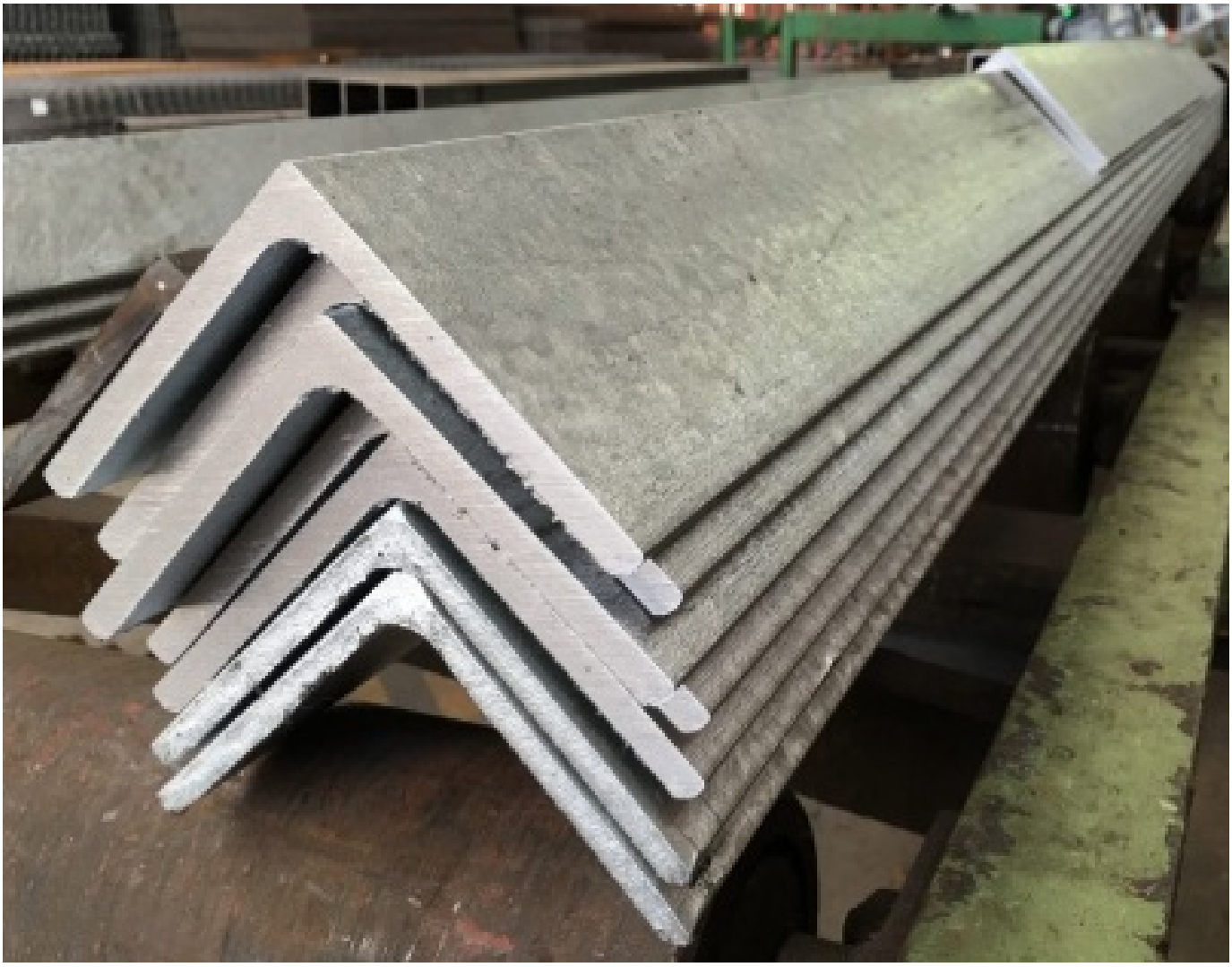
epd-global
Powered by EPD-Norway

# Environmental product declaration

In accordance with ISO 14025 and EN15804+A2

## Merchant Bars



EPD-Global

**Owner of the declaration:**
Heidelberg Materials Precast Contiga AB - Steel

**Product:**
Merchant Bars

**Declared unit:**
1 kg

**This declaration is based on Product Category Rules:**
CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR 013:2021 Part B for Steel and aluminium construction products

**Program operator:**
EPD-Global

**Declaration number:**
NEPD-17571-21955

**Issue date:**
07.09.2026

**Valid to:**
07.09.2031

**EPD software:**
LCAno EPD generator ID: 1610212

## General information

**Product**

Merchant Bars

**Owner of the declaration:**

Heidelberg Materials Precast Contiga AB - Steel
Contact person: Håvard Nyman
Phone: +46 (0)739 62 73 17
e-mail: havard.nyman@heidelbergmaterials.com

**Program operator:**

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

**Manufacturer:**

Heidelberg Materials Precast Contiga AB - Steel

**Declaration number:**

NEPD-17571-21955

**Place of production:**

Heidelberg Materials Precast Contiga AB - Steel
Vintergatan 7 / P.B 94
SE-761 21 Norrtälje, Sweden

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

CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR 013:2021 Part B for Steel and aluminium construction products

**Management system:**

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

556270-5979

**Declared unit:**

1 kg Merchant Bars

**Issue date:**

07.09.2026

**Declared unit with option:**

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

**Valid to:**

07.09.2031

**Year of study:**

2024

**Functional unit:**

**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 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. Approval number:

Developer of EPD: Filip Wirback

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

**Verification of EPD tool:**

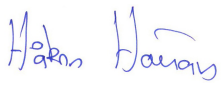
Independent third party verification of the EPD tool, background data and test-EPD in accordance with EPD-Global's procedures and guidelines for verification and approval of EPD tools.

Third party verifier:

Alexander Borg, Asplan Viak AS

(no signature required)

**Approved:**



Håkon Hauan, CEO EPD-Global

## Product

### Product description:

Steel is used as load-bearing structures and is manufactured in varying dimensions to suit different types of buildings and conditions. The steel structures are manufactured at Heidelberg Materials Precast Contiga's steel workshop in Norrtälje before they are shipped and assembled on construction sites to form the framework of buildings. Steel structures can consist of columns, beams, trusses and welded profiles.

### Product specification

| Materials | kg | % |
|---|---|---|
| Metal - Recycled steel | 0.945 | 94.50 |
| Metal - Steel | 0.045 | 4.50 |
| Paint, solvent-based | 0.01 | 1.00 |
| Total | 1.00 | 100.00 |

### Technical data:

The requirements in EN1090-2:2018+A1:2024 are applied and the constructions can be manufactured in performance classes up to EXC3.
The material grade used is steel up to S420
More technical data and information is available at Heidelberg Materials Precast Contiga's steel workshop in Norrtälje

### Market:

Sweden

### Reference service life, product

L50

### Reference service life, building or construction works

Same as product

## LCA: Calculation rules

### Declared unit:

1 kg Merchant Bars

### 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:

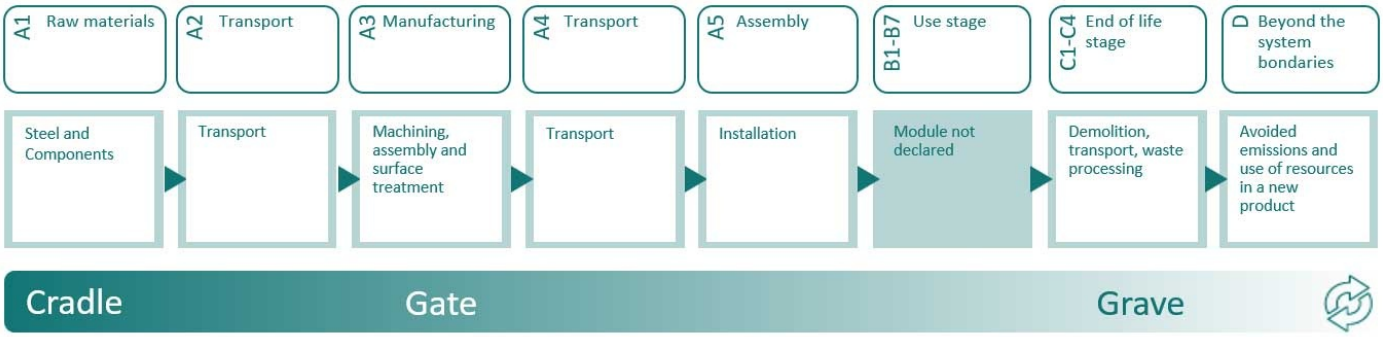
Specific data for the product composition are provided by the manufacturer. The data represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to EN 15804 and different LCA databases. The data quality of the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

| Materials | Source | Data quality | Year |
|---|---|---|---|
| Metal - Recycled steel | EPD HUB, HUB-4714 | EPD | 2024 |
| Metal - Steel | S-P-04888 | EPD | 2020 |
| Paint, solvent-based | 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:**

This EPD applies to merchant bars with their different sub variants and dimensions.
All steel structures can at the end of life be 100% recycled into new raw material.

## 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, 16-32 tonnes, EURO 6 (km) | 36.7 % | 85.00 | 0.043 | l/tkm | 3.66 |

| Assembly (A5) | Unit | Value | | | |
|---|---|---|---|---|---|
| Diesel, burned (L) | L | 0.085 | | | |
| Electricity, Sweden (kWh) | kWh | 1.20 | | | |

| De-construction demolition (C1) | Unit | Value | | | |
|---|---|---|---|---|---|
| Diesel, burned (L) | L | 0.087 | | | |

| 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 % | 85.00 | 0.043 | l/tkm | 3.66 |

| Waste processing (C3) | Unit | Value | | | |
|---|---|---|---|---|---|
| Materials to recycling (kg) | kg | 0.891 | | | |
| Waste treatment per kg Emulsion Paint, hazardous waste incineration (kg) - CH - C3 | kg | 0.01 | | | |

| Disposal (C4) | Unit | Value | | | |
|---|---|---|---|---|---|
| Waste, scrap steel, to landfill (kg) | kg | 0.099 | | | |
| Landfilling of ashes from incineration of Emulsion Paint, hazardous waste incineration, process of ashes and residues (kg) - CH - C4 | kg | 0.00707 | | | |

| Benefits and loads beyond the system boundaries (D) | Unit | Value | | | |
|---|---|---|---|---|---|
| Substitution of primary steel with net scrap (kg) | kg | -0.06246 | | | |
| Substitution of thermal energy, district heating, in Norway (MJ) | MJ | 0.0001757 | | | |
| Substitution of electricity, in Norway (MJ) | MJ | 0.00001161 | | | |

## 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 | 8.59E-01 | 1.39E-02 | 3.66E-01 | 3.08E-01 | 1.39E-02 | 2.03E-02 | 2.54E-03 | 6.88E-02 |
| | GWP-fossil | kg $CO_2$ -eq | 8.32E-01 | 1.39E-02 | 3.61E-01 | 3.08E-01 | 1.39E-02 | 2.02E-02 | 2.54E-03 | 6.87E-02 |
| | GWP-biogenic | kg $CO_2$ -eq | 6.99E-03 | 5.75E-06 | 1.29E-03 | 5.76E-05 | 5.75E-06 | 1.01E-04 | 1.32E-06 | 3.79E-05 |
| | GWP-luluc | kg $CO_2$ -eq | 2.00E-02 | 4.94E-06 | 3.97E-03 | 2.42E-05 | 4.94E-06 | 5.66E-06 | 3.13E-07 | 3.08E-05 |
| | ODP | kg CFC11 -eq | 8.70E-08 | 3.15E-09 | 9.47E-08 | 6.64E-08 | 3.15E-09 | 2.88E-09 | 3.10E-10 | -7.20E-08 |
| | AP | mol H+ -eq | 6.54E-02 | 3.99E-05 | 3.54E-03 | 3.22E-03 | 3.99E-05 | 3.68E-05 | 1.10E-05 | 3.42E-04 |
| | EP-FreshWater | kg P -eq | 1.26E-04 | 1.11E-07 | 5.20E-06 | 1.12E-06 | 1.11E-07 | 1.55E-07 | 3.33E-08 | 4.23E-06 |
| | EP-Marine | kg N -eq | 2.00E-02 | 7.90E-06 | 1.45E-03 | 1.42E-03 | 7.90E-06 | 6.27E-06 | 3.72E-06 | 7.07E-05 |
| | EP-Terrestial | mol N -eq | 1.20E-01 | 8.83E-05 | 1.61E-02 | 1.56E-02 | 8.83E-05 | 7.11E-05 | 4.32E-05 | 7.23E-04 |
| | POCP | kg NMVOC -eq | 5.56E-02 | 3.38E-05 | 4.39E-03 | 4.28E-03 | 3.38E-05 | 2.39E-05 | 1.12E-05 | 3.44E-04 |
| | ADP-minerals&metals[1] | kg Sb-eq | 1.69E-05 | 3.84E-07 | 2.89E-06 | 4.72E-07 | 3.84E-07 | 9.70E-08 | 8.28E-09 | 1.19E-06 |
| | ADP-fossil[1] | MJ | 1.79E+01 | 2.10E-01 | 1.13E+01 | 4.23E+00 | 2.10E-01 | 1.41E-01 | 2.49E-02 | 5.78E-01 |
| | WDP[1] | $m^3$ | 5.63E+02 | 2.03E-01 | 7.23E+02 | 8.99E-01 | 2.03E-01 | 5.77E-01 | 2.53E-01 | -3.56E+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

## Additional environmental impact indicators

| Indicator | | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|
| | PM | Disease incidence | 2.64E-08 | 8.50E-10 | 8.60E-08 | 8.51E-08 | 8.50E-10 | 6.41E-10 | 2.28E-10 | 5.70E-09 |
| | IRP[2] | kgBq U235 -eq | 2.35E-01 | 9.18E-04 | 2.62E-01 | 1.81E-02 | 9.18E-04 | 6.63E-04 | 1.18E-04 | -2.47E-04 |
| | ETP-fw[1] | CTUe | 5.38E+00 | 1.56E-01 | 6.02E+00 | 2.31E+00 | 1.56E-01 | 4.17E-01 | 4.30E-02 | 3.83E+00 |
| | HTP-c[1] | CTUh | 2.72E-10 | 0.00E+00 | 1.96E-10 | 9.00E-11 | 0.00E+00 | 3.00E-12 | 3.00E-12 | 3.30E-10 |
| | HTP-nc[1] | CTUh | 5.02E-09 | 1.70E-10 | 4.68E-09 | 2.13E-09 | 1.70E-10 | 1.45E-10 | 7.80E-11 | -7.19E-09 |
| | SQP[1] | dimensionless | 5.04E+00 | 1.47E-01 | 3.68E+00 | 5.37E-01 | 1.47E-01 | 6.79E-02 | 7.71E-02 | 4.32E-02 |

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

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

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 | 3.96E+00 | 3.01E-03 | 3.44E+00 | 2.29E-02 | 3.01E-03 | 2.94E-02 | 1.36E-03 | 4.68E-02 |
| | PERM | MJ | 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 | 3.96E+00 | 3.01E-03 | 3.44E+00 | 2.29E-02 | 3.01E-03 | 2.94E-02 | 1.36E-03 | 4.68E-02 |
| | PENRE | MJ | 1.82E+01 | 2.10E-01 | 1.13E+01 | 4.23E+00 | 2.10E-01 | 1.41E-01 | 2.49E-02 | 5.78E-01 |
| | PENRM | MJ | 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 | 1.82E+01 | 2.10E-01 | 1.13E+01 | 4.23E+00 | 2.10E-01 | 1.41E-01 | 2.49E-02 | 5.78E-01 |
| | SM | kg | 9.53E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | RSF | MJ | 1.41E-02 | 1.08E-04 | 1.38E-02 | 5.63E-04 | 1.08E-04 | 6.15E-04 | 3.27E-05 | -2.48E-03 |
| | NRSF | MJ | 3.56E-02 | 3.84E-04 | 5.00E-02 | 8.29E-03 | 3.84E-04 | 0.00E+00 | 1.93E-04 | -7.23E-02 |
| | FW | $m^3$ | 1.63E-02 | 2.25E-05 | 7.99E-03 | 2.18E-04 | 2.25E-05 | 5.85E-05 | 3.27E-05 | 1.45E-04 |

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 | 1.03E-02 | 1.08E-05 | 4.94E-04 | 1.25E-04 | 1.08E-05 | 0.00E+00 | 0.00E+00 | 3.57E-04 |
| | NHWD | kg | 7.02E-01 | 1.02E-02 | 2.84E-02 | 5.01E-03 | 1.02E-02 | 0.00E+00 | 1.06E-01 | 2.81E-02 |
| | RWD | kg | 2.15E-04 | 1.43E-06 | 1.36E-04 | 2.94E-05 | 1.43E-06 | 0.00E+00 | 0.00E+00 | -1.90E-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 | 0.00E+00 | 0.00E+00 |
| | MFR | kg | 3.91E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.91E-01 | 0.00E+00 | 0.00E+00 |
| | MER | kg | 7.34E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.00E-02 | 0.00E+00 | 0.00E+00 |
| | EEE | MJ | 8.99E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.16E-05 | 0.00E+00 | 0.00E+00 |
| | EET | MJ | 1.36E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.76E-04 | 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

### 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 CO2-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 | A5 | C1 | C2 | C3 | C4 | D |
| GWPIOBC | kg $CO_2$ -eq | 8.53E-01 | 1.39E-02 | 3.66E-01 | 3.08E-01 | 1.39E-02 | 2.03E-02 | 2.54E-03 | 6.88E-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.

## Bibliography

ISO 14025:2010 Environmental labels and declarations - Type III environmental declarations - Principles and procedures.
ISO 14044:2006 Environmental management - Life cycle assessment - Requirements and guidelines.
EN 15804:2012+A2:2019 Environmental product declaration - Core rules for the product category of construction products.
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NPCR 013 Part B for Steel and Aluminium Construction Products , Ver. 4.0, 06.10.2021, EPD Norway.


| | | | |
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| ECO PLATFORM EPD VERIFIED | ECO Platform<br>ECO Portal | web:<br>web: | www.eco-platform.org<br>ECO Portal |