epd-norge
Global program operatør

Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

Harmonie Exterior Door 63m without IGU (Insulated Glass Unit)

HARMONIE

The Norwegian EPD Foundation

Owner of the declaration:
Harmonie Norge AS

Product:
Harmonie Exterior Door 63m without IGU (Insulated Glass Unit)

Declared unit:
1 pcs

This declaration is based on Product Category Rules:
CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NCPR 014:2019 Part B for Windows and doors

Program operator:
The Norwegian EPD Foundation

Declaration number:

NEPD-4824-4079-EN

Registration number:

NEPD-4824-4079-EN

Issue date: 31.08.2023

Valid to: 31.08.2028

EPD Software:
LCA.no EPD generator ID: 64044

General information

Product

Harmonie Exterior Door 63m without IGU (Insulated Glass Unit)

Owner of the declaration:

Harmonie Norge AS
Contact person: Paul Roman
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Program operator:

Post Box 5250 Majorstuen, 0303 Oslo, Norway
The Norwegian EPD Foundation
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Manufacturer:

Harmonie Norge AS
Borgeskogen 36
3160 Stokke, Norway

Declaration number:

NEPD-4824-4079-EN

Place of production:

Harmonie prod. Romania

, Romania

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NCPR 014:2019 Part B for Windows and doors

Management system:

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.

Organisation no:

912591743

Declared unit:

1 pcs Harmonie Exterior Door 63m without IGU (Insulated Glass Unit)

Issue date: 31.08.2023

Declared unit with option:

A1-A3,A4,A5,B2,B4,C1,C2,C3,C4,D

Valid to: 31.08.2028

Year of study:

2022

Functional unit:

One exterior door with double IGU (Insulating Glass Unit), dimension 1230 mm x 2180 mm (reference door based on EN 14351-1), thickness 63 mm, and expected service life of 30 years.

Comparability:

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

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

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: Solmaz Atarodi

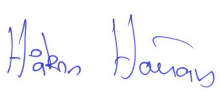
Reviewer of company-specific input data and EPD: Paul Roman

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:

Approved:



Gaylord K. Booto, NILU

(no signature required)

Håkon Hauan, CEO EPD-Norge

Product

Product description:

Exterior door used on walls in residential and non-residential constructions.

Product specification

This EPD applies to a door set (door + frame) painted surfaces. The door set size is 1230 mm x 2180 mm.

Materials	kg	%
Glue for wood	0,38	0,80
Paint, water-based	1,50	3,18
Metal - Steel	1,30	2,77
Metal - Aluminium	4,86	10,31
Plastic - Polystyrene expandable (EPS)	2,41	5,11
Metal - Stainless steel	1,08	2,29
Rubber, synthetic	0,26	0,56
Wood - Fibreboard	15,53	32,95
Wood - Laminated wood	10,34	21,94
Wood - Solid oak	1,01	2,14
Wood - Solid pine	8,46	17,95
Total	47,13	

Packaging	kg	%
Packaging - Cardboard	1,86	39,25
Packaging - Plastic	0,02	0,38
Packaging - Wood	2,86	60,37
Total incl. packaging	51,87	

Technical data:

Available in the majority of NCS S / RAL color palettes.

U-value	Frame and doorleaf thick thickness	Area of FU
0.74	105 mm and 63 mm	2.68 m^2

Market:

Scandinavian countries, but scenarios beyond cradle-to-gate are based on the situation in the Norwegian market.

Reference service life, product

30 years

Reference service life, building or construction works

60 years.

LCA: Calculation rules

Declared unit:

1 pcs Harmonie Exterior Door 63m without IGU (Insulated Glass Unit)

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. 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. The PCR specific background data follow the allocation rules in the Ecoinvent v3.7.1 Cut-off database version. The allocation of water, energy and waste flows within the production facilities for windows and doors follows unit-based allocation adjusted with a point system to different product groups or products. This score system is regulated by a factor which increases with the resource intensity of each product. The unit-based allocation is adjusted by the weight of the product, excluding the weight of glass.

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.

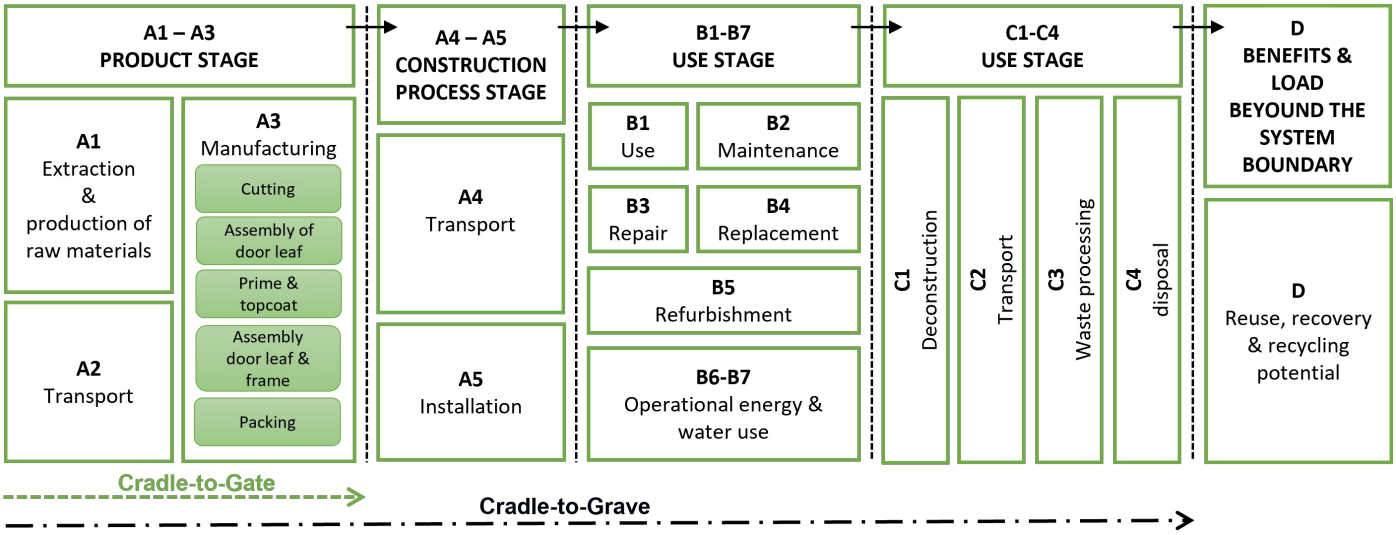
Materials	Source	Data quality	Year
Glue for wood	ecoinvent 3.6	Database	2019
Metal - Aluminium	ecoinvent 3.6	database	2019
Metal - Stainless steel	ecoinvent 3.6	Database	2019
Metal - Steel	ecoinvent 3.6	Database	2019
Packaging - Cardboard	ecoinvent 3.6	Database	2019
Packaging - Plastic	ecoinvent 3.6	Database	2019
Packaging - Wood	ecoinvent 3.6	Database	2019
Plastic - Polystyrene expandable (EPS)	ecoinvent 3.6	Database	2019
Rubber, synthetic	ecoinvent 3.6	Database	2019
Wood - Fibreboard	ecoinvent 3.6	Database	2019
Paint, water-based	ecoinvent 3.7.1	Database	2020
Wood - Laminated wood	ecoinvent 3.7.1	Specific	2020
Wood - Solid oak	modified ecoinvent 3.6	Database	2019
Wood - Solid pine	modified ecoinvent 3.6	Database	2019

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	X	MND	X	MND	MND	MND	X	X	X	X	X

System boundary:

According to the standard NS-EN 15804:2012+A2:2019, NPCR PART A (construction products and services), and NPCR 014 (Part B for windows and doors), the system boundary is cradle to grave and module D.



Additional technical information:

For the products with different sizes from the declared unit, the environmental impacts must be converted by using a conversion factor. The Norwegian EPD Foundation has published instructions on how to interpret EPDs for windows on its website (www.epdnorge.no) where different calculation methods have been stated. (Document: Bruksanvisninger i hvordan tolke EPD'er - Vinduer).

LCA: Scenarios and additional technical information

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

A4- Transport
Based on information from the manufacturer, the transportation scenario for the final packed product from the manufacturer to the construction site is as the following: from the factory in Romania to the warehouse in Stokke, Norway: 452 km by Euro 6- medium truck, 1376 km by train, 99 km by boat, and 568 km by Euro 6- medium truck.
The average transportation distance from the warehouse to the installation site is assumed 50 km by medium truck.

A5- Assembly
According to the report from EPD-Norge Harmonising the documentation of scenarios beyond cradle to gate, EN 15804 there is no loss on-site during construction activities. Since painting and surface treatment are done before installation, installation materials are negligible and not included in this assessment. Energy consumption during installation can be varied depending on the floor, type of building, and several other unknown parameters, and therefore ignored in the calculation. So, the installation module includes waste treatment of packaging waste.
The contribution from auxiliary materials used for installation, e.g., fixings, sealants, and insulation materials, is commonly considered to be within the cut-off criteria (6.3.4.3 Construction stage, NS-EN 17213:2020).

B1- Use
Use of the installed product in terms of any emissions to the environment (not covered by B2-B7). Module not declared.

B2- Maintenance
The maintenance scenario includes cleaning and painting. Cleaning is performed two times washing per year for doors without glass. It is calculated with 45 ml of detergent and 4.5 liters of water each year during RSL of the building.
Doors are assumed to be painted 1 time during their lifetime from the inside and 2 times from the outside. It is assumed that 5 gr of lubricating oil is used every year for fittings and moving parts.

B3- Repair
No repair is assumed during the product's lifetime. Module not declared.

B4- Replacement
The doorset has an RSL (Reference Service Life) of 30 years. The IGU shall be considered with a maximum of 30 years as well. So, if the lifetime of the building is assumed 60 years, a one-time replacement will be necessary when the IGU reaches its end of life.

B5- Refurbishment
There is no need for refurbishment during the product's lifetime. Module not declared.

B6 and B7
Module not declared.

C1- Deconstruction demolition
In the C module, the end-of-life scenario is assumed that the door is demounted during the deconstruction process and no separate energy from a machine is required for this process.

C2-Transport
The entire doorset is transported to a municipal waste collection and sorting station, and the average transport distance from the demolition place to the station is assumed to be 85 km.
C3- Waste processing
Based on Table 1 in NPCR 014 Part B- Windows and Doors, the door is assumed as mixed waste and sent to municipal incineration with energy recovery.

C4- Disposal
The ashes from municipal incineration, that are not separated for recycling goals, are transferred to landfilling.

D- Benefits and loads beyond the system boundaries
The combustible materials (plastic and timber) are considered as energy recovered materials. Energy recovery from incineration is assumed with the process efficiency rate of the power station above 60 %.
The metals are separated from the bottom ashes and recycled. Since there is no data on the share recycled, the Ecoinvent database is employed (B.3, NS-EN 17213:2020) Here the assumption is that recovered metals can be substituted by the primary metals used (6.4.3.3, EN 15804).

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Ship, Ferry, Sea (km)	50,0 %	99	0,034	l/tkm	3,37
Train, freight (kgkm)	0,0 %	1376	0,000	0	0,00
Truck, 16-32 tonnes, EURO 6 (km) - Europe	36,7 %	568	0,043	l/tkm	24,42
Truck, 16-32 tonnes, EURO 6 (km) - Europe	36,7 %	50	0,043	l/tkm	2,15
Truck, 16-32 tonnes, EURO 6 (km) - Europe	36,7 %	452	0,043	l/tkm	19,44

Assembly (A5)	Unit	Value			
Waste, packaging, cardboard, to average treatment (kg)	kg	1,86			
Waste, packaging, chipboard, to average treatment (kg)	kg	1,60			
Waste, packaging, pallet, wooden pallet, single use, average treatment (kg)	kg	1,26			
Waste, packaging, plastic film (LDPE), to average treatment (kg)	kg	0,02			

Maintenance (B2)	Unit	Value			
Lubricant (kg)	kg/DU	0,30			
Soap water, 5% solution with household detergent (kg)	kg/DU	1,82			
Wastewater, average treatment (m3)	m3	0,18			
Water, tap water (kg)	kg/DU	180,00			

Maintenance (B2)	Unit	Value			
Paint, 40% water, wet mass	kg	1.80			

Replacement (B4)	Unit	Value			
Replace product (pcs)	Units/DU	1,00			
Waste treatment of replaced product (pcs)	Units/DU	1,00			

Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, unspecified (km) - Europe	48,7 %	85	0,051	l/tkm	4,34

Waste processing (C3)	Unit	Value			
Materials to recycling (kg)	kg	6,88			
Waste treatment per kg Expanded Polystyrene (EPS), incineration - C3 (kg)	kg	2,41			
Waste treatment per kg Paint, hazardous waste incineration (kg)	kg	1,50			
Waste treatment per kg Polyurethane (PU), incineration (kg)	kg	0,36			
Waste treatment per kg Polyvinylchloride (PVC), incineration with fly ash extraction (kg)	kg	0,90			
Waste treatment per kg Rubber, municipal incineration with fly ash extraction (kg)	kg	0,26			
Waste treatment per kg Wood, incineration with fly ash extraction (kg)	kg	15,71			

Disposal (C4)	Unit	Value			
Landfilling of ashes from incineration of expanded polystyrene (EPS), process per kg ashes and residues - C4 (kg)	kg	0,09			
Landfilling of ashes from incineration of Paint, hazardous waste incineration, process of ashes and residues (kg)	kg	0,04			
Landfilling of ashes from incineration of Polyurethane (PU), process per kg ashes and residues - C4 (kg)	kg	0,01			
Landfilling of ashes from incineration of Polyvinylchloride (PVC), process per kg ashes and residues (kg)	kg	0,14			
Landfilling of ashes from incineration of Rubber, process per kg ashes and residues - C4 (kg)	kg	0,01			
Landfilling of ashes from incineration of Wood, process per kg ashes and residues (kg)	kg	0,18			
Waste, aluminium, to landfill (kg)	kg	0,24			
Waste, glue, to landfill (kg)	kg	0,02			
Waste, scrap steel, to landfill (kg)	kg	0,10			
Waste, wood, untreated, to landfill (kg)	kg	0,83			

Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of electricity, in Norway (MJ)	MJ	16,38			
Substitution of primary aluminium with net scrap (kg)	kg	4,62			
Substitution of primary steel with net scrap (kg)	kg	1,98			
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	247,77			

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-A3	A4	A5	B2	B4	C1	C2	C3	C4	D
	GWP-total	kg CO_2 -eq	5,30E+01	1,30E+01	7,87E+00	3,00E+00	1,19E+02	0	5,81E-01	4,44E+01	1,46E-01	-4,56E+01
	GWP-fossil	kg CO_2 -eq	1,17E+02	1,30E+01	1,09E-01	2,61E+00	1,47E+02	0	5,80E-01	1,63E+01	7,57E-02	-4,46E+01
	GWP-biogenic	kg CO_2 -eq	-6,72E+01	1,03E-02	7,76E+00	9,93E-02	-3,13E+01	0	2,49E-04	2,81E+01	7,03E-02	-1,93E-01
	GWP-luluc	kg CO_2 -eq	3,02E+00	8,19E-03	2,98E-05	2,84E-01	3,02E+00	0	2,05E-04	6,48E-04	1,12E-05	-8,29E-01
	ODP	kg CFC11 -eq	1,18E-05	2,67E-06	1,87E-08	7,17E-07	1,50E-05	0	1,32E-07	3,81E-07	8,28E-09	-1,05E-01
	AP	mol H+ -eq	7,60E-01	7,51E-02	7,63E-04	1,41E-02	8,49E-01	0	3,31E-03	9,56E-03	2,76E-04	-3,00E-01
	EP-FreshWater	kg P -eq	9,32E-03	1,68E-04	1,17E-06	1,65E-03	9,51E-03	0	4,77E-06	1,73E-05	1,06E-06	-1,85E-03
	EP-Marine	kg N -eq	1,17E-01	2,15E-02	3,14E-04	8,85E-03	1,43E-01	0	1,18E-03	3,15E-03	1,34E-04	-4,11E-02
	EP-Terrestial	mol N -eq	1,23E+00	2,39E-01	3,36E-03	4,15E-02	1,52E+00	0	1,30E-02	3,38E-02	9,99E-04	-4,50E-01
	POCP	kg NMVOC -eq	4,37E-01	7,07E-02	8,80E-04	1,80E-02	5,22E-01	0	3,73E-03	9,21E-03	2,95E-04	-1,52E-01
	ADP-minerals&metals[1]	kg Sb -eq	8,01E-03	2,81E-04	1,99E-06	4,81E-05	8,31E-03	0	1,50E-05	9,25E-06	3,15E-07	1,12E-05
	ADP-fossil[1]	MJ	1,82E+03	1,88E+02	1,33E+00	5,18E+01	2,04E+03	0	8,91E+00	2,32E+01	7,04E-01	-5,60E+02
	WDP[1]	m^3	3,15E+04	1,90E+02	1,95E+00	8,24E+01	3,18E+04	0	8,44E+00	1,35E+02	9,99E+00	-2,36E+04

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-A3	A4	A5	B2	B4	C1	C2	C3	C4	D
	PM	Disease incidence	8,19E-06	8,56E-07	9,70E-09	2,14E-07	9,25E-06	0	5,29E-08	1,40E-07	3,68E-09	-3,76E-06
	IRP[2]	kgBq U235 -eq	1,11E+01	8,31E-01	5,11E-03	2,23E-01	1,21E+01	0	3,89E-02	1,04E-01	3,67E-03	-2,39E+00
	ETP-fw[1]	CTUe	2,59E+03	1,58E+02	1,60E+00	1,24E+02	3,05E+03	0	6,66E+00	1,42E+02	1,52E+02	-8,52E+02
	HTP-c[1]	CTUh	3,22E-07	0,00E+00	1,31E-10	2,19E-09	3,33E-07	0	0,00E+00	1,17E-08	6,70E-11	-1,16E-07
	HTP-nc[1]	CTUh	3,24E-06	1,88E-07	6,21E-09	5,90E-08	3,53E-06	0	8,82E-09	8,91E-08	2,36E-09	-1,09E-06
	SQP[1]	dimensionless	5,82E+03	1,28E+02	8,00E-01	4,16E+01	5,97E+03	0	7,62E+00	1,08E+01	2,58E+00	-1,43E+02

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-A3	A4	A5	B2	B4	C1	C2	C3	C4	D
	PERE	MJ	7,59E+02	4,61E+00	2,57E-02	4,21E+00	7,68E+02	0	1,28E-01	4,53E+00	5,38E-02	-3,17E+02
	PERM	MJ	5,21E+02	0,00E+00	-4,70E+01	0,00E+00	3,07E+02	0	0,00E+00	-1,66E+02	0,00E+00	0,00E+00
	PERT	MJ	1,25E+03	4,61E+00	-4,70E+01	4,21E+00	1,05E+03	0	1,28E-01	-1,62E+02	5,38E-02	-3,17E+02
	PENRE	MJ	1,71E+03	1,88E+02	1,33E+00	5,23E+01	1,93E+03	0	8,91E+00	2,32E+01	7,04E-01	-5,60E+02
	PENRM	MJ	1,19E+02	0,00E+00	-7,64E-01	0,00E+00	-1,81E+01	0	0,00E+00	-1,37E+02	0,00E+00	0,00E+00
	PENRT	MJ	1,82E+03	1,88E+02	5,67E-01	5,23E+01	1,91E+03	0	8,91E+00	-1,13E+02	7,04E-01	-5,60E+02
	SM	kg	1,78E+00	0,00E+00	0,00E+00	0,00E+00	1,78E+00	0	0,00E+00	0,00E+00	8,82E-05	0,00E+00
	RSF	MJ	4,97E+00	1,11E-01	7,76E-04	3,09E-02	5,19E+00	0	4,55E-03	9,34E-02	1,25E-03	-2,08E-02
	NRSF	MJ	9,51E-02	5,35E-01	7,13E-03	8,55E-03	7,50E-01	0	1,60E-02	0,00E+00	9,64E-02	-4,96E+00
	FW	m^3	2,64E+00	3,26E-02	8,60E-04	5,72E-02	2,75E+00	0	1,01E-03	6,78E-02	7,48E-04	-1,19E+00

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-A3	A4	A5	B2	B4	C1	C2	C3	C4	D
	HWD	kg	6,29E-01	1,88E-02	0,00E+00	3,45E-02	8,84E-01	0	4,80E-04	0,00E+00	2,35E-01	1,61E-01
	NHWD	kg	3,94E+01	7,31E+00	4,74E+00	2,12E+00	5,36E+01	0	5,52E-01	0,00E+00	1,53E+00	-1,33E+01
	RWD	kg	9,60E-03	1,23E-03	0,00E+00	3,26E-04	1,09E-02	0	6,06E-05	0,00E+00	2,86E-06	-2,23E-03

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-A3	A4	A5	B2	B4	C1	C2	C3	C4	D
	CRU	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	MFR	kg	2,24E+00	0,00E+00	1,74E+00	0,00E+00	1,09E+01	0	0,00E+00	6,88E+00	7,41E-05	0,00E+00
	MER	kg	4,36E-06	0,00E+00	2,98E+00	0,00E+00	2,26E+01	0	0,00E+00	1,96E+01	1,53E-06	0,00E+00
	EEE	MJ	4,61E-01	0,00E+00	2,09E+00	0,00E+00	1,89E+01	0	0,00E+00	1,64E+01	1,16E-04	0,00E+00
	EET	MJ	6,97E+00	0,00E+00	3,16E+01	0,00E+00	2,86E+02	0	0,00E+00	2,48E+02	1,76E-03	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	1,72E+01
Biogenic carbon content in accompanying packaging	kg C	1,38E+00

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	Data source	Amount	Unit
Electricity, Romania (kWh)	ecoinvent 3.6	465,15	g CO2-eq/kWh
Electricity, Norway (kWh)	ecoinvent 3.6	24,33	g CO2-eq/kWh

Dangerous substances

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

Indoor environment

No impact on indoor environment.

Additional Environmental Information

Additional environmental impact indicators required in NPCR Part A for construction products											
Indicator	**Unit**	A1-A3	A4	A5	B2	B4	C1	C2	C3	C4	D
GWPIOBC	kg CO_2 -eq	1,12E+02	1,30E+01	0,00E+00	3,53E+00	1,37E+02	0	5,81E-01	1,14E+01	5,21E-02	-4,48E+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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