

Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

ZT19 24/4-1



Owner of the declaration:

Norrmontage AB

Product:

ZT19 24/4-1

Declared unit:

1 pcs

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019

PCR EPD Italy 007 - Electronic and electrical products and systems - Compact secondary sub-station

Program operator:

EPD-Global

Declaration number:

NEPD-15406-18969

Issue date:

07.04.2026

Valid to:

07.04.2031

EPD software:

LCAno EPD generator ID: 1188383

General information

Product

ZT19 24/4-1

Program operator:

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

Declaration number:

NEPD-15406-18969

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019
PCR EPD Italy 007 - Electronic and electrical products and systems -
Compact secondary sub-station

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.

Declared unit:

1 pcs ZT19 24/4-1

Declared unit with option:

A1-A3, A4, A5, B1, B4, B6, C1, C2, C3, C4, D

Functional unit:

1 unit of Compact secondary substation, installed and used to adjust supply electricity at use rate of 100% with 50% load during a service life of 35 years.

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

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. Approval number: NEPDT154.

Third party verifier:

Elisabet Amat, GREENIZE projects

(no signature required)

Owner of the declaration:

Norrmontage AB
Contact person: Jens sankala
Phone: +46 647 108 00
e-mail: Info@norrmontage.se

Manufacturer:

Norrmontage AB

Place of production:

Norrmontage AB
Fabriksvägen 1
837 32 Järpen, Sweden

Management system:

ISO 14001, 9001 and 45001

Organisation no:

5563742658

Issue date:

07.04.2026

Valid to:

07.04.2031

Year of study:

2024

Comparability:

EPD of construction products may not be comparable if they not comply with EN 15804 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-Global. NEPDT115

Developer of EPD: Jens Sankala

Reviewer of company-specific input data and EPD: Jenny Dahlberg

Approved:



Håkon Hauan, CEO EPD-Global

Product

Product description:

ZT19-24/4-1 Sheet metal Compact Secondary Substation, 24kV.

More information here: <https://shop.norrmontage.se/>

Product specification

Materials	kg	%
Electronic - Cable	81.08	1.59
Electronic - Connector	0.81	0.01589
Electronic - Plug	11.29	0.2215
Electronic - Wire	3.98	0.07808
Electronic component	202.26	3.97
Glass fibre	0.86	0.01687
Metal	12.41	0.2435
Metal - Alloy	8.46	0.166
Metal - Aluminium	17.84	0.35
Metal - Aluminium alloy	29.93	0.5872
Metal - Copper	2.40	0.04708
Metal - Galvanized Steel	41.98	0.8236
Metal - Steel	29.13	0.5715
Metal - Steel low alloy	1.07	0.02099
Metal - Steel with magnelis coating	1747.37	34.28
Metal/plastic - Copper and Plastic	0.199	0.003904
Paint, water-based	55.00	1.08
Plastic - Polyethylene (HDPE)	0.07	0.001373
Plastic - Polyethylene (LDPE)	0.02	0.0003924
Plastic - Polystyrene (PS)	0.17	0.003335
Plastic - Polyvinyl chloride (PVC)	40.05	0.7857
Polycarbonate (PC)	7.20	0.1413
Product label - supercalendered	0.06	0.001177
Steel and rubber	1.31	0.02574
Thermoplastic elastomers (TPE)	1.52	0.02982
Transformer	2796.00	54.85
Wood - Medium Density Fibreboard (MDF)	3.32	0.06513
Wood - Plywood	1.42	0.02786
Total	5097.21	100.00

Technical data:

Sheet metal building with integrated sheet metal foundation magnelis 1,5 and 2 mm.

MV Air insulated switch-disconnectors ABB NAL/NALF

Transformer: Norsk Transformator 800 kVA 22000/415V, oil insulated.

LV Switchgear ABB Kabeldon.

Market:

Sweden

Reference service life, product

35 years

Reference service life, building or construction works

NA

LCA: Calculation rules

Declared unit:

1 pcs ZT19 24/4-1

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. 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:

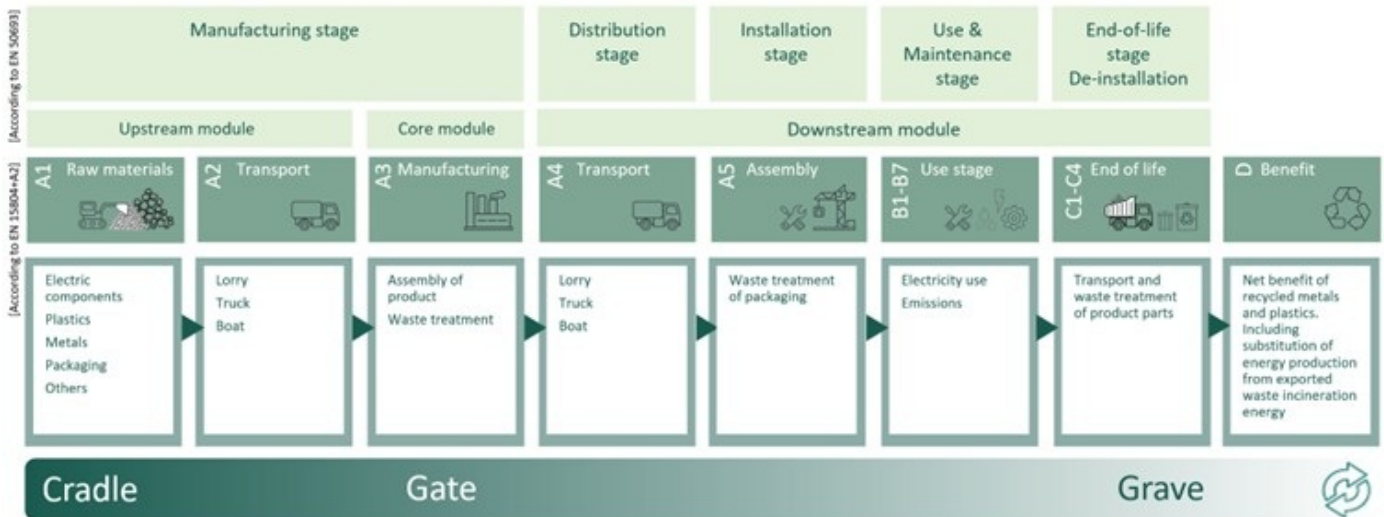
Specific data for the product composition are provided by the manufacturer. The data represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to EN 15804 and different LCA databases. The data quality of the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

Materials	Source	Data quality	Year
Electronic - Cable	Ecoinvent 3.6	Database	2019
Electronic - Cable	ecoinvent 3.6	Supplier data + database	2019
Electronic - Connector	Material composition + ecoinvent 3.6	Supplier data + database	2019
Electronic - Plug	NEPD-9948-9892	EPD	2023
Electronic - Wire	ecoinvent 3.6	Database	2019
Electronic - Wire	Material composition + ecoinvent 3.6	Supplier data + database	2019
Electronic component	ABBG-00082-V01.01-EN	EPD	2021
Electronic component	ABBG-00186-V01.01-EN	EPD	2022
Electronic component	ecoinvent 3.6	Database	2019
Electronic component	Ecoinvent 3.6	Database + Supplier Information	2019
Electronic component	ecoinvent 3.6	Supplier data + database	2019
Electronic component	NEPD-5473-4764-EN	EPD	2022
Electronic component	NEPD-7970-7495-EN	EPD	2023
Glass fibre	ecoinvent 3.6	Database	2019
Metal	ecoinvent 3.6	Database	2019
Metal - Alloy	ecoinvent 3.6	Database	2019
Metal - Aluminium	ecoinvent 3.6	Database	2019
Metal - Aluminium alloy	ecoinvent 3.6	Database	2019
Metal - Copper	Ecoinvent 3.6	Database	2019
Metal - Galvanized Steel	Modified ecoinvent 3.6	Database	2019
Metal - Steel	ecoinvent 3.6	Database	2019
Metal - Steel low alloy	ecoinvent 3.6	Database	2019
Metal - Steel with magnelis coating	EPD-IES-0014422	EPD	2022
Metal/plastic - Copper and Plastic	ecoinvent 3.6	Database	2019
Paint, water-based	ecoinvent 3.6	Database	2019
Plastic - Polyethylene (HDPE)	ecoinvent 3.6	Database	2019
Plastic - Polyethylene (LDPE)	ecoinvent 3.6	Database	2019
Plastic - Polystyrene (PS)	ecoinvent 3.6	Database	2019
Plastic - Polyvinyl chloride (PVC)	ecoinvent 3.6	Database	2019
Polycarbonate (PC)	European Polycarbonate Sheet Extruders	EPD	2022
Product label - supercalendered	Ecoinvent 3.6	Database	2019
Steel and rubber	ecoinvent 3.6	Database	2019
Thermoplastic elastomers (TPE)	ecoinvent 3.6	Database	2019
Transformer	NEPD-12377-12439	EPD	2023
Wood - Medium Density Fibreboard (MDF)	ecoinvent 3.6	Database	2019
Wood - Plywood	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	X	MND	MND	X	MND	X	MND	X	X	X	X	X

System boundary:



Additional technical information:

Not relevant

LCA: Scenarios and additional technical information

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

Module B1, B2, B3, B5, B7 = Not declared.

Module A4 = Average or weighted average distribution to Sweden.

Module A5 = Installation is performed by manual labor, with the use of electrical machines, that fall under the cut-off criteria of 1% and is therefore neglected. And the product does not include any packaging of the final product.

B6: The operational energy use, here in the form of electricity consumption corresponding to all subcomponents, is calculated in accordance with EPD intended market and is therefore assumed to be of high quality.

Energy use (B6) CSS=Switchgear B6+Transformer B6

$E_{use} [kWh] = (P_{use} * 8760 * RSL) / 1000 \times 100\% \text{ use rate.}$

RSL is the service life of the product, assumed to be 35 years. Each year is taken as 365.25 days to account for leap years. As per the sub-PCR RSL is 20 years. However, due to product life of 35 years, B6 for has been considered for 35 years accordingly.

8760 is the number of hours in a year

1000 is the conversion factor that allows the energy consumed in kWh over the product's service life to be expressed.

Puse is the power consumed by the switchboard.

Puse is to be calculated with the following formula:

$$P = R * I^2$$

R is the resistance in the switchgear

I is the voltage in the switchgear

$E_d [kWh] = [P_{load} * k_{load}^2 + P_{noload}] * t_{year} * RSL + P_{aux} * f_{aux} * t_{year} * RSL \times 100\% \text{ use rate}$

Where:

Pload is the load loss of the transformer at 75°C reference temperature at nominal power. It is expressed in kW.

kload represents an average load factor for the equipment. For calculations based on PCR Italy 018, 70% of nominal power shall be adopted.

Pnoload is the power dissipated in case no losses shall occur. It is expressed in kW.

Paux is the power loss due to auxiliary activities at no load (such as cooling). It is expressed in kW.

fau represents the fraction of time in which ancillary equipment is operating. It is expressed in % over 1 year.

tyear is the total amount of hours during a year. For this calculation, 8 760 hours shall be considered.

RSL represents the Reference Service Life, defined as 35 years for EPDs based on PCR Italy 018. Therefore, the results are based on 35 years.

Module C1 = The de-installation of the compact secondary sub-station is carried out manually, with the assistance of electrical tools. The energy consumption of portable electrical devices (e.g., drills) is typically low, falling below the 1% cut-off criterion, and is therefore disregarded.

Module C2 = Transportation from building site to the waste treatment facility with an average distance of 300km.

Modules C3 and C4 = Waste treatment of the product follows the default values provided in EN 15804:2012+A2:2019 and EN 50693, Product Category Rules for life cycle assessments of electronic and electrical products and systems, table G.4. This table specified how different types of raw materials used in A1 will likely be treated during the end-of-life of the product. Waste treatments in C3 include material recycling and incineration with and without energy recovery and fly ash extraction. Disposal in C4 consist of landfilling of different waste fractions and of ashes.

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, 16-32 tonnes, HVO, EURO 6 (km) - Europe	36.7 %	400.00	0.043	l/tkm	17.20
Replacement (B4)	Unit	Value			
Reuse this EPD A1-A5 and C1-C4 - NAL - NEPD-5473-4764-EN - PL	Units	0.75			
Reuse this EPD A1-A5 and C1-C4 - NALF - NEPD-7970-7495-EN - PL	Units	0.75			
Operational energy (B6)	Unit	Value			
Electricity, Sweden, medium voltage (kWh)	kWh	15951.59			
Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 16-32 tonnes, EURO 6 (km) - Europe	36.7 %	300.00	0.043	l/tkm	12.90

Waste processing (C3)	Unit	Value			
Waste treatment per kg Plastic, Mixture, incineration with fly ash extraction (kg)	kg	387.10			
Materials to recycling (kg)	kg	2907.29			
Waste treatment per kg of waste cable, manual treatment (kg) - GLO	kg	2881.87			
Landfilling of ashes from incineration of Wood, process per kg ashes and residues (kg)	kg	0.25			
Waste treatment per kg Sealing sheet, polyvinylchlorid (PVC), incineration with fly ash extraction (kg)	kg	20.03			
Waste treatment per kg used electronic components, manual separation (kg)	kg	213.55			
Landfilling of ashes from incineration of Paint, hazardous waste incineration, process per kg ashes and residues (kg)	kg	20.00			
Waste treatment per kg Paint, hazardous waste incineration (kg)	kg	35.00			
Waste treatment per kg Wood, incineration with fly ash extraction (kg)	kg	4.49			

Disposal (C4)	Unit	Value			
Landfilling of ashes from incineration of Plastics, Mixture, process per kg ashes and residues (kg)	kg	16.12			
Waste, plastic, mixture, to landfill (kg) - C4	kg	407.13			
Landfilling of Metal (kg)	kg	1315.86			
Landfilling of non-hazardous waste (kg)	kg	0.06			
Landfilling of ashes from incineration of Sealing sheet, polyvinylchlorid (PVC), process per kg ashes and residues (kg) - C4 NO DATA	kg	5.06			
Landfilling of ashes from incineration of Paint, hazardous waste incineration, process per kg ashes and residues (kg)	kg	1.04			
Landfilling of ashes from incineration of Wood, process per kg ashes and residues (kg)	kg	0.05165			

Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of electricity (MJ)	MJ	733.10			
Substitution of thermal energy, district heating (MJ)	MJ	11091.17			
Substitution of primary other non-ferrous metals with net scrap (kg)	kg	1028.89			
Substitution of primary steel with net scrap (kg)	kg	1508.66			

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	B1	B4	
GWP-total	kg CO ₂ -eq	2.13E+04	8.01E+01	0	0	1.18E+03	
GWP-fossil	kg CO ₂ -eq	2.10E+04	7.98E+01	0	0	5.90E+02	
GWP-biogenic	kg CO ₂ -eq	1.59E+02	1.35E-01	0	0	5.64E+02	
GWP-luluc	kg CO ₂ -eq	1.63E+02	1.24E-01	0	0	2.54E+01	
ODP	kg CFC11 -eq	2.00E-03	1.65E-05	0	0	6.84E-05	
AP	mol H ⁺ -eq	1.48E+02	5.60E-01	0	0	9.55E+00	
EP-FreshWater	kg P -eq	2.90E+00	2.93E-03	0	0	7.52E-01	
EP-Marine	kg N -eq	2.05E+01	1.48E-01	0	0	9.23E-01	
EP-Terrestrial	mol N -eq	2.32E+02	1.66E+00	0	0	1.09E+01	
POCP	kg NMVOC -eq	8.94E+01	6.06E-01	0	0	3.41E+00	
ADP-minerals&metals ¹	kg Sb-eq	2.43E+00	9.70E-03	0	0	1.13E-01	
ADP-fossil ¹	MJ	2.88E+05	1.69E+03	0	0	8.14E+03	
WDP ¹	m ³	1.97E+06	5.00E+03	0	0	2.10E+02	

Indicator	Unit	B6	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq	4.77E+02	0.00E+00	2.52E+02	1.53E+03	6.63E+01	-2.86E+03
GWP-fossil	kg CO ₂ -eq	4.05E+02	0.00E+00	2.52E+02	1.48E+03	6.62E+01	-2.86E+03
GWP-biogenic	kg CO ₂ -eq	1.55E+01	0.00E+00	1.04E-01	4.69E+01	5.00E-02	-1.67E+00
GWP-luluc	kg CO ₂ -eq	5.69E+01	0.00E+00	8.97E-02	7.49E-01	8.36E-03	-3.47E+00
ODP	kg CFC11 -eq	1.20E-05	0.00E+00	5.71E-05	2.67E-05	6.61E-06	-4.68E+00
AP	mol H ⁺ -eq	2.27E+00	0.00E+00	7.25E-01	2.36E+00	1.81E-01	-1.44E+01
EP-FreshWater	kg P -eq	1.46E-01	0.00E+00	2.01E-03	2.28E-02	3.96E-04	-1.78E-01
EP-Marine	kg N -eq	6.78E-01	0.00E+00	1.43E-01	4.64E-01	1.13E-01	-3.04E+00
EP-Terrestrial	mol N -eq	6.23E+00	0.00E+00	1.60E+00	5.16E+00	7.25E-01	-3.12E+01
POCP	kg NMVOC -eq	1.57E+00	0.00E+00	6.14E-01	1.36E+00	2.15E-01	-1.45E+01
ADP-minerals&metals ¹	kg Sb-eq	9.41E-03	0.00E+00	6.96E-03	1.51E-03	1.77E-04	-4.88E-02
ADP-fossil ¹	MJ	6.68E+04	0.00E+00	3.81E+03	5.84E+03	5.35E+02	-2.44E+04
WDP ¹	m ³	3.68E+03	0.00E+00	3.69E+03	2.22E+04	1.22E+04	1.33E+05

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

Not relevant

Additional environmental impact indicators

Indicator	Unit	A1-A3	A4	A5	B1	B4
 PM	Disease incidence	1.09E-03	1.85E-05	0	0	0.00E+00
 IRP ²	kgBq U235 -eq	1.88E+03	5.52E+00	0	0	0.00E+00
 ETP-fw ¹	CTUe	7.50E+05	2.47E+03	0	0	0.00E+00
 HTP-c ¹	CTUh	6.37E-05	0.00E+00	0	0	0.00E+00
 HTP-nc ¹	CTUh	9.74E-04	4.12E-06	0	0	0.00E+00
 SQP ¹	dimensionless	9.19E+04	3.15E+03	0	0	0.00E+00











Indicator	Unit	B6	C1	C2	C3	C4	D
 PM	Disease incidence	3.94E-05	0.00E+00	1.54E-05	1.81E-05	3.20E-06	-2.64E-04
 IRP ²	kgBq U235 -eq	4.87E+03	0.00E+00	1.67E+01	2.61E+01	3.40E+00	4.15E+00
 ETP-fw ¹	CTUe	3.58E+03	0.00E+00	2.83E+03	1.12E+04	8.15E+05	-1.61E+05
 HTP-c ¹	CTUh	3.67E-07	0.00E+00	0.00E+00	4.00E-07	4.00E-08	-1.35E-05
 HTP-nc ¹	CTUh	1.17E-05	0.00E+00	3.09E-06	7.19E-06	7.55E-07	2.87E-04
 SQP ¹	dimensionless	1.43E+04	0.00E+00	2.67E+03	1.26E+03	1.13E+03	-7.91E+03

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	B1	B4
	PERE	MJ	6.10E+04	7.65E+01	0	0	7.70E+03
	PERM	MJ	1.02E+03	0.00E+00	0	0	8.27E+02
	PERT	MJ	6.20E+04	7.65E+01	0	0	8.53E+03
	PENRE	MJ	2.86E+05	1.69E+03	0	0	1.85E+02
	PENRM	MJ	2.73E+04	0.00E+00	0	0	8.14E+03
	PENRT	MJ	3.13E+05	1.69E+03	0	0	8.33E+03
	SM	kg	5.03E+02	0.00E+00	0	0	6.09E+00
	RSF	MJ	6.36E+02	2.49E+00	0	0	2.48E+01
	NRSF	MJ	1.83E+02	8.57E+00	0	0	0.00E+00
	FW	m ³	4.39E+02	6.91E-01	0	0	0.00E+00

Indicator		Unit	B6	C1	C2	C3	C4	D
	PERE	MJ	4.56E+04	0.00E+00	5.46E+01	6.89E+02	6.57E+01	-7.59E+03
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	-7.05E+02	0.00E+00	0.00E+00
	PERT	MJ	4.56E+04	0.00E+00	5.46E+01	-1.57E+01	6.57E+01	-7.59E+03
	PENRE	MJ	6.68E+04	0.00E+00	3.81E+03	5.84E+03	5.35E+02	-2.44E+04
	PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	-2.73E+04	0.00E+00	0.00E+00
	PENRT	MJ	6.68E+04	0.00E+00	3.81E+03	-2.14E+04	5.35E+02	-2.44E+04
	SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	RSF	MJ	2.56E-02	0.00E+00	1.95E+00	1.72E+01	1.36E+00	9.98E+01
	NRSF	MJ	0.00E+00	0.00E+00	6.98E+00	1.19E+01	9.02E-01	2.60E+03
	FW	m ³	8.70E+01	0.00E+00	4.08E-01	4.73E+00	6.93E-01	-1.27E+01

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	B1	B4
	HWD	kg	1.35E+02	2.37E-01	0	0	5.61E-02
	NHWD	kg	6.40E+03	2.51E+02	0	0	1.72E+02
	RWD	kg	1.46E+00	6.77E-03	0	0	1.10E-02

Indicator		Unit	B6	C1	C2	C3	C4	D
	HWD	kg	4.76E+01	0.00E+00	1.97E-01	1.84E-01	5.35E+01	-1.46E+01
	NHWD	kg	9.36E+02	0.00E+00	1.85E+02	4.03E+01	1.75E+03	-1.16E+03
	RWD	kg	1.04E+00	0.00E+00	2.60E-02	1.67E-04	3.69E-03	2.89E-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"

End of life - Output flow							
Indicator		Unit	A1-A3	A4	A5	B1	B4
	CRU	kg	0.00E+00	0.00E+00	0	0	1.70E+01
	MFR	kg	1.40E+02	0.00E+00	0	0	8.09E+01
	MER	kg	1.76E-01	0.00E+00	0	0	0.00E+00
	EEE	MJ	2.71E-01	0.00E+00	0	0	6.88E+01
	EET	MJ	4.10E+00	0.00E+00	0	0	3.82E+01

Indicator		Unit	B6	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
	MFR	kg	0.00E+00	0.00E+00	0.00E+00	2.91E+03	3.65E-02	0.00E+00
	MER	kg	0.00E+00	0.00E+00	0.00E+00	4.12E+02	8.93E-04	0.00E+00
	EEE	MJ	0.00E+00	0.00E+00	0.00E+00	6.19E+02	5.79E-02	0.00E+00
	EET	MJ	0.00E+00	0.00E+00	0.00E+00	9.37E+03	8.77E-01	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	1.24E+01
Biogenic carbon content in accompanying packaging	kg C	0.00E+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	Source	Amount	Unit
Electricity, Medium voltage mix, guarantee of origin, 2024, Sweden (kWh) - Norrmontage - SE	ecoinvent 3.6	16.27	g CO ₂ -eq/kWh

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	B1	B4	
GWPIOBC	kg CO ₂ -eq	2.14E+04	8.01E+01	0	0	1.18E+03	
Indicator	Unit	B6	C1	C2	C3	C4	D
GWPIOBC	kg CO ₂ -eq	4.72E+02	0.00E+00	2.52E+02	1.48E+03	6.63E+01	-3.42E+03

GWPIOBC: 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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