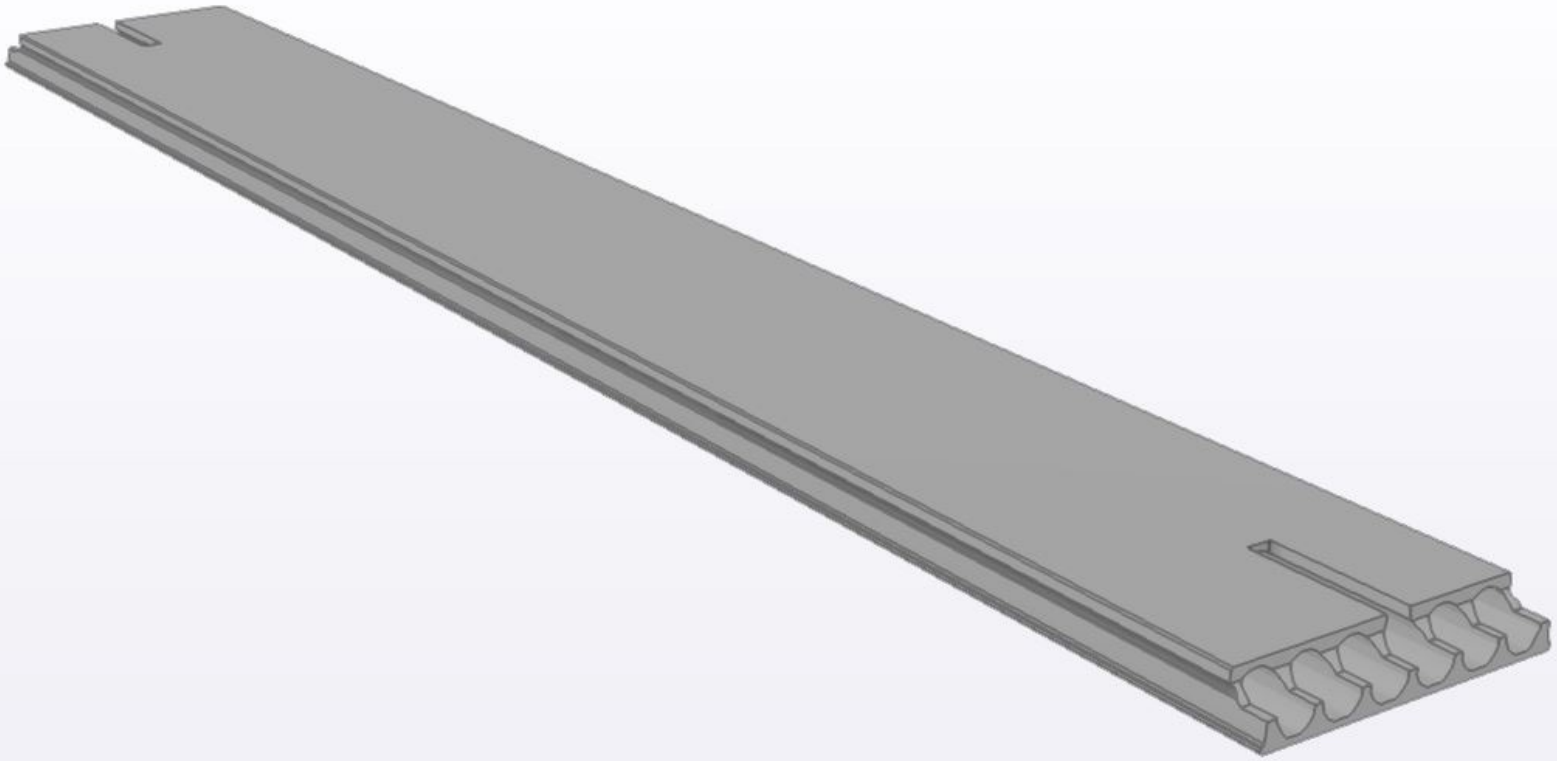
epd-global
Powered by EPD-Norway

# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

## Håldäck Uddevalla Nivå 4



EVOBUILD

Heidelberg Materials

**Owner of the declaration:**
Heidelberg Materials Precast Contiga AB – Concrete

**Product:**
Håldäck Uddevalla Nivå 4

**Declared unit:**
1 tonne

**This declaration is based on Product Category Rules:**
EN 15804:2012+A2:2019 serves as core PCR
NPCR 020:2021 Part B for Concrete and concrete elements

**Program operator:**
EPD-Global

**Declaration number:**
NEPD-17564-21963

**Issue date:**
07.09.2026

**Valid to:**
07.09.2031

**EPD software:**
LCAno EPD generator ID: 1577870

EPD-Global

## General information

**Product**

Håldäck Uddevalla Nivå 4

**Program operator:**

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

**Declaration number:**

NEPD-17564-21963

**This declaration is based on Product Category Rules:**

EN 15804:2012+A2:2019 serves as core PCR
NPCR 020:2021 Part B for Concrete and concrete elements

**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 tonne Håldäck Uddevalla Nivå 4

**Declared unit with option:**

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

**Functional unit:**

**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.

Third party verifier:

Ellen Soldal, Norsus AS

(no signature required)

**Owner of the declaration:**

Heidelberg Materials Precast Contiga AB – Concrete
Contact person: Håvard Nyman
e-mail: havard.nyman@heidelbergmaterials.com

**Manufacturer:**

Heidelberg Materials Precast Contiga AB – Concrete
Contact person: Håvard Nyman
e-mail: havard.nyman@heidelbergmaterials.com
Phone: +46 0522 636333

**Place of production:**

Heidelberg Materials Precast Contiga AB – Concrete
Vintergatan 7,
761 50 Norrtälje, Sweden

**Management system:**

Holds a local environmental diploma and is certified for ISO45001, 14001 and 9001

**Organisation no:**

556270-5979

**Issue date:**

07.09.2026

**Valid to:**

07.09.2031

**Year of study:**

2025

**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.

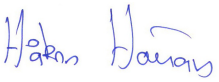
**Development and verification of EPD:**

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. NEPDT03

Developer of EPD: Alexander Noré

Reviewer of company-specific input data and EPD: Håvard Nyman

**Approved:**



Håkon Hauan, CEO EPD-Global

## Product

### Product description:

Hollow core is a type of slab that is made of concrete and contains prestressed reinforcement. The elements have longitudinal air channels to optimize material use and load-bearing capacity. The hollow cores are manufactured in different thicknesses depending on the desired function. This type of slabs allows for large spans, which also provides good conditions for a flexible use of the building over its lifetime. It is also a very resource-efficient product that utilizes the included material optimally.
The low w/c ratio and the high strength mean that the construction dries out quickly. With hollow core slabs, the building also receives very good properties in terms of sound insulation and good resistance against fire and moisture. Another of the concrete's important properties is its ability to store heat, which enables a low energy consumption and a lower power output during the building's entire operating time.
Hollow cores are 100% recyclable and enable fast, cost-effective and rational assembly in the construction project. This type of slab is also well suited for reuse.

### Product specification

| Materials | kg | % |
|---|---|---|
| Additives | 66.69 | 6.67 |
| Aggregate | 783.83 | 78.38 |
| Cement | 91.70 | 9.17 |
| Chemical | 0.65 | 0.065 |
| Metal - Steel | 10.86 | 1.09 |
| Water | 46.27 | 4.63 |
| Total | 1000.00 | 100.00 |

### Technical data:

The declared element is an HD/F 120/27 hollow core slab made of concrete strength class C45/55 with a water-cement ratio (w/c) of 0.40 and six tension lines Ø12.9 mm.
This EPD is applicable for dimensions HD/F 120/20 to HD/F 120/50, as the environmental impact indicators do not differ by more than 10% from the declared value.
The cement used is Heidelberg Materials Industricement Skövde CEM II. See NEPD-11497-11391 for reference.
Additional technical data and information on load capacity for different hollow core dimensions are available from Heidelberg Materials Precast Contiga's concrete factory in Uddevalla.

### Market:

Sweden

### Reference service life, product

More than 50 years

### Reference service life, building or construction works

More than 50 years

## LCA: Calculation rules

### Declared unit:

1 tonne Håldäck Uddevalla Nivå 4

### 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:

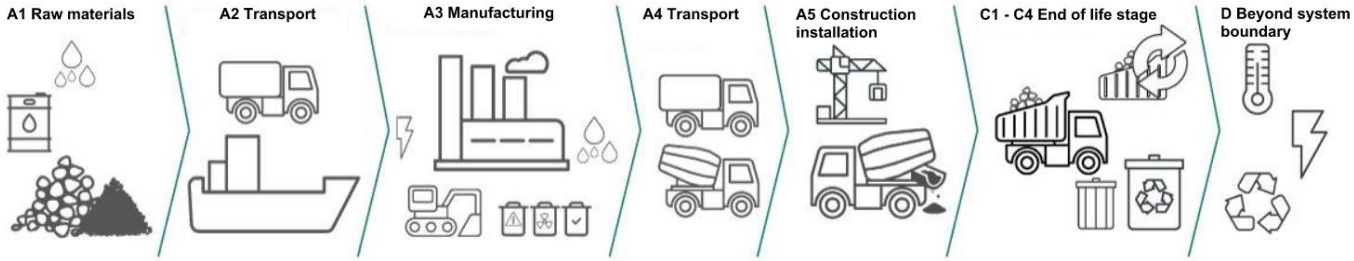
Specific data for the product composition are provided by the manufacturer. The data represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to EN 15804 and different LCA databases. The data quality of the raw materials in A1 is presented in the table below. The LCA modelling follows the "allocation, cut-off by classification" system model, where recycled materials enter the system without upstream environmental burdens and no credits are assigned for materials leaving the system. Life cycle impact assessment results are calculated using the Environmental Footprint (EF) method version 3.1

| Materials | Source | Data quality | Year |
|---|---|---|---|
| Additives | S-P-05377 | EPD | 2022 |
| Aggregate | ecoinvent 3.6 | Database | 2019 |
| Cement | NEPD-11497-11391 (Net calculation) | EPD | 2025 |
| Chemical | EPD-EFC-20210198-IBG1-EN | EPD | 2021 |
| Metal - Steel | S-P-07047 | EPD | 2023 |
| Water | 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 | MND | MND | MND | MND | MND | MND | X | X | X | X | X |

**System boundary:**




**Additional technical information:**

The product can be recycled by crushing

## LCA: Scenarios and additional technical information

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

| Transport from production place to user (A4) | Capacity utilisation (incl. return) % | Distance (km) | Fuel/Energy Consumption | Unit | Value (Liter/tonne) |
|---|---|---|---|---|---|
| Truck, over 32 tonnes, EURO 6 (km) | 53.3 % | 85.00 | 0.023 | l/tkm | 1.96 |

| Assembly (A5) | Unit | Value | | | |
|---|---|---|---|---|---|
| Diesel (L) | L | 0.87 | | | |

| De-construction demolition (C1) | Unit | Value | | | |
|---|---|---|---|---|---|
| Diesel (L) | L | 0.87 | | | |
| Demolition of building per kg of cement-based product, C1 (kg) | kg | 989.11 | | | |
| Demolition of building per kg of steel, C1 (kg) | kg | 10.89 | | | |

| Transport to waste processing (C2) | Capacity utilisation (incl. return) % | Distance (km) | Fuel/Energy Consumption | Unit | Value (Liter/tonne) |
|---|---|---|---|---|---|
| Truck, over 32 tonnes, EURO 6 (km) | 53.3 % | 85.00 | 0.023 | l/tkm | 1.96 |

| Waste processing (C3) | Unit | Value | | | |
|---|---|---|---|---|---|
| Waste treatment of cement-based product after demolition (kg | kg | 672.59 | | | |
| Materials to recycling (kg) | kg | 7.30 | | | |

| Disposal (C4) | Unit | Value | | | |
|---|---|---|---|---|---|
| Waste, concrete sludge, rest concrete, to disposal (kg) | kg | 316.52 | | | |
| Waste, scrap steel, to disposal (kg) | kg | 3.59 | | | |

| Benefits and loads beyond the system boundaries (D) | Unit | Value | | | |
|---|---|---|---|---|---|
| Substitution of stone materials (kg) | kg | 672.59 | | | |
| Substitution of steel (kg) | kg | 3.53 | | | |

## LCA: Results

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

| Environmental impact | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Indicator | | Unit | A1 | A2 | A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
| | GWP-total | kg $CO_2$ -eq | 6.64E+01 | 3.11E+00 | 3.69E+00 | 7.41E+00 | 3.08E+00 | 7.08E+00 | 7.41E+00 | 4.84E-01 | 1.37E+00 | -5.46E+00 |
| | GWP-fossil | kg $CO_2$ -eq | 6.58E+01 | 3.11E+00 | 3.56E+00 | 7.40E+00 | 3.08E+00 | 7.08E+00 | 7.40E+00 | 4.78E-01 | 1.37E+00 | -5.42E+00 |
| | GWP-biogenic | kg $CO_2$ -eq | 4.94E-01 | 1.33E-03 | 3.77E-02 | 3.17E-03 | 5.76E-04 | 1.33E-03 | 3.17E-03 | 4.13E-03 | 1.17E-03 | -3.29E-02 |
| | GWP-luluc | kg $CO_2$ -eq | 1.31E-01 | 9.50E-04 | 8.85E-02 | 2.26E-03 | 2.42E-04 | 5.58E-04 | 2.26E-03 | 6.61E-04 | 2.69E-04 | -2.78E-03 |
| | ODP | kg CFC11 -eq | 6.50E-07 | 7.49E-07 | 1.13E-06 | 1.79E-06 | 6.64E-07 | 1.53E-06 | 1.79E-06 | 9.42E-08 | 6.67E-07 | -4.04E-07 |
| | AP | mol H+ -eq | 1.26E-01 | 1.00E-02 | 3.10E-02 | 2.38E-02 | 3.22E-02 | 7.40E-02 | 2.38E-02 | 3.87E-03 | 1.34E-02 | -3.32E-02 |
| | EP-FreshWater | kg P -eq | 1.75E-03 | 2.48E-05 | 1.03E-04 | 5.89E-05 | 1.12E-05 | 2.58E-05 | 5.89E-05 | 3.02E-05 | 1.02E-05 | -2.80E-04 |
| | EP-Marine | kg N -eq | 3.48E-02 | 2.19E-03 | 1.12E-02 | 5.22E-03 | 1.42E-02 | 3.27E-02 | 5.22E-03 | 1.13E-03 | 5.02E-03 | -8.80E-03 |
| | EP-Terrestial | mol N -eq | 4.83E-01 | 2.44E-02 | 1.26E-01 | 5.82E-02 | 1.56E-01 | 3.56E-01 | 5.82E-02 | 1.30E-02 | 5.53E-02 | -9.73E-02 |
| | POCP | kg NMVOC -eq | 1.11E-01 | 9.58E-03 | 3.38E-02 | 2.29E-02 | 4.28E-02 | 9.86E-02 | 2.29E-02 | 3.49E-03 | 1.58E-02 | -3.44E-02 |
| | ADP-minerals&metals[1] | kg Sb-eq | 1.10E-03 | 5.59E-05 | 5.93E-05 | 1.32E-04 | 4.72E-06 | 1.09E-05 | 1.32E-04 | 6.06E-06 | 1.21E-05 | -2.04E-04 |
| | ADP-fossil[1] | MJ | 5.49E+02 | 5.05E+01 | 1.89E+02 | 1.20E+02 | 4.23E+01 | 9.74E+01 | 1.20E+02 | 1.48E+01 | 4.42E+01 | -5.87E+01 |
| | WDP[1] | $m^3$ | 2.11E+03 | 3.88E+01 | 1.62E+04 | 9.22E+01 | 8.99E+00 | 2.07E+01 | 9.22E+01 | 1.64E+03 | 9.31E+01 | -1.02E+03 |

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.

This EPD might use cement EPDs as input in which the Net approach* has been applied. See the Data Quality table on page 3.

*The Net approach excludes the emissions from waste incineration used to produce heat required in the cement manufacturing process.

| Additional environmental impact indicators | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Indicator | | Unit | A1 | A2 | A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
| | PM | Disease incidence | 2.15E-02 | 2.84E-07 | 6.45E-07 | 6.80E-07 | 8.51E-07 | 5.92E-06 | 6.80E-07 | 6.19E-08 | 2.85E-07 | -6.18E-07 |
| | IRP[2] | kgBq U235 -eq | 9.23E+00 | 2.21E-01 | 5.59E+00 | 5.26E-01 | 1.81E-01 | 4.21E-01 | 5.26E-01 | 2.49E-01 | 1.92E-01 | -2.25E-01 |
| | ETP-fw[1] | CTUe | 9.24E+01 | 3.69E+01 | 1.01E+02 | 8.79E+01 | 2.31E+01 | 5.32E+01 | 8.79E+01 | 1.05E+01 | 2.19E+01 | -2.43E+02 |
| | HTP-c[1] | CTUh | 6.85E-08 | 0.00E+00 | 3.18E-09 | 0.00E+00 | 8.98E-10 | 1.90E-09 | 0.00E+00 | 6.73E-10 | 6.40E-10 | -2.00E-08 |
| | HTP-nc[1] | CTUh | 2.39E-07 | 3.58E-08 | 7.58E-08 | 8.50E-08 | 2.13E-08 | 4.93E-08 | 8.50E-08 | 9.42E-09 | 1.28E-08 | 3.73E-07 |
| | SQP[1] | dimensionless | 3.26E+01 | 5.76E+01 | 7.47E+01 | 1.38E+02 | 5.37E+00 | 1.21E+01 | 1.38E+02 | 8.39E+00 | 1.61E+02 | 5.67E+01 |

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

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

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator
2. This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

| Resource use | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Indicator | | Unit | A1 | A2 | A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
| | PERE | MJ | 6.44E+01 | 6.36E-01 | 7.68E+01 | 1.51E+00 | 2.29E-01 | 5.29E-01 | 1.51E+00 | 7.63E+00 | 6.81E-01 | -8.75E+00 |
| | PERM | MJ | 7.61E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | PERT | MJ | 6.45E+01 | 6.36E-01 | 7.68E+01 | 1.51E+00 | 2.29E-01 | 5.29E-01 | 1.51E+00 | 7.63E+00 | 6.81E-01 | -8.75E+00 |
| | PENRE | MJ | 3.74E+02 | 5.05E+01 | 1.89E+02 | 1.20E+02 | 4.23E+01 | 9.74E+01 | 1.20E+02 | 1.48E+01 | 4.42E+01 | -6.02E+01 |
| | PENRM | MJ | 3.76E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | PENRT | MJ | 3.78E+02 | 5.05E+01 | 1.89E+02 | 1.20E+02 | 4.23E+01 | 9.74E+01 | 1.20E+02 | 1.48E+01 | 4.42E+01 | -6.02E+01 |
| | SM | kg | 6.69E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | RSF | MJ | 4.27E+01 | 2.23E-02 | 3.08E-01 | 5.29E-02 | 5.63E-03 | 5.63E-03 | 5.29E-02 | 0.00E+00 | 1.41E-02 | 1.55E-02 |
| | NRSF | MJ | 1.87E+02 | 7.47E-02 | 1.00E+00 | 1.77E-01 | 8.29E-02 | 8.29E-02 | 1.77E-01 | 0.00E+00 | 4.04E-02 | 3.95E+00 |
| | FW | $m^3$ | 5.58E-01 | 5.74E-03 | 2.83E-01 | 1.37E-02 | 2.18E-03 | 5.01E-03 | 1.37E-02 | 2.54E-02 | 5.27E-02 | -9.65E-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 | A2 | A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
| | HWD | kg | 1.11E+00 | 2.76E-03 | 4.33E-02 | 6.58E-03 | 1.25E-03 | 2.87E-03 | 6.58E-03 | 1.48E-03 | 0.00E+00 | -2.65E-02 |
| | NHWD | kg | 9.02E+00 | 4.36E+00 | 2.03E+00 | 1.05E+01 | 5.01E-02 | 1.15E-01 | 1.05E+01 | 4.68E-02 | 3.20E+02 | -1.78E+00 |
| | RWD | kg | 9.26E-03 | 3.45E-04 | 2.60E-03 | 8.21E-04 | 2.94E-04 | 6.76E-04 | 8.21E-04 | 1.57E-04 | 0.00E+00 | -1.96E-04 |

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 | A2 | A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
| | CRU | kg | 2.51E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | MFR | kg | 0.00E+00 | 0.00E+00 | 1.46E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.80E+02 | 0.00E+00 | 0.00E+00 |
| | MER | kg | 0.00E+00 | 0.00E+00 | 8.79E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | EEE | MJ | 0.00E+00 | 0.00E+00 | 4.86E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | EET | MJ | 0.00E+00 | 0.00E+00 | 7.36E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

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

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

| 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

### Transparent reporting of energy

The table below presents GWPtotal values for energy resources used in the manufacturing phase (A3), calculated with both the location-based and market-based approach. This information is provided for transparency, allowing EPD users to understand the impact of these methodological choices. In this EPD, the following methodology was used in the main results: Location-based approach.

| Electricity mix | Source | Amount | Unit | GWPtotal [kg CO2/Unit] | SUM [kg CO2] |
|---|---|---|---|---|---|
| **Location-based approach.** | | | | | |
| Electricity, Sweden (kWh) | ecoinvent 3.6 | 2.68E+01 | kWh | 5.49E-02 | 1.47E+00 |
| **Market-based approach.** | | | | | |
| Electricity, Sweden, low voltage, residual mix | ecoinvent 3.10.1 | 2.68E+01 | kWh | 6.55E-02 | 1.76E+00 |

"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

The product has a very small or no impact on the indoor climate

## Additional Environmental Information

| Additional environmental impact indicators required in NPCR Part A for construction products | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | A1 | A2 | A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
| GWPIOBC | kg $CO_2$ -eq | 6.58E+01 | 3.11E+00 | 3.68E+00 | 7.41E+00 | 3.08E+00 | 7.08E+00 | 7.41E+00 | 4.78E-01 | 1.37E+00 | -5.53E+00 |

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.

| Additional GWP indicators for GWP Net and Gross | | |
|---|---|---|
| **Indicator** | **Unit** | **A1-A3** |
| GWP-total, gross | kg $CO_2$ -eq | 8.82E+01 |
| GWP-fossil, gross | kg $CO_2$ -eq | 8.74E+01 |
| GWP-biogenic, gross | kg $CO_2$ -eq | 5.33E-01 |
| GWP-luluc, gross | kg $CO_2$ -eq | 2.20E-01 |
| GWP-total, net | kg $CO_2$ -eq | 7.32E+01 |
| GWP-fossil, net | kg $CO_2$ -eq | 7.25E+01 |
| GWP-biogenic, net | kg $CO_2$ -eq | 5.33E-01 |
| GWP-luluc, net | kg $CO_2$ -eq | 2.20E-01 |

GWP-total, gross = Global Warming Potential total, gross (GWP-fossil, gross + GWP-biogenic, gross + GWP-luluc); GWP-total, net = Global Warming Potential total, net (GWP-fossil, net + GWP-biogenic, net + GWP-luluc); GWP-fossil, gross = Global Warming Potential fossil fuels, gross (includes emissions from combustion of waste fuels from non-renewable sources); GWP-fossil, net = Global Warming Potential fossil fuels, net (excludes emissions from combustion of waste fuels from non-renewable sources); GWP-biogenic, gross = Global Warming Potential biogenic, gross (includes emissions from combustion of waste fuels from renewable sources); GWP-biogenic, net = Global Warming Potential biogenic, net (excludes emissions from combustion of waste fuels from renewable sources); GWP-luluc = Global Warming Potential land use and land use change.

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