THE INTERNATIONAL EPD® SYSTEM

Environmental Product Declaration

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

Drainage Board P45 - 170 kPa

from

Pordrän AB

Programme	The International EPD® System
Programme operator	EPD International AB
EPD registration number	EPD-IES-0022432
Version date	2025-05-24
Valid until	2030-05-23

This EPD covers multiple products and is based on the representative composition of 1 m3. An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at 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	info@environdec.com

Accountabilities for PCR, LCA and independent, third-party verification	
Product Category Rules (PCR)	CEN standard EN 15804 serves as the Core Product Category Rules (PCR) PCR 2019:14 Construction products (EN 15804:A2) (1.3.4)
Life Cycle Assessment (LCA)	Carbonzero AB
Third-party verification:	Independent third-party verification of the declaration and data, according to ISO 14025:2006: ☒ EPD verification by individual verifier Vladimir Koci, LCA studio Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☑ No	

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

EPDs within the same product category but 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	Pordrän Sverige AB
Contact	Henrik Rauge, info@pordran.se
Description of the organisation	Pordrän is a company with a lot of experience in moisture problems in houses and land. Our business concept is to offer a complete system that heats, protects against moisture, dries out and drains in an economical, simple and functional way. The products are manufactured in our own facility in Tullinge, south of Stockholm, and the Pordrän boards are sold and distributed to resellers within the Nordics.
Product-related or management system-related certifications:	Not relevant
Name and location of production site(s):	**Name of plant:** Tullinge **Location:** Sweden

Product information	
Product name(s)	P45
Product description:	Pordrän boards are used as an effective moisture protection with a draining, capillary-breaking, heat-insulating and drying function for basement walls, basement floors, slabs on the ground, crawl spaces and courtyard floor structures. The products come in different compressive strength, depending on the purpose from 60 kPa up to 200 kPa.
RSL	Not applicable
UN CPC code	369 - Other plastics products

LCA information	
Functional unit / declared unit	1 m3 (with a density of 45 kg/m3)
Time representative-ness	Data obtained refers to the year 2024
System Boundary	The system boundaries are set to be “cradle-to-gate with modules C1-C4 + D for end of life.
Database(s) and LCA software used	Eando X version 1.01 & The characterization factors used in this study refer to PCR 2019:14 and EN 15804+A2 (based on EF 3.1).

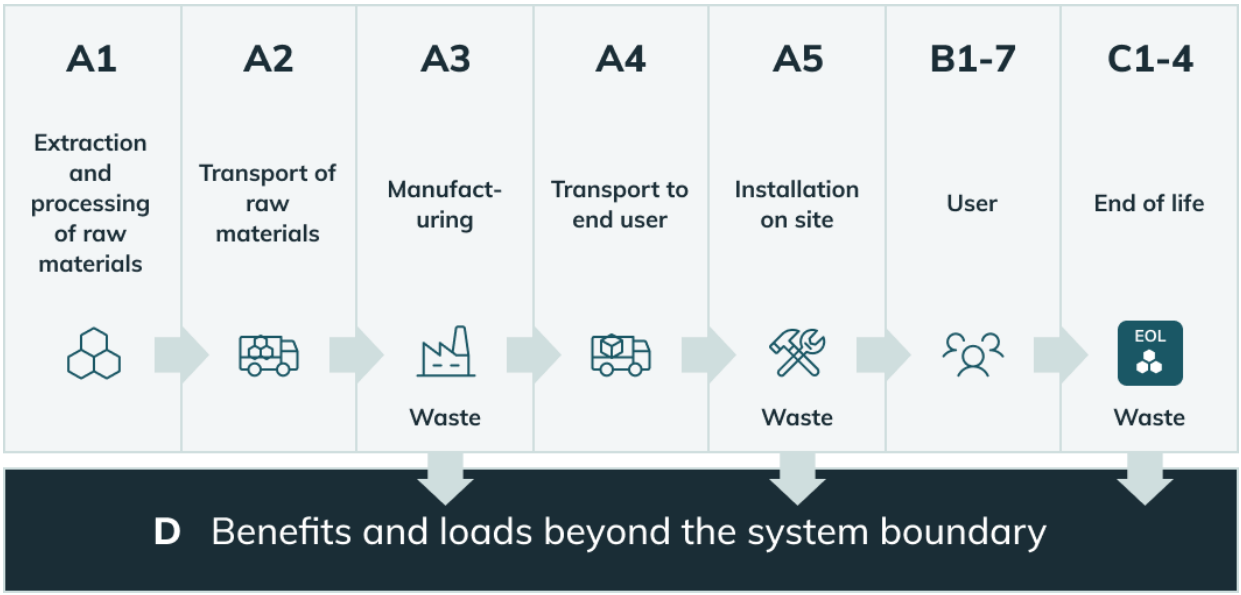
Cut-off criteria
The following procedures were followed for the exclusion of inputs and outputs:

All input and output flows in a unit process were considered i.e., taking into account the value of all flows in the unit process and the corresponding LCI where data was available

Processes of infrastructure or capital goods are excluded from this study

The use of cut-off criterion on mass inputs and primary energy at the unit process level (1%) and at the information module level (5%) was applied

System diagram



A1	Raw material supply	This module considers the extraction and processing of all raw materials, energy, and transportation which occur upstream to the studied manufacturing process, including packaging material.
A2	Transport to the manufacturer	The raw materials are transported to the manufacturing site.
A3	Manufacturing*	This module includes all resources used to produce and waste produced. This also includes additives and packaging material.
A4	Transport	Transportation from the manufacturing site to distribution centre and then from the distribution centre to the building site is included.
	Transport Scenario	truck: 262km boat: 16km representing distribution within Nordic countries
A5	Construction installation	Installation is manual. Waste treatment of packaging is included.
B1-B7	Use stage	This stage is not declared.
C1	Deconstruction/Demolition	This stage includes deconstructing the product when it is no longer in use. In this study the deconstruction is manual and the impact is considered negligible.
C2	Transport	This stage represents the transport distance to the waste processing facility, 50 km.
C3	Waste processing	This stage includes any waste treatment needed.
	EOL Scenario	Landfill 0%. Incineration 100%. Recycling 0%.
C4	Final disposal	This includes any material that is landfilled.
D	Benefits	Emission credits obtained from energy recovery and/or recycling materials

** If purchased electricity used in the manufacturing process of module A3 accounts for more than 30% of the GWP-GHG results of modules A1-A3, the EPD shall declare the energy source behind the purchased electricity and its climate impact as kg CO2 eq./kWh. This information can be found in the end of the EPD.*

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

	Product stage			Assembly stage		Use stage							End of life stage				Benefits & loads beoyond system boundary
	Raw Materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery - Recycling-potential
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Declared	X	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	EU	EU	SE	NC	NC	-	-	-	-	-	-	-	NC	NC	NC	NC	NC
Specific data used	4 %			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation-Products	0%*			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation-Sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

NC refers to the Nordic countries: Sweden, Norway, Finland and Denmark
*there is no variation within the product range since the material composition is the same per m3 and the included products are only in different dimensions

Content Information

Product Components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Polystyrene	26.600	0.000	0.000
Bitumen based adhesive	18.455	0.000	0.000
Total	45.055	0.000	0.000

Packaging Materials	Weight, kg	Weight-% (versus the product)	Weight biogenic carbon, kg C/kg
Low density polyethylene	0.344	0.764	0.000
Total	0.344	0.764	0.000

Dangerous substances from the candidate list of SVHC for Authorisation	EC No.	CAS No.	Weight-% per functional or declared unit
-	-	-	0.000

At the date of issue of this declaration, there is no “Substance of Very High Concern” (SVHC) in concentration above 0.1% by weight, and neither does the packaging, following the European REACH regulation (Registration, Evaluation, Authorization and Restriction of Chemicals)

Environmental Information

Potential environmental impact – indicators according to EN 15804+A2

Results per functional unit: 1 m3									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO2 eq	8.44E+1	1.07E+0	5.41E-1	0.00E+0	2.04E-1	0.00E+0	1.11E+2	-3.30E+1
GWP-fossil	kg CO2 eq	8.41E+1	1.06E+0	5.38E-1	0.00E+0	2.01E-1	0.00E+0	1.11E+2	-3.30E+1
GWP-biogenic	kg CO2 eq	2.87E-1	2.61E-3	3.50E-3	0.00E+0	4.98E-4	0.00E+0	5.24E-3	0.00E+0
GWP-luluc	kg CO2 eq	4.97E-2	1.12E-2	5.34E-5	0.00E+0	2.14E-3	0.00E+0	8.92E-4	-1.48E-3
ODP	kg CFC-11 eq	3.41E-8	1.82E-13	5.41E-10	0.00E+0	3.45E-14	0.00E+0	8.24E-12	-1.46E-12
AP	mole H+ eq	2.26E-1	6.94E-3	2.62E-4	0.00E+0	1.30E-3	0.00E+0	1.65E-2	-2.67E-2
EP-freshwater*	kg P eq	1.04E-3	2.94E-6	9.56E-6	0.00E+0	5.61E-7	0.00E+0	2.26E-6	-2.53E-6
EP-marine	kg N eq	6.31E-2	3.43E-3	1.03E-4	0.00E+0	6.47E-4	0.00E+0	4.86E-3	-7.10E-3
EP-terrestrial	mole N eq	6.68E-1	3.73E-2	9.14E-4	0.00E+0	7.03E-3	0.00E+0	7.94E-2	-7.65E-2
POCP	kg NMVOC eq	2.24E-1	6.59E-3	2.81E-4	0.00E+0	1.23E-3	0.00E+0	1.34E-2	-2.08E-2
ADP-minerals & metals**	kg Sb eq	1.93E-5	7.27E-8	2.52E-7	0.00E+0	1.38E-8	0.00E+0	6.03E-8	-1.15E-7
ADP-fossil**	MJ	2.87E+3	1.40E+1	8.20E-1	0.00E+0	2.66E+0	0.00E+0	1.85E+1	-1.04E+3
WDP**	m3	2.12E+1	5.00E-3	5.42E-2	0.00E+0	9.51E-4	0.00E+0	1.08E+1	-7.12E-1
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								

** The results in kg PO4 eq. can be obtained by multiplying the results in kg P eq. by a factor of 3,07.*

*** 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 experience with the indicator.*

Use of resources

Results per functional unit: 1 m3									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	8.28E+1	1.05E+0	4.92E-2	0.00E+0	2.01E-1	0.00E+0	2.98E+1	-1.90E+0
PERM	MJ	2.48E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-2.41E+1	0.00E+0
PERT	MJ	1.08E+2	1.05E+0	4.92E-2	0.00E+0	2.01E-1	0.00E+0	5.04E+0	-1.90E+0
PENRE	MJ	2.77E+3	1.40E+1	1.60E+1	0.00E+0	2.66E+0	0.00E+0	1.51E+3	-4.06E+2
PENRM	MJ	1.51E+3	0.00E+0	-1.52E+1	0.00E+0	0.00E+0	0.00E+0	-1.49E+3	0.00E+0
PENRT	MJ	4.28E+3	1.40E+1	8.20E-1	0.00E+0	2.66E+0	0.00E+0	1.85E+1	-4.06E+2
SM	kg	1.03E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
RSF	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
NRSF	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
FW	m3	6.17E-1	5.20E-4	1.27E-3	0.00E+0	9.91E-5	0.00E+0	2.53E-1	-1.47E-1
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								

Option A is used for balancing energy indicators

Additional mandatory indicators

Results per functional unit: 1 m3									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq	8.44E+1	1.07E+0	5.41E-1	0.00E+0	2.04E-1	0.00E+0	1.11E+2	-3.30E+1
Acronyms	GWP-GHG global warming potential - greenhouse gases								

The GWP-GHG indicator is identical to GWP-total except that the characterisation factor (CF) for biogenic CO2 is set to zero. This means that the uptake and emissions of biogenic CO2 are "balanced out" already in modules A1-A3, instead of in modules A1-A5 (for packaging) or modules A-C (for product). In the context of Norwegian public procurement legislation, GWP-GHG is also referred to as GWP-IOBC.

Waste flows

Results per functional unit: 1 m3									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	1.79E-7	5.64E-10	3.37E-11	0.00E+0	1.07E-10	0.00E+0	1.06E-8	-3.46E-8
NHWD	kg	5.80E-1	1.95E-3	1.92E-3	0.00E+0	3.72E-4	0.00E+0	1.96E+0	-1.19E-1
RWD	kg	8.96E-3	2.64E-5	3.22E-6	0.00E+0	5.02E-6	0.00E+0	9.64E-4	-1.94E-1
Acronyms	HW Hazardous waste disposed; NHW Non-hazardous waste disposed; RW Radioactive waste disposed								

Output flows

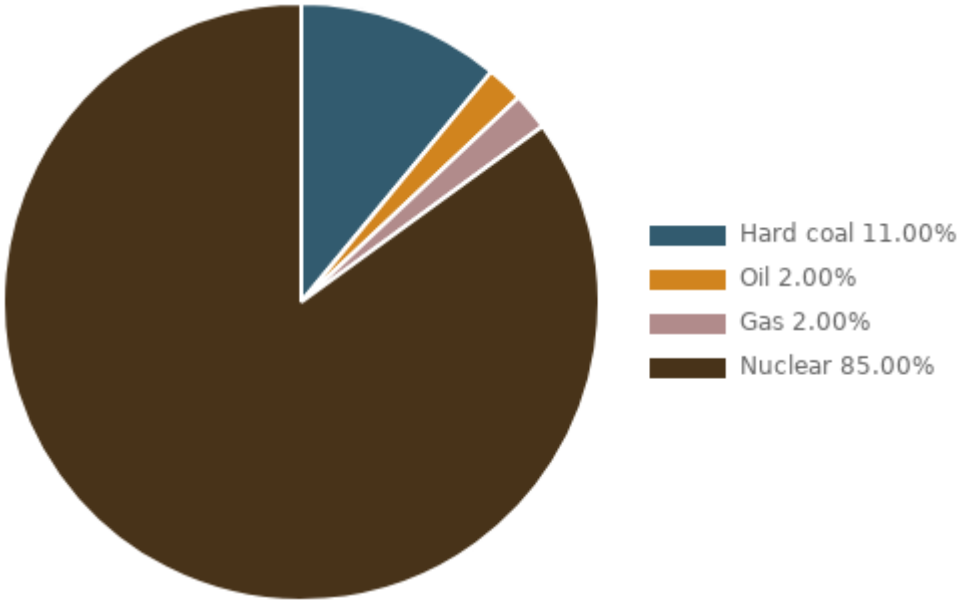
Results per functional unit: 1 m3									
Indicator	Unit	A1 - A3	A4	A5	C1	C2	C3	C4	D
CRU	kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
MFR	kg	1.59E-3	0.00E+0	1.89E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
MER	kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
EEE	MJ	8.42E+0	0.00E+0	1.03E+0	0.00E+0	0.00E+0	0.00E+0	2.10E+2	0.00E+0
EET	MJ	1.53E+1	0.00E+0	1.84E+0	0.00E+0	0.00E+0	0.00E+0	3.83E+2	0.00E+0
Acronyms	CRU Components for reuse; MFR Materials for recycling; MER Materials for energy recovery; EEE Exported electric energy; ETE Exported thermal energy								

Energy Breakdown

Electricity used in the manufacturing

Name	Data source	GWP excl. biogenic [kg CO2-eq/kWh]
Electricity Residual Mix - Sweden (2023)	AIB	1.51E-1

Breakdown of electricity usage



Product Table

Name	Article number	Dimensions (length * width * thickness)	Conversion factor to one piece
P45	10013	1200*750*70	0.063
P45	10014	1000*750*100	0.075

Disclaimers

ILCD classification	Indicator	Disclaimer
ILCD Type 1	Global warming potential (GWP)	None
	Depletion potential of the stratospheric ozone layer (ODP)	None
ILCD Type 2	Acidification potential, Accumulated Exceedance (AP)	None
	Eutrophication potential, Fraction of nutrients reaching freshwater end compartment (EP-freshwater)	None
	Eutrophication potential, Fraction of nutrients reaching marine end compartment (EP-marine)	None
	Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	None
	Formation potential of tropospheric ozone (POCP)	None
ILCD Type 3	Abiotic depletion potential for non-fossil resources (ADP-minerals & metals)	1
	Abiotic depletion potential for fossil resources (ADP-fossil)	1
	Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	1
Disclaimer 1 – 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 experience with the indicator.		
Note 1: 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.		
Note 2: The results presented for modules A1-A3 alone shall not be used for comparisons unless all relevant life cycle stages, particularly end-of-life (C1-C4), are included. This ensures a more accurate and representative environmental impact assessment over the full product life cycle.		

Abbreviations

CPC	Central Product Classification
CPR	Construction Product Regulation
EPD	Environmental Product Declaration
EU	European Union
GHG	Greenhouse gases
GPI	General Programme Instructions
GWP	Global Warming Potential
ISO	International Organization for Standardization
LCA	Life Cycle Assessment
LCI	Life Cycle Inventory
ND	Not Declared
PCR	Product Category Rules
PEF	Product Environmental Footprint
REACH	Restriction of Chemicals
RSL	Reference Service Life
SI	The International System of Units
SVHC	Substance of Very High Concern
UN	United Nations

References

EN15804:2012 A2	Sustainability of construction works: Environmental product declaration – Core rules for the product category of construction products
GPI 5.0	General Programme Instructions of the International EPD® System, version 4.0
ISO 14020:2022	International Standard ISO 14020 – Environmental statements and programmes for products – Principles and general requirements
ISO 14025:2006	International Standard ISO 14025 – Environmental labels and declarations — Type III environmental declarations — Principles and procedures
ISO 14040:2006	International Standard ISO 14040: Environmental Management – Life cycle assessment – Principles and framework. Second edition 2006-07-01.
ISO 14044:2006	International Standard ISO 14044: Environmental Management – Life cycle assessment – Requirements and Guidelines.
PCR 2019:14	Construction products v1.3.4
LCA report	LCA report for Pordrän drainage boards (Carbonzero), May 2025

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