2.52E+00	1.53E-01	0.00E+00
WDP*	m^3	7.82E-01	6.73E-03	0.00E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption			

ADDITIONAL ENVIRONMENTAL INFORMATION

Release of substances during use stage

PackWall boards do not release dangerous substances into indoor air, soil, or water. Independent VOC testing confirms low emissions to indoor air. This ensures the product is safe for interior use throughout its service life.

Instructions for use

An installation manual is provided to support safe handling, proper installation, and minimisation of material losses during construction. No additional maintenance, repairs, or energy inputs are required during the use stage, as the boards retain their functional properties over time.

Recycling and end-of-life treatment

PackWall boards are fully recyclable. After use, they can be:

- disposed of in yellow collection containers for beverage cartons,
- delivered to municipal collection yards for further sorting, or
- returned directly to the manufacturer in Milevsko for recycling into new boards.

The product can be shredded and reintroduced into the production process as secondary raw material, closing the material cycle and reducing the need for virgin resources.

Organisational environmental work

Flexibau not only manufactures PackWall boards but also acts as a recycler of used products, supporting circular economy principles. This integrated approach minimises end-of-life impacts and contributes to long-term environmental sustainability.

ADDITIONAL SOCIAL AND ECONOMIC INFORMATION

Flexibau contributes to the circular economy by transforming post-consumer beverage cartons into recyclable construction boards, reducing landfilling. Production in Milevsko (CZ) supports local employment, while patented technology and international licensing agreements (e.g., in Australia, New Zealand, Sweden, Austria) demonstrate long-term economic viability. VOC certification confirms low emissions to indoor air, ensuring product safety for interior use.

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
EN	European Norm (Standard)
EPD	Environmental Product Declaration
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
LCA	Life Cycle Assessment
PCR	Product Category Rules
c-PCR	Complementary Product Category Rules
CEN	European Committee for Standardization
CLC	Co-location centre
CPC	Central product classification
GHS	Globally harmonized system of classification and labelling of chemicals
GRI	Global Reporting Initiative
Environmental Impact Indicators (EN 15804)	
GHG	Greenhouse gas
GWP	Global Warming Potential (kg CO_2 eq.)
GWP-fossil	Global Warming Potential from fossil sources (kg CO_2 eq.)
GWP-biogenic	Global Warming Potential from biogenic sources (kg CO_2 eq.)
GWP-luluc	Global Warming Potential from land use and land use change (kg CO_2 eq.)
GWP-total	Total Global Warming Potential (kg CO_2 eq.)
GWP-GHG	Global Warming Potential for greenhouse gases (kg CO_2 eq.)
ODP	Ozone Depletion Potential (kg CFC-11 eq.)
AP	Acidification Potential (mol H^+ eq.)
EP	Eutrophication Potential
EP-freshwater	Freshwater eutrophication potential (kg P eq.)
EP-marine	Marine eutrophication potential (kg N eq.)
EP-terrestrial	Terrestrial eutrophication potential (mol N eq.)
POCP	Photochemical Ozone Creation Potential (kg NMVOC eq.)
ADP	Abiotic Depletion Potential
ADP-minerals&metals	Abiotic depletion potential for non-fossil resources (kg Sb eq.)
ADP-fossil	Abiotic depletion potential for fossil resources (MJ)
WDP	Water Deprivation Potential (m^3)
Resource Use Indicators	
PERE	Use of renewable primary energy excluding renewable primary energy resources used as raw materials (MJ)
PERM	Use of renewable primary energy resources used as raw materials (MJ)
PERT	Total use of renewable primary energy resources (MJ)
PENRE	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (MJ)
PENRM	Use of non-renewable primary energy resources used as raw materials (MJ)
PENRT	Total use of non-renewable primary energy resources (MJ)
SM	Use of secondary material (kg)
RSF	Use of renewable secondary fuels (MJ)
NRSF	Use of non-renewable secondary fuels (MJ)
FW	Use of net fresh water (m^3)
Waste Indicators	
HW	Hazardous Waste (disposed) (kg)
NHW	Non-Hazardous Waste (disposed) (kg)
RW	Radioactive Waste (disposed) (kg)
Output Flow Indicators	
CFR	Components for Reuse (kg)
MR	Material for Recycling (kg)

MER	Materials for Energy Recovery (kg)
EEE	Exported Energy, Electricity (MJ)
EET	Exported Energy, Thermal (MJ)
Lifecycle Stages / Modules	
A1	Raw material supply
A2	Transport
A3	Manufacturing
A4	Transport to site
A5	Construction/Installation
B1	Use
B2	Maintenance
B3	Repair
B4	Replacement
B5	Refurbishment
B6	Operational energy use
B7	Operational water use
C1	Deconstruction/Demolition
C2	Transport to waste processing
C3	Waste processing
C4	Disposal
D	Reuse-Recovery-Recycling potential
Other Relevant Terms	
SVHC	Substances of Very High Concern
EC No.	European Community Number
CAS No.	Chemical Abstracts Service Number
MJ	Megajoule
kg	Kilogram
m^3	Cubic Meter
NMVOC	Non-Methane Volatile Organic Compounds
Sb eq.	Antimony Equivalents
P eq.	Phosphorus Equivalents
N eq.	Nitrogen Equivalents
CFC-11 eq.	Chlorofluorocarbon-11 Equivalents
CO_2 eq.	Carbon Dioxide Equivalents
kg C	Kilograms of Carbon
kg CO_2 eq.	Kilograms of Carbon Dioxide Equivalent
ND	Not Declared

REFERENCES

General Programme Instructions of the International EPD® System. Version 5.0.1
PCR 2019:14, version 2.0.1
ISO 14025: EN ISO 14025:2006-11: Environmental labels and declarations - Type III environmental declarations — Principles and procedures
ISO 14040:2006 Environmental management — Life cycle assessment — Principles and framework
ISO 14044:2006 Environmental management — Life cycle assessment — Requirements and guidelines
EN 15804+A2:2019/AC:2021 European Committee for Standardization: Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products
Ecoinvent: www.ecoinvent.org
More production related information to be requested at: info@flexibau.cz

VERSION HISTORY

Original Version of the EPD, 2025-12-04
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EPD
INTERNATIONAL EPD SYSTEM
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