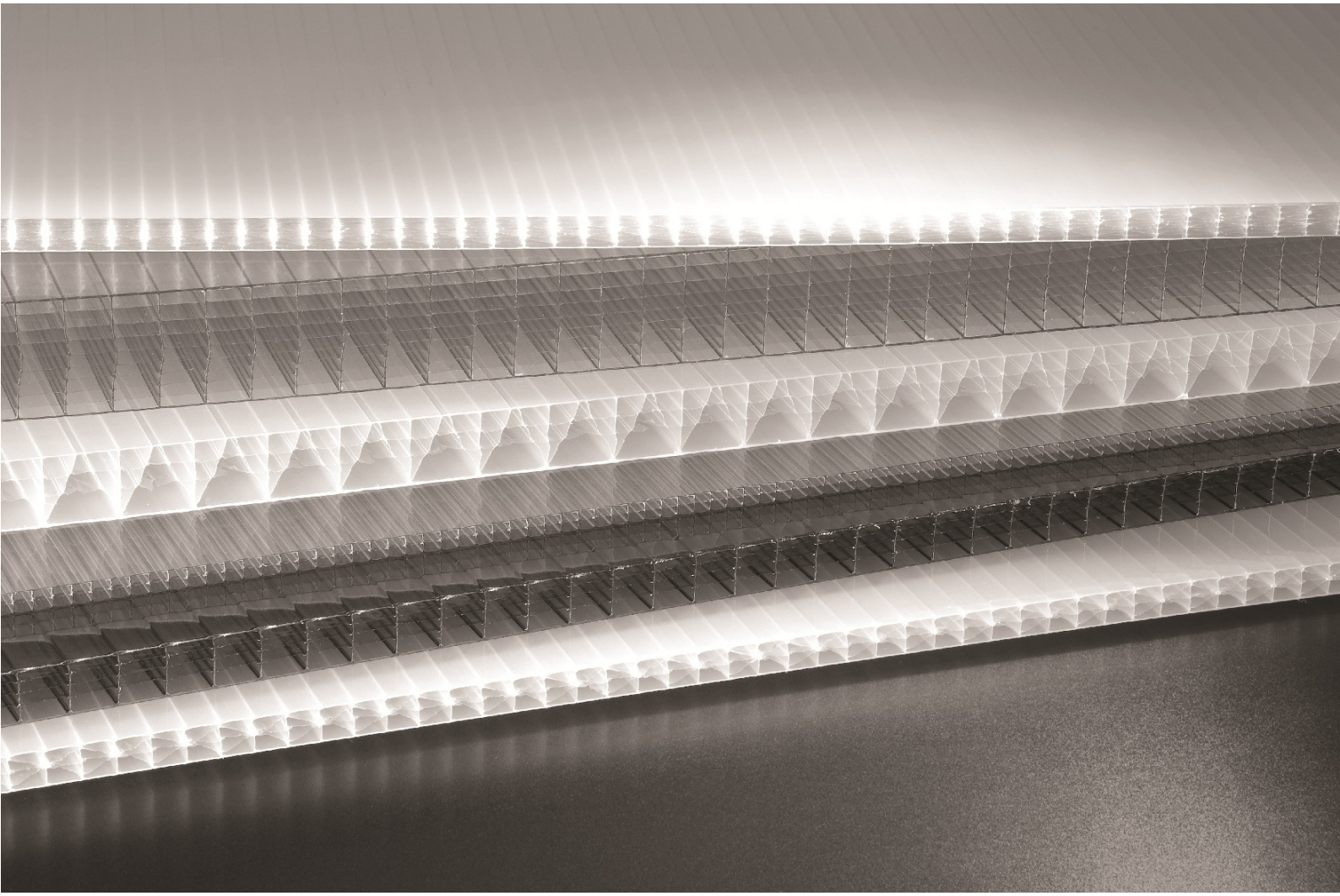
epd-global
Powered by EPD-Norway

Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

MACROLUX MULTIWALL - Polycarbonate multiwall sheets



EPD-Global

Owner of the declaration:
Stabilit Suisse SA

Product:
MACROLUX MULTIWALL - Polycarbonate multiwall sheets

Declared unit:
1 kg

This declaration is based on Product Category Rules:
CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR Part A: Construction products and services (application for plastic products)

Program operator:
EPD-Global

Declaration number:
NEPD-17899-22535

Issue date:
06.10.2026

Valid to:
06.10.2031

EPD software:
LCAno EPD generator ID: 1497224

General information

Product:

MACROLUX MULTIWALL - Polycarbonate multiwall sheets

Owner of the declaration:

Stabilit Suisse SA
Contact person: Stefano Pizzinato
Phone: +41 (0)91 641 72 48
e-mail: stefano.pizzinato@stabilitsuisse.com

Program operator:

EPD-Global
Post Box 5250 Majorstuen, 0303 Oslo, Norway
Phone: +47 977 22 020
web: www.epd-global.com

Manufacturer:

Stabilit Suisse SA

Declaration number:

NEPD-17899-22535

Place of production:

Stabilit Suisse SA
Via Lische 11/13
6855 Stabio, Switzerland

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR Part A: Construction products and services (application for plastic products)

Management system:

ISO 9001

Statement of liability:

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

Organisation no:

CHE 101 6848 84 MWST

Declared unit:

1 kg MACROLUX MULTIWALL - Polycarbonate multiwall sheets

Issue date:

06.10.2026

Declared unit with option:

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

Valid to:

06.10.2031

Year of study:

2025

Functional unit:

Not relevant

Comparability:

EPDs of construction products may not be comparable if they do not comply with EN 15804 and are not viewed 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-Global'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-Global, and iii) the process is reviewed annually by an independent third party verifier. See Appendix G of EPD-Global's General Programme Instructions for further information on EPD tools

Development and verification of EPD:

The declaration is created using EPD generator v2025.09, developed by LCA.no. The EPD tool is integrated in the company's management system, and has been approved by EPD-Global. NEPDT242

Developer of EPD: Stefano Pizzinato

Reviewer of company-specific input data and EPD: Matteo Borsani

Verification of EPD tool:

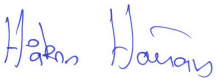
Independent third party verification of the EPD tool, background data and test-EPD in accordance with EPD-Global's procedures and guidelines for verification and approval of EPD tools.

Third party verifier:

Elisabet Amat, GREENIZE projects

(no signature required)

Approved:



Håkon Hauan, CEO EPD-Global

Product:

Product description:

Macrolux® Multiwall sheets are extruded multiwall polycarbonate sheets, UV protected on the external layer (or both sides on request) produced with the most advanced extrusion manufacturing techniques.
Its multiwall structure enables the product to withstand the most demanding external applications.
Available in thicknesses ranging from 4 mm to 60 mm and with a wide choice of structures, Macrolux® Multiwall is at the cutting edge of efficiency and energy savings and both its optical and mechanical properties.

Product specification:

Materials	kg	%
Additives	0.02	2.00
Plastic - Polycarbonate (PC)	0.98	98.00
Total	1.00	100.00

Packaging	kg	%
Packaging - Plastic	0.023	10.00
Packaging - Wood	0.207	90.00
Total incl. packaging	1.23	100.00

Technical data:

Description	Available thickness and nominal weight	Standard dimensions W x L
Macrolux Multiwall 2W	4 mm (800 g/m2) | 6 mm (1300 g/m2) | 8 mm (1500 g/m2) | 10 mm (1700 g/m2)	2100 x 6000 mm
Macrolux Multiwall 3W	16 mm (2700 g/m2)	2100 x 6000 mm
Macrolux Multiwall 3Q	6 mm (1300 g/m2) | 8 mm (1500 g/m2) | 10 mm (1700 g/m2)	2100 x 6000 mm
Macrolux Multiwall 4W	6 mm (1300 g/m2) | 8 mm (1500 g/m2) | 10 mm (1750 g/m2)	2100 x 6000 mm | 2100 x 7000 mm
Macrolux Multiwall 5W	16 mm (2700 g/m2) | 20 mm (3100 g/m2) | 25 mm (3300 g/m2)	2100 x 6000 mm
Macrolux Multiwall 5X	16 mm (2500 g/m2)	980 x 7000 mm | 2100 x 6000 mm | 2100 x 7000 mm
Macrolux Multiwall 7W	16 mm (2500 g/m2) | 20 mm (3100 g/m2) | 25 mm (3300 g/m2)	2100 x 6000 mm | 2100 x 7000 mm
Macrolux Multiwall 10X	20 mm (3200 g/m2) | 25 mm (3400 g/m2) | 32 mm (3700 g/m2) | 35 mm (3800 g/m2) | 40 mm (4300 g/m2)	2100 x 6000 mm
Macrolux Multiwall 10W	40 mm (4200 g/m2) | 50 mm (5000 g/m2) | 55 mm (5200 g/m2) | 60 mm (6000 g/m2)	1230 x 6000 mm

Market:

Europe

Reference service life, product:

20 years

Reference service life, building or construction works:

Not relevant

LCA: Calculation rules

Declared unit:

1 kg MACROLUX MULTIWALL - Polycarbonate multiwall sheets

Cut-off criteria:

All major raw materials and all the essential energy are included. The production processes for raw materials and energy flows with very small amounts (less than 1%) may not be 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. 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:

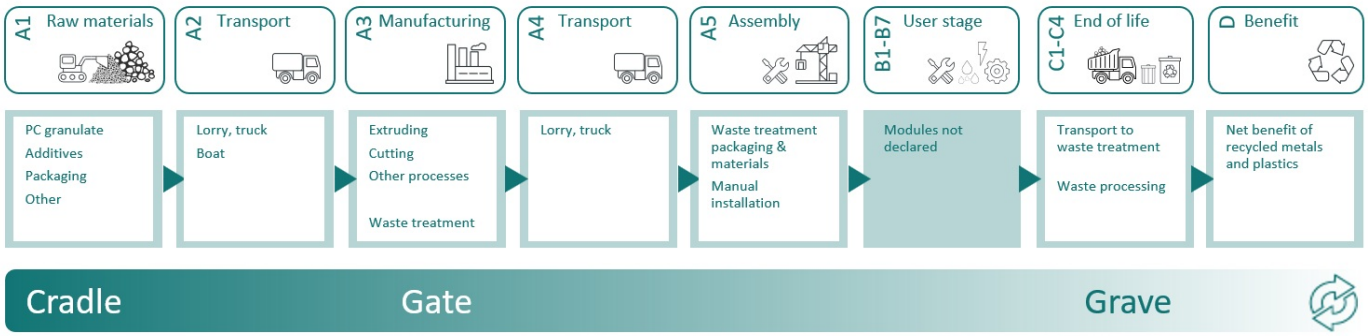
Specific data for the product composition are provided by the manufacturer. The data represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to EN 15804 and different LCA databases. The data quality of the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

Materials	Source	Data quality	Year
Additives	ecoinvent 3.10.1	Database	2023
Packaging - Plastic	ecoinvent 3.10.1	Database	2023
Packaging - Wood	ecoinvent 3.10.1	Database	2023
Plastic - Polycarbonate (PC)	ecoinvent 3.10.1	Database	2023

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:



Additional technical information:

LCA: Scenarios and additional technical information

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

Module A4 = products are transported directly to the installation site or to the end customer by truck (EURO 6). More than 90% of the product is distributed in Europe, with distances ranging from a minimum of 50 km to a maximum of 1900 km. The weighted average transport distance for the year 2025 is 840 km.

Modules A5 = No energy use for installation has been quantified since this operation is assumed to be done with other products and should be assessed at a construction works level.

Module C1 = For both buildings and construction work, the plastic components will be taken out as part of a larger demolition. The energy use for the polycarbonate components removal compared to other heaver materials is assumed to be low. This module can therefore be included with zero impact

Module C2 = The transportation distance from the demolition site to the waste treatment facility is assumed to be 100 km and the mode of transport is assumed to be truck.

Modules C3 and C4 = Waste treatment of the end-of-life polycarbonate components is treated as 100% to the incineration in C3.

Module D = The recyclability of metals, plastics, and electronic components allows the producers a credit for the net scrap that is produced at the end of a product's life. The benefits from recycling of net scrap are described in formula from EN 15804:2012+A2:2019. Substitution of heat and electricity generated by the incineration with energy recovery of plastic insulation and other parts is also calculated in module D.

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, unspecified (km) - Europe	48.7 %	840.00	0.051	l/tkm	42.84

Assembly (A5)	Unit	Value			
Waste, packaging, pallet, EUR wooden pallet, single use, average treatment (kg)	kg	0.207			
Waste, packaging, plastic film (LDPE), to average treatment (kg)	kg	0.023			

Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, unspecified (km) - Europe	48.7 %	100.00	0.051	l/tkm	5.10

Waste processing (C3)	Unit	Value			
Waste plastic, mixture | treatment of waste plastic, mixture, municipal incineration FAE (kg)	kg	1.00			

Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	2.16			
Substitution of electricity, in Norway (MJ)	MJ	0.1435			

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	C1	C2	C3	C4	D
	GWP-total	kg CO_2 -eq	5.71E+00	1.58E-01	3.66E-02	0.00E+00	1.88E-02	2.37E+00	0	-1.30E-02
	GWP-fossil	kg CO_2 -eq	5.98E+00	1.58E-01	3.66E-02	0.00E+00	1.88E-02	2.37E+00	0	-1.25E-02
	GWP-biogenic	kg CO_2 -eq	-2.67E-01	1.10E-04	1.01E-05	0.00E+00	1.30E-05	2.85E-05	0	-2.60E-05
	GWP-luluc	kg CO_2 -eq	4.81E-03	5.81E-05	1.65E-06	0.00E+00	6.92E-06	9.34E-06	0	-4.32E-04
	ODP	kg CFC11 -eq	1.61E-07	3.10E-09	1.03E-10	0.00E+00	3.69E-10	7.51E-10	0	-9.13E-04
	AP	mol H+ -eq	2.40E-02	7.10E-04	3.00E-05	0.00E+00	8.45E-05	5.03E-04	0	-1.03E-04
	EP-FreshWater	kg P -eq	1.67E-03	1.08E-05	6.77E-07	0.00E+00	1.28E-06	5.64E-06	0	-1.11E-06
	EP-Marine	kg N -eq	4.65E-03	2.79E-04	1.94E-05	0.00E+00	3.32E-05	3.00E-04	0	-3.38E-05
	EP-Terrestial	mol N -eq	4.75E-02	3.04E-03	1.37E-04	0.00E+00	3.62E-04	2.53E-03	0	-3.65E-04
	POCP	kg NMVOC -eq	2.51E-02	1.09E-03	4.20E-05	0.00E+00	1.30E-04	6.33E-04	0	-1.01E-04
	ADP-minerals&metals[1]	kg Sb-eq	6.58E-05	5.02E-07	1.63E-08	0.00E+00	5.98E-08	1.48E-07	0	-1.25E-07
	ADP-fossil[1]	MJ	1.22E+02	2.26E+00	6.63E-02	0.00E+00	2.69E-01	3.54E-01	0	-1.79E-01
	WDP[1]	m^3	1.85E+00	1.14E-02	4.75E-03	0.00E+00	1.36E-03	1.57E-01	0	-2.24E+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"

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:

The LCA results in the EPD are calculated using a specific methodological approach for accounting energy resources, see the additional requirements section for more information. In this EPD the following approach was used: Location-based approach.

Not relevant

Additional environmental impact indicators

Indicator		Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	PM	Disease incidence	2.52E-07	1.55E-08	4.50E-10	0.00E+00	1.85E-09	2.21E-09	0	-6.26E-09
	IRP[2]	kgBq U235 -eq	6.06E-01	2.97E-03	1.01E-04	0.00E+00	3.54E-04	1.29E-03	0	-1.15E-03
	ETP-fw[1]	CTUe	2.43E+02	2.95E-01	8.24E-02	0.00E+00	3.51E-02	5.02E+00	0	-9.75E-01
	HTP-c[1]	CTUh	6.66E-09	0.00E+00	4.00E-12	0.00E+00	0.00E+00	1.32E-10	0	-1.80E-11
	HTP-nc[1]	CTUh	6.14E-08	2.07E-09	2.30E-10	0.00E+00	2.47E-10	5.42E-09	0	-9.34E-10
	SQP[1]	dimensionless	4.68E+01	1.69E+00	3.62E-02	0.00E+00	2.01E-01	8.59E-02	0	-1.20E+00

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"

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	C1	C2	C3	C4	D
	PERE	MJ	1.04E+01	3.98E-02	1.51E-03	0.00E+00	4.74E-03	2.22E-02	0	-1.11E+00
	PERM	MJ	2.96E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00
	PERT	MJ	1.33E+01	3.98E-02	1.51E-03	0.00E+00	4.74E-03	2.22E-02	0	-1.11E+00
	PENRE	MJ	9.43E+01	2.26E+00	6.63E-02	0.00E+00	2.69E-01	3.54E-01	0	-1.79E-01
	PENRM	MJ	3.03E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-5.81E+01	0	0.00E+00
	PENRT	MJ	1.25E+02	2.26E+00	6.63E-02	0.00E+00	2.69E-01	-5.78E+01	0	-1.79E-01
	SM	kg	1.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00
	RSF	MJ	1.01E-01	1.25E-05	5.35E-07	0.00E+00	1.49E-06	1.35E-05	0	-1.94E-04
	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	-6.56E-02
	FW	m^3	4.88E-02	3.21E-04	5.80E-05	0.00E+00	3.83E-05	2.70E-03	0	-1.34E-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"

End of life - Waste

Indicator		Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	HWD	kg	3.60E-01	3.25E-03	4.75E-04	0.00E+00	3.87E-04	0.00E+00	0	-8.46E-06
	NHWD	kg	1.43E+01	6.86E-02	1.05E-01	0.00E+00	8.17E-03	1.00E+00	0	-4.24E-03
	RWD	kg	1.49E-04	7.39E-07	1.68E-08	0.00E+00	8.79E-08	0.00E+00	0	-9.39E-07

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"

End of life - Output flow

Indicator		Unit	A1-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	0.00E+00
	MFR	kg	2.51E-03	0.00E+00	1.41E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00
	MER	kg	0.00E+00	0.00E+00	2.88E-10	0.00E+00	0.00E+00	1.00E+00	0	0.00E+00
	EEE	MJ	9.49E-06	0.00E+00	7.04E-06	0.00E+00	0.00E+00	3.24E-04	0	0.00E+00
	EET	MJ	7.01E-06	0.00E+00	1.54E-05	0.00E+00	0.00E+00	3.56E-04	0	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"

Biogenic Carbon Content

Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	2.66E-05
Biogenic carbon content in accompanying packaging	kg C	9.22E-02

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

Additional requirements

Transparent energy reporting

The EPD presents environmental impact categories in the main results tables using a specific methodological approach for accounting energy resources. To ensure transparency and support informed interpretation, the table below explains the implications of the chosen methodology. It illustrates the GWP-total for energy resources used in the manufacturing stage, comparing the location-based and market-based approaches. In this EPD the following approach was used in main result tables: Location-based approach.

Electricity mix	Source	Amount	Unit	GWPtotal [kg CO2/Unit]	SUM [kg CO2]
Location-based approach.					
Electricity, low voltage | market for electricity, low voltage (kWh) - CH - ecoinvent 3.10.1	ecoinvent 3.10.1	7.66E-01	kWh	4.82E-02	3.69E-02
Market-based approach.					

"Reading example: 9.0 E-03 = 9.0*10-3 = 0.009"

Dangerous substances:

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

Indoor environment:

Not relevant

Additional Environmental Information

Additional environmental impact indicators required in NPCR Part A for construction products									
Indicator	**Unit**	A1-A3	A4	A5	C1	C2	C3	C4	D
GWPIOBC	kg CO_2 -eq	5.99E+00	1.58E-01	3.66E-02	0.00E+00	1.88E-02	2.37E+00	0	-1.28E-02

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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