

Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

Envistar Top 17 with counter-flow heat exchanger and controls



The Norwegian EPD Foundation

Owner of the declaration:

IV Produkt AB

Product:

Envistar Top 17 with counter-flow heat exchanger and controls

Declared unit:

1 pcs

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR 030:2021 Part B for ventilation components

Program operator:

The Norwegian EPD Foundation

Declaration number:

NEPD-9368-8955

Registration number:

NEPD-9368-8955

Issue date: 10.03.2025

Valid to: 10.03.2030

EPD software:

LCAno EPD generator ID: 805232

General information

Product

Envistar Top 17 with counter-flow heat exchanger and controls

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:

NEPD-9368-8955

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR 030:2021 Part B for ventilation components

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 pcs Envistar Top 17 with counter-flow heat exchanger and controls

Declared unit with option:

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

Functional unit:

N/A

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 EPD-Norway's procedures and guidelines for verification and approval of EPD tools.

Third party verifier:

Alexander Borg, Asplan Viak AS

(no signature required)

Owner of the declaration:

IV Produkt AB
Contact person:
Phone: + 46 70 758800
e-mail: info@ivprodukt.se

Manufacturer:

IV Produkt AB

Place of production:

IV Produkt AB
Sjöddevägen 7
352 46 Växjö, Sweden

Management system:

ISO 14001 and 9001

Organisation no:

556129-1559

Issue date:

10.03.2025

Valid to:

10.03.2030

Year of study:

2023

Comparability:

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

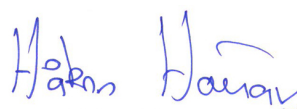
Development and verification of EPD:

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. NEPDT144

Developer of EPD: Linnea Schindelar

Reviewer of company-specific input data and EPD: Axel bergstrand

Approved:



Håkon Hauan
Managing Director of EPD-Norway

Product

Product description:

Air Handling Unit (AHU) for non residential building.

Product specification

Envistar Top air handling unit for non residential buildings.

Bi-directional including counter-flow heat exchanger and integrated controls, damper and LPHW coil.

| Materials | kg | % |
|---|--------|---------|
| Adhesive | 2,34 | 0,28 |
| Aluminium foil, with plastic | 0,018 | 0,0022 |
| Electronic - Unspecified | 6,16 | 0,75 |
| Electronic - Wire | 1,51 | 0,18 |
| Filter, plastic based | 3,80 | 0,46 |
| Glass fibre reinforced plastic, polyamide | 18,23 | 2,22 |
| Insulation | 32,18 | 3,93 |
| Motor | 13,56 | 1,65 |
| Plastic - Polyamide | 0,16 | 0,019 |
| Plastic - Polyethylene (HDPE) | 0,060 | 0,0073 |
| Plastic - Polystyrene (PS) | 0,085 | 0,010 |
| Rubber, synthetic | 0,041 | 0,0050 |
| Steel and rubber | 1,45 | 0,17 |
| Ventilation components | 27,12 | 3,31 |
| Metal | 2,38 | 0,29 |
| Metal - Aluminium | 166,43 | 20,33 |
| Metal - Brass | 0,41 | 0,050 |
| Metal - Steel | 14,95 | 1,82 |
| Metal - Steel with aluzinc coating | 527,21 | 64,40 |
| Plastic - Polyethylene terephthalate (PET) | 0,47 | 0,058 |
| Plastic - Acrylonitrile butadiene styrene (ABS) | 0,0060 | 0,00073 |
| Total | 818,65 | 100,00 |
| Packaging | kg | % |
| Packaging - PET Film | 3,50 | 100,00 |
| Total incl. packaging | 822,15 | 100,00 |

Technical data:

According to printout from IVP Designer (selection program).

Market:

Europe

Reference service life, product

25 years

Reference service life, building or construction works

N/A

LCA: Calculation rules

Declared unit:

1 pcs Envistar Top 17 with counter-flow heat exchanger and controls

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. Energy, 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:

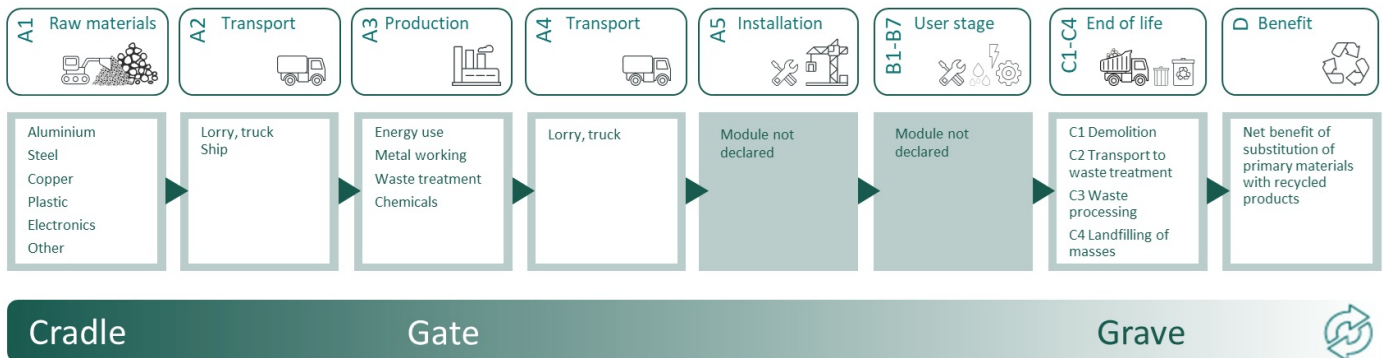
Specific data for the product composition are provided by the manufacturer. The data represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to EN 15804 and different LCA databases. The data quality of the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

| Materials | Source | Data quality | Year |
|---|------------------------|--------------|------|
| Adhesive | ecoinvent 3.6 | Database | 2019 |
| Aluminium foil, with plastic | ecoinvent 3.6 | Database | 2019 |
| Electronic - Unspecified | ecoinvent 3.6 | Database | 2019 |
| Electronic - Wire | ecoinvent 3.6 | Database | 2019 |
| Filter, plastic based | S-P-03432 | EPD | 2022 |
| Glass fibre reinforced plastic, polyamide | ecoinvent 3.6 | Database | 2019 |
| Insulation | ecoinvent 3.6 | Database | 2019 |
| Metal | ecoinvent 3.6 | Database | 2019 |
| Metal - Aluminium | ecoinvent 3.6 | Database | 2019 |
| Metal - Aluminium | Modified ecoinvent 3.6 | Database | 2019 |
| Metal - Brass | ecoinvent 3.6 | Database | 2019 |
| Metal - Steel | ecoinvent 3.6 | Database | 2019 |
| Metal - Steel with aluzinc coating | Modified ecoinvent 3.6 | Database | 2019 |
| Motor | ecoinvent 3.6 | Database | 2019 |
| Packaging - PET Film | Ecoinvent 3.6 | Database | 2019 |
| Plastic - Acrylonitrile butadiene styrene (ABS) | ecoinvent 3.6 | Database | 2019 |
| Plastic - Polyamide | ecoinvent 3.6 | Database | 2019 |
| Plastic - Polyethylene (HDPE) | ecoinvent 3.6 | Database | 2019 |
| Plastic - Polyethylene terephthalate (PET) | ecoinvent 3.6 | Database | 2019 |
| Plastic - Polystyrene (PS) | ecoinvent 3.6 | Database | 2019 |
| Rubber, synthetic | ecoinvent 3.6 | Database | 2019 |
| Steel and rubber | ecoinvent 3.6 | Database | 2019 |
| Ventilation components | 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 | MND | MND | MND | MND | MND | MND | MND | MND | X | X | X | X | X |

System boundary:



Additional technical information:

The unit is made up of frameworks in aluminium profiles. Panels and hatches are in double sheet construction of aluminium/zinc-treated steel sheet with protective coating (ALC) that meets the requirements for corrosion class C4 according to SS-EN ISO 12944-2.

Development and manufacture of our products takes place with the help of our environmental and quality management system certified according to ISO 14001 and ISO 9001.

Units delivered are CE-marked.

IV Produkt AB's unit series are certified by Eurovent as standard.

Complete project specific technical documentation is generated using our selection software, IVP Designer. Please refer to our website www.ivprodukt.se for more information.

LCA: Scenarios and additional technical information

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

Module A4 = A generic transportation distance (EURO6 truck) of 378 km is declared. True transportation distance can be provided in project specific EPD.

Module A5 = Not declared.

Module C1 = The de-installation of the air handling unit (AHU) 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 = A generic transportation distance (EURO6 truck) of 80 km is declared. True transportation distance can be provided in project specific EPD.

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, EURO 6 (km) | 36,7 % | 378 | 0,043 | l/tkm | 16,25 |
| Truck, over 32 tonnes, EURO 6 (km) | 53,3 % | 378 | 0,023 | l/tkm | 8,69 |

| 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) | 36,7 % | 80 | 0,043 | l/tkm | 3,44 |

| Waste processing (C3) | Unit | Value | | | |
|--|------|--------|--|--|--|
| Waste treatment per kg Non-hazardous waste, incineration with fly ash extraction (kg) | kg | 18,23 | | | |
| Waste treatment per kg electronics scrap from PWB, with components, recycling of metals C3 (kg) | kg | 3,082 | | | |
| Waste treatment per kg wire plastic, municipal incineration (kg) | kg | 0,24 | | | |
| Materials to recycling (kg) | kg | 683,60 | | | |
| Waste treatment per kg Polypropylene (PP), incineration (kg) | kg | 0,23 | | | |
| Aluminium to recycling (kg) | kg | 0,011 | | | |
| Waste treatment per kg Polyethylene terephthalate (PET), incineration with fly ash extraction (kg) | kg | 0,042 | | | |
| Waste treatment per kg Hazardous waste, incineration (kg) | kg | 38,33 | | | |
| Waste treatment per kg Rubber, municipal incineration with fly ash extraction (kg) | kg | 0,041 | | | |
| Waste treatment per kg used PWB, shredding and separation - C3 (kg) | kg | 6,16 | | | |
| Waste treatment per kg bulk waste, excluding reinforcement, sorting plant (kg) | kg | 13,56 | | | |
| Waste treatment per kg Plastics, from incineration (kg) | kg | 0,083 | | | |
| Waste treatment per kg Polyethylene, PE, incineration with fly ash extraction (kg) | kg | 0,060 | | | |
| Waste treatment of plastic mixture, incineration with energy recovery and fly ash extraction (kg) | kg | 0,36 | | | |

| Disposal (C4) | Unit | Value | | | |
|--|------|---------|--|--|--|
| Waste, copper, to landfill (kg) | kg | 0,31 | | | |
| Waste, aluminium, to landfill (kg) | kg | 11,74 | | | |
| Landfilling of ashes from incineration of Plastics, process per kg ashes and residues (kg) | kg | 0,014 | | | |
| Waste, scrap steel, to landfill (kg) | kg | 58,13 | | | |
| Landfilling of ashes from incineration of Non-hazardous waste process per kg ashes and residues (kg) | kg | 4,32 | | | |
| Waste, plastic, mixture, to landfill (kg) | kg | 0,97 | | | |
| Landfilling of ashes from incineration of Polyethylene (PE), process per kg ashes and residues (kg) | kg | 0,0021 | | | |
| Landfilling of ashes from incineration per kg wire plastic, from municipal incineration - RoW | kg | 0,037 | | | |
| Landfilling of hazardous waste (kg) | kg | 3,082 | | | |
| Landfilling of ashes from incineration of Polypropylene (PP), process per kg ashes and residues (kg) | kg | 0,0070 | | | |
| Waste treatment per kg Brass slag, to landfill, residual material landfill (kg) | kg | 0,041 | | | |
| Landfilling of ashes from incineration per kg Hazardous waste, from incineration (kg) | kg | 7,24 | | | |
| Landfilling of ashes from incineration of Polyethylene terephthalate (PET), process per kg ashes and residues (kg) | kg | 0,00095 | | | |
| Landfilling of ashes from incineration of Rubber, municipal incineration with fly ash extraction (kg) | kg | 0,0021 | | | |
| Benefits and loads beyond the system boundaries (D) | Unit | Value | | | |
| Substitution of primary Brass with net scrap (kg) | kg | 0,37 | | | |
| Substitution of electricity (MJ) | MJ | 12,35 | | | |
| Substitution of thermal energy, district heating (MJ) | MJ | 186,97 | | | |
| Substitution of primary aluminium with net scrap (kg) | kg | 154,98 | | | |
| Substitution of primary metals with net scrap from PWB, with components (kg) | kg | 0,90 | | | |
| Substitution of primary copper with net scrap (kg) | kg | 1,61 | | | |
| Substitution of primary steel with net scrap (kg) | kg | 298,084 | | | |

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 | C1 | C2 | C3 | C4 | D | |
|  GWP-total | kg CO ₂ -eq | 4,34E+03 | 3,44E+01 | 0,00E+00 | 1,07E+01 | 1,32E+02 | 4,42E+00 | -1,79E+03 | |
|  GWP-fossil | kg CO ₂ -eq | 4,29E+03 | 3,44E+01 | 0,00E+00 | 1,07E+01 | 1,32E+02 | 4,41E+00 | -1,76E+03 | |
|  GWP-biogenic | kg CO ₂ -eq | 2,93E+01 | 1,45E-02 | 0,00E+00 | 4,45E-03 | 2,16E-01 | 3,10E-03 | -6,68E+00 | |
|  GWP-luluc | kg CO ₂ -eq | 2,02E+01 | 1,13E-02 | 0,00E+00 | 3,82E-03 | 2,61E-02 | 6,24E-03 | -2,64E+01 | |
|  ODP | kg CFC11 -eq | 3,38E-04 | 8,07E-06 | 0,00E+00 | 2,43E-06 | 1,02E-05 | 3,65E-07 | -7,91E-02 | |
|  AP | mol H ⁺ -eq | 3,77E+01 | 1,05E-01 | 0,00E+00 | 3,09E-02 | 1,37E-01 | 1,34E-02 | -1,50E+01 | |
|  EP-FreshWater | kg P -eq | 2,71E-01 | 2,74E-04 | 0,00E+00 | 8,58E-05 | 2,09E-03 | 6,57E-05 | -9,68E-02 | |
|  EP-Marine | kg N -eq | 4,81E+00 | 2,21E-02 | 0,00E+00 | 6,11E-03 | 2,93E-02 | 3,84E-03 | -1,71E+00 | |
|  EP-Terrestrial | mol N -eq | 8,74E+01 | 2,47E-01 | 0,00E+00 | 6,83E-02 | 3,27E-01 | 4,21E-02 | -1,92E+01 | |
|  POCP | kg NMVOC -eq | 1,77E+01 | 9,60E-02 | 0,00E+00 | 2,62E-02 | 9,11E-02 | 1,33E-02 | -6,80E+00 | |
|  ADP-minerals&metals ¹ | kg Sb-eq | 1,22E+00 | 7,67E-04 | 0,00E+00 | 2,97E-04 | 3,29E-04 | 1,37E-05 | -9,42E-02 | |
|  ADP-fossil ¹ | MJ | 5,36E+04 | 5,41E+02 | 0,00E+00 | 1,62E+02 | 3,77E+02 | 3,47E+01 | -2,10E+04 | |
|  WDP ¹ | m ³ | 5,91E+05 | 4,63E+02 | 0,00E+00 | 1,57E+02 | 1,46E+03 | 5,04E+02 | -7,73E+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"

*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 | C1 | C2 | C3 | C4 | D | |
|  PM | Disease incidence | 3,78E-04 | 2,68E-06 | 0,00E+00 | 6,58E-07 | 1,99E-06 | 1,77E-07 | -1,32E-04 | |
|  IRP ² | kgBq U235 -eq | 2,16E+02 | 2,37E+00 | 0,00E+00 | 7,10E-01 | 1,73E+00 | 1,57E-01 | -7,77E+01 | |
|  ETP-fw ¹ | CTUe | 1,97E+05 | 3,98E+02 | 0,00E+00 | 1,20E+02 | 1,89E+03 | 7,34E+03 | -6,95E+04 | |
|  HTP-c ¹ | CTUh | 1,70E-05 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 1,37E-07 | 1,41E-08 | -5,27E-06 | |
|  HTP-nc ¹ | CTUh | 2,52E-04 | 4,07E-07 | 0,00E+00 | 1,32E-07 | 3,64E-06 | 6,87E-07 | -2,26E-05 | |
|  SQP ¹ | dimensionless | 1,51E+04 | 5,14E+02 | 0,00E+00 | 1,14E+02 | 1,47E+02 | 1,02E+02 | -1,04E+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"

*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 | C1 | C2 | C3 | C4 | D | |
|  PERE | MJ | 1,34E+04 | 7,22E+00 | 0,00E+00 | 2,32E+00 | 6,73E+01 | 5,05E+00 | -6,74E+03 | |
|  PERM | MJ | 8,23E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | |
|  PERT | MJ | 1,34E+04 | 7,22E+00 | 0,00E+00 | 2,32E+00 | 6,73E+01 | 5,05E+00 | -6,74E+03 | |
|  PENRE | MJ | 5,36E+04 | 5,41E+02 | 0,00E+00 | 1,62E+02 | 3,78E+02 | 3,48E+01 | -2,10E+04 | |
|  PENRM | MJ | 8,80E+02 | 0,00E+00 | 0,00E+00 | 0,00E+00 | -5,74E+02 | 0,00E+00 | 0,00E+00 | |
|  PENRT | MJ | 5,44E+04 | 5,41E+02 | 0,00E+00 | 1,62E+02 | -1,96E+02 | 3,48E+01 | -2,10E+04 | |
|  SM | kg | 3,01E+02 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 1,50E-04 | 6,66E-02 | 1,01E+00 | |
|  RSF | MJ | 8,12E+01 | 2,55E-01 | 0,00E+00 | 8,32E-02 | 1,46E+00 | 5,33E-02 | 9,31E+00 | |
|  NRSF | MJ | 9,66E+02 | 8,83E-01 | 0,00E+00 | 2,97E-01 | -2,96E-03 | 9,15E-01 | 3,49E+02 | |
|  FW | m ³ | 1,03E+02 | 6,00E-02 | 0,00E+00 | 1,74E-02 | 3,70E-01 | 4,56E-02 | -3,60E+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"

*INA Indicator Not Assessed

End of life - Waste






| Indicator | Unit | A1-A3 | A4 | C1 | C2 | C3 | C4 | D |
|--|------|----------|----------|----------|----------|----------|----------|-----------|
|  HWD | kg | 3,15E+01 | 2,89E-02 | 0,00E+00 | 8,38E-03 | 1,56E-03 | 4,06E+00 | 3,85E+00 |
|  NHWD | kg | 1,27E+03 | 3,79E+01 | 0,00E+00 | 7,90E+00 | 5,86E+01 | 7,87E+01 | -5,45E+02 |
|  RWD | kg | 1,95E-01 | 3,69E-03 | 0,00E+00 | 1,11E-03 | 7,81E-05 | 5,02E-06 | -7,30E-02 |

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 | 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 |
|  MFR | kg | 6,29E+01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 6,84E+02 | 1,21E-04 | -6,05E-02 |
|  MER | kg | 2,05E+01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 5,76E+01 | 3,32E-06 | -7,79E-03 |
|  EEE | MJ | 1,21E+01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 1,52E+00 | 1,43E-04 | -2,67E-02 |
|  EET | MJ | 1,83E+02 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 2,31E+01 | 2,17E-03 | -4,04E-01 |

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 | 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, Sweden (kWh) | ecoinvent 3.6 | 54,94 | g CO ₂ -eq/kWh |

Dangerous substances

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

Indoor environment






Additional Environmental Information

| Additional environmental impact indicators required in NPCR Part A for construction products | | | | | | | | |
|--|------------------------|----------|----------|----------|----------|----------|----------|-----------|
| Indicator | Unit | A1-A3 | A4 | C1 | C2 | C3 | C4 | D |
| GWPIOBC | kg CO ₂ -eq | 4,33E+03 | 3,44E+01 | 0,00E+00 | 1,07E+01 | 1,13E+02 | 4,56E+00 | -1,89E+03 |

GWPI-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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