epd-norge
Global program operatør

Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

Jackopor Flamingo 80 Drænplade Denmark



BEWI

The Norwegian EPD Foundation

Owner of the declaration:
BEWI ASA, Insulation and Construction

Product:
Jackopor Flamingo 80 Drænplade Denmark

Declared unit:
1 m2

This declaration is based on Product Category Rules:
CEN Standard EN 15804:2012+A2:2019 serves as core PCR.
NPCR 012:2022 Part B for Thermal insulation products

Program operator:
The Norwegian EPD Foundation

Declaration number:

Registration number:

Issue date:

Valid to:

EPD software:
LCAno EPD generator ID: 435100

General information

Product

Jackopor Flamingo 80 Drænplade Denmark

Program operator:

The Norwegian EPD Foundation
Post Box 5250 Majorstuen, 0303 Oslo, Norway
Phone: +47 977 22 020
web: www.epd-norge.no

Declaration number:

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR.
NPCR 012:2022 Part B for Thermal insulation products

Statement of liability:

The owner of the declaration shall be liable for the underlying information and evidence. EPD Norway shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Declared unit:

1 m2 Jackopor Flamingo 80 Drænplade Denmark

Declared unit with option:

A1,A2,A3,A4,A5,C1,C2,C3,C4,D

Functional unit:

1 m^2 of EPS basement wall insulation material (Jackopor Flamingo 80 Drænplade) with a thickness (38 mm) designed to provide a thermal resistance (R-value) = 1 m^2K/W within an expected service life for insulation materials.

General information on verification of EPD from EPD tools:

Independent verification of data, other environmental information and the declaration according to ISO 14025:2010, § 8.1.3 and § 8.1.4. Verification of each EPD is made according to EPD-Norway's guidelines for verification and approval requiring that tools are i) integrated into the company's environmental management system, ii) the procedures for use of the EPD tool are approved by EPD-Norway, and iii) the process is reviewed annually by an independent third party verifier. See Appendix G of EPD-Norway's General Programme Instructions for further information on EPD tools

Verification of EPD tool:

Independent third party verification of the EPD tool, background data and test-EPD in accordance with EPDNorway's procedures and guidelines for verification and approval of EPD tools.

Third party verifier:

Elisabet Amat, GREENIZE projects

(no signature required)

Owner of the declaration:

BEWI ASA, Insulation and Construction
Contact person: Marc Storm Andersen
Phone: +45 72157902
e-mail: marc.andersen@bewi.com

Manufacturer:

BEWI Insulation Danmark A/S
Lundagervej 20
8722 Hedensted, Denmark

Place of production:

BEWI Denmark

, Denmark

Management system:

ISO 14001 og 9001 for all production sites

Organisation no:

925437948

Issue date:

Valid to:

Year of study:

2023

Comparability:

EPD of construction products may not be comparable if they not comply with EN 15804:2012+A2:2019 and seen in a building context.

Development and verification of EPD:

The declaration is created using EPD tool lca.tools ver EPD2022.03, developed by LCA.no. The EPD tool is integrated in the company's management system, and has been approved by EPD Norway.

Developer of EPD: Martin Bendix

Reviewer of company-specific input data and EPD: Mark Plate

Approved:

Product

Product description:

Product variation and calculation of averages:
- The insulation board is provided in several dimensions and thicknesses. Please use the conversion table in this EPD for other sizes and densities than the declared variant.

Product description:
- Expanded polystyrene (EPS) is a common material used for thermal insulation of buildings, including floors, walls and roofs. It is a polymer foam, consisting of air-filled polystyrene cells. As 98% of the material is air, EPS provides good insulating properties at a low weight. Other characteristics of the material include low moisture absorption, long service life, high compressive strength and 100% recyclable.
- EPS is manufactured through permeating polystyrene beads with pentane, allowing the beads to expand when exposed to steam. This addition of a so-called blowing agent adds 4% - 6% w/w. The expanded polystyrene (EPS) beads are then fed into a block molding machine, where steam and pressure forms large blocks of EPS. The amount of EPS going into the mold determines the density of the block, where pressure class 80 (JP80) provides a compressive strength at 80 kN/m^2, which is approximately 15,0 kg/m^3. After molding, the remaining blowing agent, pentane, is aired out and the blocks are cut into the desired shape.
- The EPS boards used for exterior basement wall insulation are delivered with sharp edges, with grooves milled on one side, and covered with a non-woven fabric geotextile.
- Weight per declared unit is 0,73 kg given a density of 15,0 kg/m^3 with a thickness of 38 mm including non-woven fabric geotextile, glue and packaging material.

Product specification

Materials	kg	%
Adhesive	0,01	2,03
Others	0,13	18,10
Packaging - EPS	0,00	0,53
Plastic - Polystyrene expandable (EPS)	0,57	79,34
Total	0,72	100,00

Packaging	kg	%
Packaging - Plastic	0,01	100,00
Total incl. packaging	0,73	100,00

Technical data:

The declared products are covered by harmonized technical specification DS/EN13163.
Typical size: 600 x 2400 mm
Typical thickness: 50 mm - 500 mm
Thermal conductivity = 0,038 W/mK (EN 12667)
Compressive strength at 10 % deformation, CS(10) = 80 kPa (EN 826)
Durability of compressive strength against ageing and degradation, Compressive creep (2%), CC = 24 kPa (30% of CS(10)) - (DS/EN ISO 16534)
Fire class (Reaction to fire): NPD (Euroclass F - EN 13501)

Further technical information can be obtained on www.bewi.com and in the table below.

Product - CS(10)	Density [kg/m3]	Thermal conductivity [W/mK]	Mass per declared unit [kg]	Conversion factor to 1 kg
JP60 - (60 kPa)	13,0	0,041	0,69	1,45
JP80 - (80 kPa)	15,0	0,038	0,73	1,37
JP150 - (150 kPa)	23,5	0,035	0,98	1,02
JP250 - (250 kPa)	34,0	0,033	1,28	0,78
JP300 - (300 kPa)	39,5	0,033	1,46	0,68

Market:

Denmark

Reference service life, product

The reference service life of EPS products varies depending on where in the building the products are used. In Denmark, the service life tables from BUILD are used to determine the reference service life of EPS in various building contexts (according to BR18 § 297 Stk. 7).
Link: https://vbn.aau.dk/da/publications/build-levetidstabel-version-2021

Reference service life, building or construction works

The reference service life of a building varies depending on the building type. In Denmark, the service life tables from BUILD are used to determine the reference service life of the various building types.
Link: https://vbn.aau.dk/da/publications/build-levetidstabel-version-2021

LCA: Calculation rules

Declared unit:

1 m2 Jackopor Flamingo 80 Drænplade Denmark

Cut-off criteria:

All major raw materials and all the essential energy is included. The production processes for raw materials and energy flows with very small amounts (less than 1%) are not included. These cut-off criteria do not apply for hazardous materials and substances.

Allocation:

The allocation is made in accordance with the provisions of EN 15804+A2. Incoming energy and water and waste production in-house is allocated equally among all products through mass allocation. Effects of primary production of recycled materials is allocated to the main product in which the material was used. The recycling process and transportation of the material is allocated to this analysis.

Data quality:

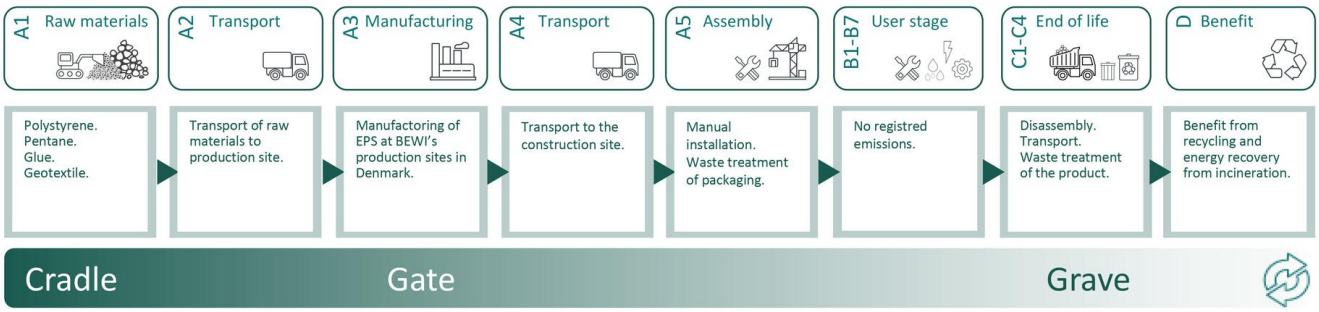
Specific data for the product composition are provided by the manufacturer. The data represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to EN 15804 and different LCA databases. The data quality of the raw materials in A1 is presented in the table below.

Materials	Source	Data quality	Year
Adhesive	ecoinvent 3.6	Database	2019
Others	ecoinvent 3.6	Database	2019
Packaging - EPS	Plastics Europe + ecoinvent 3.6	European average.	2019
Packaging - Plastic	ecoinvent 3.6	Database	2019
Plastic - Polystyrene expandable (EPS)	Supplier Specific	Project EPD	2024

System boundaries (X=included, MND=module not declared, MNR=module not relevant)

Product stage			Construction installation stage		Use stage							End of life stage				Beyond the system boundaries
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
X	X	X	X	X	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X

System boundary:



Conversion factors to other compressive strengths [kPa] and thicknesses [mm]

Conversion table to other types, based on approximate average densities. It is important to notice, that the functional unit changes when these product properties changes. EPS with higher compressive stress will have a higher thermal resistance and increased thickness also increases the thermal resistance. The EPS can also have other properties which alters the application areas. For more detailed or accurate values regarding the other densities than the declared (JP80) – see the respective EPD for the individual product.

Note that when the conversion factors are used to convert the LCA results, the LCA results are only presented with 2 significant figures, which may lead to variations in the converted values. Because of that, the most accurate conversions is achieved from a digital conversion/calculation og by using the relevant EPD for the respective density.

		38 mm	50 mm	100 mm	150 mm	200 mm	250 mm	300 mm	1 m3
JP60	(60 kPa)	0,95	1,15	1,95	2,76	3,57	4,38	5,19	16,49
JP80	(80 kPa)	**1,00**	1,26	2,35	3,45	4,54	5,63	6,73	22,02
JP150	(150 kPa)	1,32	1,68	3,20	4,71	6,23	7,75	9,26	30,48
JP250	(250 kPa)	1,69	2,23	4,45	6,67	8,89	11,11	13,33	44,41
JP300	(300 kPa)	1,92	2,54	5,12	7,70	10,28	12,86	15,44	51,56

Conversion to other thicknesses than the listed in the table above.

If you need a conversion factor for other thicknesses or densities than above – please interpolate between the values.

GWP-total results for JP80 (for the declared unit - in aggregated form)

A1-A3 = 1,78 kg CO_2 - eq

A1-A3, B4, B6, C3, C4 = 3,79 kg CO_2 – eq (In addition, A4 and A5 combined account for approx. 0,02 kg CO2 – eq)

A1-A3, B4, B6, C3, C4, D = 3,38 kg CO_2 – eq (In addition, A4 and A5 combined account for approx. 0,02 kg CO2 – eq)



Additional technical information:

LCA: Scenarios and additional technical information

The following information describe the scenarios in the different modules of the EPD.

Product & Construction installation stages (A1-A5)

- The product stage includes the acquisition of all raw materials, products and energy, transport to the production site, packaging, and waste processing up to the "end-of-waste" state or final disposal.

- No solid waste is generated from the production of EPS products, as the waste is immediately returned to production line (however, some solid waste is produced from the raw material packaging, e.g., cardboard).

- The pentane content in the EPS products is highest right after production, after which it continues to decrease. After approximately one month almost all the pentane has been emitted from the products. The release of pentane is reported in module A3 since it relates to the production.

- A2-A4 is based on a weighted average for BEWI Denmark's Danish production sites (BEWI Hedensted and Maribo).

- For A4, a weighted average distance is calculated based on the distance from BEWI Hedensted to three outer areas: Skagen, Padborg and Nyborg, and from BEWI Maribo to Copenhagen, Kalundborg and Odense. The weighted average distance is 170 km.

End of Life stage (C1-C4) includes:

- The EPS product is dismantled manually, thus, no environmental impacts are associated with module C1. The dismantled EPS product is transported 20 km to an incineration plant by a EURO 6 diesel truck.

- Incineration of the dismantled EPS is included in module C3. Energy credits related to energy recovery from the incineration is included in module D.

Re-use, recovery, and recycling potential (D) includes:

- Credits for energy recovery related to the incineration is included in module D.

- The packaging materials, LDPE foil and EPS pallets, reach the end-of-waste stage in module A5, and the benefits from recycling and incineration of the packaging materials are included in module D.

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 16-32 tonnes, EURO 6 (kgkm)	36,7 %	170	0,043	l/tkm	7,31

Assembly (A5)	Unit	Value			
Waste, packaging, plastic to average treatment - A5 (inkl transport) (kg)	kg	0,01			

De-construction demolition (C1)	Unit	Value			
Waste treatment, PS, Insulation, Denmark (kg)	kg/DU	0,71			

Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 7.5-16 tonnes, EURO 6 (kgkm)	35,4 %	20	0,056	l/tkm	1,12

Waste processing (C3)	Unit	Value			
Recycling of PS	kg	0,08			
Waste, Polystyrene, incineration	kg	0,63			

Disposal (C4)	Unit	Value			
Landfilling of ashes from incineration of PS	kg	0,00			
Waste, inert waste, to landfill (kg)	kg	0,01			

Benefits and loads beyond the system boundaries (D)	Unit	Value			
substitution of electricity (MJ)	MJ	0,36			
Substitution of expandable polystyrene, EPS, granulate (kg)	kg	0,08			
Substitution of thermal energy (MJ)	MJ	20,08			

LCA: Results

The LCA results are presented below for the declared unit defined on page 2 of the EPD document.

Environmental impact												
	Indicator	**Unit**	A1	A2	A3	A4	A5	C1	C2	C3	C4	D
	GWP-total	kg CO_2 -eq	1,56E+00	2,64E-02	1,94E-01	2,02E-02	1,01E-03	0,00E+00	3,12E-03	2,01E+00	1,56E-04	-4,10E-01
	GWP-fossil	kg CO_2 -eq	1,61E+00	2,63E-02	1,93E-01	2,02E-02	1,01E-03	0,00E+00	3,12E-03	2,01E+00	1,56E-04	-4,04E-01
	GWP-biogenic	kg CO_2 -eq	-4,43E-02	1,10E-05	7,69E-04	8,36E-06	1,40E-07	0,00E+00	1,44E-06	1,38E-05	1,20E-07	-2,01E-03
	GWP-luluc	kg CO_2 -eq	6,58E-04	8,76E-06	5,77E-05	7,19E-06	7,76E-08	0,00E+00	1,35E-06	2,19E-06	2,94E-08	-3,98E-03
	ODP	kg CFC11 -eq	9,48E-08	6,18E-09	4,21E-09	4,58E-09	6,10E-11	0,00E+00	6,84E-10	1,44E-09	3,20E-11	-8,48E-03
	AP	mol H+ -eq	4,17E-03	1,00E-04	2,00E-04	5,80E-05	1,25E-06	0,00E+00	8,95E-06	2,38E-04	8,65E-07	-1,92E-03
	EP-FreshWater	kg P -eq	1,79E-05	2,07E-07	3,48E-06	1,61E-07	2,08E-09	0,00E+00	2,86E-08	1,42E-07	1,98E-09	-1,50E-05
	EP-Marine	kg N -eq	9,45E-04	2,20E-05	3,69E-05	1,15E-05	1,14E-06	0,00E+00	1,69E-06	1,15E-04	3,01E-07	-4,61E-04
	EP-Terrestial	mol N -eq	1,00E-02	2,45E-04	4,94E-04	1,28E-04	4,47E-06	0,00E+00	1,90E-05	1,23E-03	3,36E-06	-4,96E-03
	POCP	kg NMVOC -eq	3,90E-03	8,78E-05	2,19E-02	4,92E-05	1,47E-06	0,00E+00	7,27E-06	2,94E-04	9,49E-07	-1,80E-03
	ADP-minerals&metals[1]	kg Sb-eq	6,50E-06	5,63E-07	4,04E-07	5,58E-07	5,39E-09	0,00E+00	1,12E-07	6,19E-08	1,08E-09	-7,43E-07
	ADP-fossil[1]	MJ	5,50E+01	4,14E-01	7,91E-01	3,05E-01	4,17E-03	0,00E+00	4,65E-02	1,23E-01	2,50E-03	-8,09E+00
	WDP[1]	m^3	1,45E+01	3,44E-01	8,55E+00	2,95E-01	1,48E-02	0,00E+00	5,56E-02	2,72E-01	1,92E-02	-5,98E+00

GWP-total = Global Warming Potential total; 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

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"
*INA Indicator Not Assessed

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 experienced with the indicator

Remarks to environmental impacts

Additional environmental impact indicators

Indicator		Unit	A1	A2	A3	A4	A5	C1	C2	C3	C4	D
	PM	Disease incidence	3,06E-08	2,06E-09	1,12E-09	1,24E-09	2,30E-11	0,00E+00	1,75E-10	1,00E-09	1,50E-11	-6,72E-08
	IRP[2]	kgBq U235 -eq	3,83E-02	1,81E-03	3,13E-03	1,33E-03	1,89E-05	0,00E+00	2,03E-04	2,05E-04	1,16E-05	-9,11E-03
	ETP-fw[1]	CTUe	2,22E+02	3,03E-01	5,37E+00	2,26E-01	3,98E-03	0,00E+00	3,63E-02	2,96E-01	2,51E-03	-9,81E+00
	HTP-c[1]	CTUh	6,21E-10	0,00E+00	2,40E-11	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,40E-11	0,00E+00	-2,06E-10
	HTP-nc[1]	CTUh	2,32E-08	3,07E-10	7,58E-10	2,47E-10	4,00E-12	0,00E+00	4,40E-11	3,33E-09	4,00E-12	-8,81E-09
	SQP[1]	dimensionless	4,87E+00	3,97E-01	9,04E-01	2,14E-01	7,29E-03	0,00E+00	2,77E-02	1,46E-02	8,66E-03	-1,11E+01

PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Potential Soil Quality Index (dimensionless)

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"
*INA Indicator Not Assessed

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 experienced with the indicator
2. 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.

Resource use												
Indicator		Unit	A1	A2	A3	A4	A5	C1	C2	C3	C4	D
	PERE	MJ	1,71E+00	5,43E-03	4,64E-01	4,37E-03	1,05E-04	0,00E+00	7,92E-04	3,54E-03	1,10E-04	-9,20E+00
	PERM	MJ	3,67E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	PERT	MJ	2,08E+00	5,43E-03	4,64E-01	4,37E-03	1,05E-04	0,00E+00	7,92E-04	3,54E-03	1,10E-04	-9,20E+00
	PENRE	MJ	4,42E+01	4,14E-01	7,91E-01	3,05E-01	4,17E-03	0,00E+00	4,65E-02	1,23E-01	2,50E-03	-8,09E+00
	PENRM	MJ	2,74E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	PENRT	MJ	7,16E+01	4,14E-01	7,91E-01	3,05E-01	4,17E-03	0,00E+00	4,65E-02	1,23E-01	2,50E-03	-8,09E+00
	SM	kg	6,20E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	RSF	MJ	7,21E-02	1,91E-04	1,75E-02	1,56E-04	2,76E-06	0,00E+00	2,86E-05	9,86E-05	2,49E-06	-9,26E-04
	NRSF	MJ	8,73E-03	6,54E-04	4,12E-04	5,59E-04	7,24E-06	0,00E+00	1,04E-04	0,00E+00	2,08E-04	-6,07E-01
	FW	m^3	2,60E-02	4,55E-05	2,98E-03	3,27E-05	2,21E-06	0,00E+00	5,54E-06	3,48E-04	2,80E-06	-9,15E-03

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 resources; SM = Use of secondary materials; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"
*INA Indicator Not Assessed

End of life - Waste

Indicator		Unit	A1	A2	A3	A4	A5	C1	C2	C3	C4	D
	HWD	kg	3,31E-03	2,21E-05	4,19E-04	1,58E-05	0,00E+00	0,00E+00	2,58E-06	0,00E+00	1,62E-03	-1,39E-04
	NHWD	kg	8,97E-02	2,93E-02	4,41E-03	1,49E-02	1,28E-02	0,00E+00	1,84E-03	0,00E+00	7,95E-03	-3,59E-02
	RWD	kg	5,87E-05	2,83E-06	2,45E-06	2,08E-06	0,00E+00	0,00E+00	3,14E-07	0,00E+00	5,36E-09	-7,98E-06

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"
*INA Indicator Not Assessed

End of life - Output flow

Indicator		Unit	A1	A2	A3	A4	A5	C1	C2	C3	C4	D
	CRU	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	MFR	kg	7,24E-04	0,00E+00	1,07E-02	0,00E+00	6,52E-03	0,00E+00	0,00E+00	7,86E-02	0,00E+00	0,00E+00
	MER	kg	5,58E-03	0,00E+00	6,61E-03	0,00E+00	6,39E-07	0,00E+00	0,00E+00	6,29E-01	0,00E+00	0,00E+00
	EEE	MJ	3,37E-03	0,00E+00	4,83E-03	0,00E+00	9,82E-07	0,00E+00	0,00E+00	1,11E+00	0,00E+00	0,00E+00
	EET	MJ	5,10E-02	0,00E+00	7,31E-02	0,00E+00	1,49E-05	0,00E+00	0,00E+00	1,68E+01	0,00E+00	0,00E+00

CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported energy electrical; EET = Exported energy thermal

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"
*INA Indicator Not Assessed

Biogenic Carbon Content

Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in accompanying packaging	kg C	1,39E-02

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO2

Additional requirements

Greenhouse gas emissions from the use of electricity in the manufacturing phase

National production mix from import, low voltage (production of transmission lines, in addition to direct emissions and losses in grid) of applied electricity for the manufacturing process (A3).

Electricity mix	Source	Amount	Unit
Electricity, Denmark (kWh)	ecoinvent 3.6	338,20	g CO2-eq/kWh

Dangerous substances

The product contains no substances given by the REACH Candidate list.

Indoor environment

The EPD does not give information on release of dangerous substances to indoor air because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.1.

The EPD does not give information on release of dangerous substances to soil and water because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.2.

Additional Environmental Information

Additional environmental impact indicators required in NPCR Part A for construction products											
Indicator	**Unit**	A1	A2	A3	A4	A5	C1	C2	C3	C4	D
GWPIOBC	kg CO_2 -eq	1,61E+00	2,64E-02	2,10E-01	2,02E-02	1,01E-03	0,00E+00	3,12E-03	2,00E+00	1,60E-04	-4,08E-01

GWP-IOBC: Global warming potential calculated according to the principle of instantaneous oxidation. In order to increase the transparency of biogenic carbon contribution to climate impact, the indicator GWP-IOBC is required as it declares climate impacts calculated according to the principle of instantaneous oxidation. GWP-IOBC is also referred to as GWP-GHG in context to Swedish public procurement legislation.

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