

# Environmental product declaration

In accordance with ISO 14025 and EN15804+A2

## OWAtecta Metal Ceilings



**OWA**

EPD-Global

**Owner of the declaration:**

Odenwald Faserplattenwerk GmbH

**Product:**

OWAtecta Metal Ceilings

**Declared unit:**

1 m<sup>2</sup>

**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-17691-22197

**Issue date:**

18.09.2026

**Valid to:**

18.09.2031

**EPD software:**

LCAno EPD generator ID: 1693621

## General information

### Product

OWAtecta Metal Ceilings

### Program operator:

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

### Declaration number:

NEPD-17691-22197

### 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

### 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 m<sup>2</sup> OWAtecta Metal Ceilings

### Declared unit with option:

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

### Functional unit:

Not relevant

### 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:

Alexander Borg, Asplan Viak AS

(no signature required)

### Owner of the declaration:

Odenwald Faserplattenwerk GmbH  
Contact person: Odenwald Faserplattenwerk GmbH  
Phone: +49 9373 201 0  
e-mail: [info@owa.de](mailto:info@owa.de)

### Manufacturer:

Odenwald Faserplattenwerk GmbH  
Dr.-F.-A.-Freundt-Straße 3  
63916 Amorbach, Germany

### Place of production:

Aspen Yapi ve Zemin Sistemleri San. ve Tic. A.S.  
Eskisehir Organize Sanayi Bolgesi Savas Ozaydemir Teknoloji Bulvari  
13. Cad. NO:6 26110 Odunpazari  
Eskisehir, Turkey

### Management system:

### Organisation no:

### Issue date:

18.09.2026

### Valid to:

18.09.2031

### 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.

Developer of EPD: Eren Yaman - ERKE Sustainability Consultancy

Reviewer of company-specific input data and EPD: Børge Heggen Johansen, Energiråd AS

### Approved:



Håkon Hauan, CEO EPD-Global

## Product

### Product description:

OWAtecta metal tiles combine modern architectural design with exceptional durability, hygiene, and acoustic performance. Manufactured from high-quality galvanized steel and available in a wide range of perforation patterns, edge details, and sizes, OWAtecta metal ceiling systems offer flexible solutions for both aesthetic and technical requirements. Designed for exposed and concealed suspension systems, OWAtecta tiles can be supplied as lay-in, clip-in, hook-on, or plank solutions, enabling seamless integration into offices, healthcare facilities, educational buildings, retail spaces, hospitality environments, laboratories, and industrial applications. Perforated OWAtecta metal tiles provide excellent acoustic absorption, achieving performance levels up to Class B depending on the configuration, while maintaining a clean, contemporary appearance. The smooth powder-coated surface is easy to clean, highly durable, and suitable for environments where hygiene and maintenance are critical.

### Product specification

Metal ceiling systems are manufactured from folded, roll-formed and partially punched steel as complete ceiling kits or as individual components. The ceiling kit comprises the membrane component, e.g. Tile panels or plank panel ceilings, as well as the substructure for suspending the metal ceiling. The substructure is usually made of steel. The substructure can have various suspension heights and its design is governed by the form, functional requirements and weight of the membrane components. For the placing on the market of the product in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland) Regulation (EU) No. 305/2011 (CPR) applies.

| Materials                                     | Value | Unit |
|-----------------------------------------------|-------|------|
| Powder coated steel tile with acoustic fleece | 3.4   | kg   |
| Packaging - Cardboard                         | 0.29  | kg   |
| Packaging - Wood                              | 0.029 | kg   |
| Total incl. packaging                         | 3.719 | kg   |

### Technical data:

Metal suspended ceiling systems are manufactured in accordance with EN 13964:2014, "Suspended ceilings – Requirements and test methods". The product has a reaction to fire classification of A2, s1-d0 and a corrosion resistance of Class B, with sound absorption values (single value  $\alpha_w$ ) ranging from 0,1 – 0,8 depending on the perforation pattern and acoustic backing used. Conformity is confirmed by a CE Declaration of Performance (OWAtecta DoP 00013.1) and a UKCA/UKNI Declaration of Performance (OWAtecta).

Indoor air emissions have been tested and passed according to DE-UZ 132 (Blue Angel) test report no. 392-2024-00533801\_K8\_EN by Eurofins Product Testing Denmark A/S, with a declared VOC level < 5 µg/cbm. The product is free of urea-formaldehyde resins, lead, mercury, cadmium, PBDEs and phthalates, and it complies with the REACH regulation, containing no Substances of Very High Concern above 0,1 % by weight (based on supplier's declaration).

Further technical documentation and product data sheet are available on the manufacturer's website: <https://www.owa.de/en/>

| Parameter                                               | Value                                                                                                                              |
|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Material Composition                                    | Steel: DX51 Z100 / 0,4 mm - 2,00 mm Galvanized Steel - Powder Coating: PE Electrostatic Powder Coat / 60 Microns - Acoustic Fleece |
| Sound absorption coefficient (EN ISO 354, EN ISO 11654) | $\alpha_w$ : 0,10 – 0,80                                                                                                           |
| Durability class (EN 13964)                             | Corrosion Class B                                                                                                                  |
| Reaction to fire                                        | A2-s1, d0                                                                                                                          |

### Market:

Germany

### Reference service life, product

60 years

### Reference service life, building or construction works

Not relevant. Standard RSL of 60 years for building can be assumed from PCR.

## LCA: Calculation rules

### Declared unit:

1 m<sup>2</sup> OWAtecta Metal Ceilings

### Cut-off criteria:

All major raw materials and all the essential energy are included. The production processes for raw materials and energy flows with very small amounts (less than 1%) may not be included. These cut-off criteria do not apply for hazardous materials and substances.

### Allocation:

The allocation is made in accordance with the provisions of EN 15804. Incoming energy and water and waste production in-house is allocated equally among all products through mass allocation. Effects of primary production of recycled materials is allocated to the main product in which the material was used. The recycling process and transportation of the material is allocated to this analysis.

**Data quality:**

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

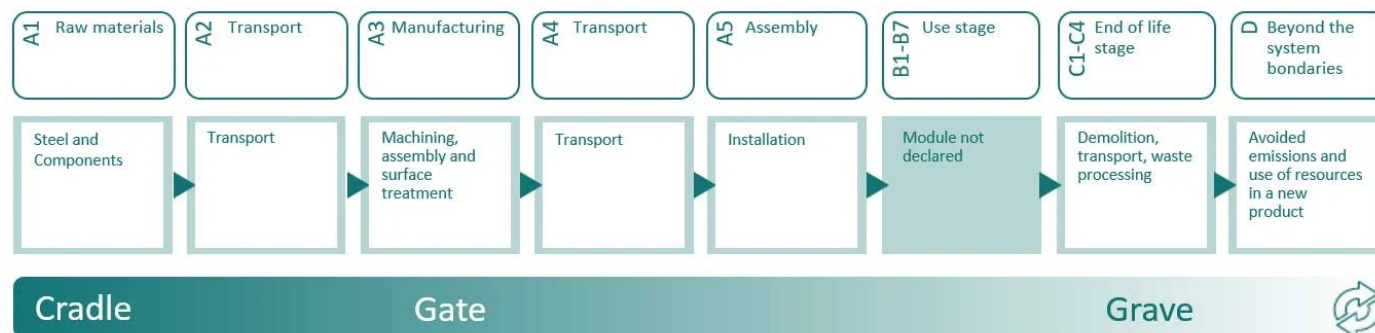
| Materials             | Source           | Data quality | Year |
|-----------------------|------------------|--------------|------|
| Glass fibre           | ecoinvent 3.10.1 | Database     | 2023 |
| Metal - Steel         | ecoinvent 3.10.1 | Database     | 2023 |
| Metal - Steel         | ecoinvent 3.6    | Database     | 2019 |
| Metal - Zinc          | ecoinvent 3.6    | Database     | 2019 |
| Packaging - Cardboard | ecoinvent 3.10.1 | Database     | 2023 |
| Packaging - Wood      | ecoinvent 3.10.1 | Database     | 2023 |
| Powder coating        | 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:**

Cradle to gate with optional modules A5, C1-C4 and D.


**Additional technical information:**

| Key environmental indicators (A1-A3) for variants of this EPD |                             |                  |
|---------------------------------------------------------------|-----------------------------|------------------|
| Product                                                       | Weight incl. packaging (kg) | GWPTotal (A1-A3) |
| Mesh                                                          | 5.419                       | 11.2147          |
| S14 canopies                                                  | 7.219                       | 16.7988          |
| S19 baffles                                                   | 3.719                       | 11.8307          |
| S80 rafts                                                     | 5.319                       | 10.4445          |
| Selecta metal canopies                                        | 7.219                       | 20.6903          |
| Reference Product (Rd1522)                                    | 3.719                       | 8.4061           |

## LCA: Scenarios and additional technical information

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

### A4 – Transport to the Building Site

An average transport distance of 200 km by truck from the manufacturing facility to the construction site has been considered.

### A5 – Installation in the Building

The installation of the ceiling system is carried out manually and does not require any energy consumption. No additional treatment or auxiliary material is required during installation. Only the removal and end-of-life treatment of the packaging materials have been considered in this module.

### C1 – Deconstruction and Demolition

The ceiling system is assumed to be manually dismantled at the end of its service life. Therefore, no energy consumption associated with deconstruction has been considered.

### C2 – Transport to Waste Treatment

An average transport distance of 85 km by truck from the deconstruction site to the relevant waste treatment, recycling or disposal facility has been considered.

### C3 – Waste Processing for Recycling

At the end of life, 95% of the steel is assumed to be collected and sent for recycling. The recycling scenario represents the processing of the recovered steel for use as secondary material in a subsequent product system.

### C4 – Disposal

The remaining 5% of the steel is assumed to be disposed of in landfill.

### Module D – Benefits and Loads Beyond the System Boundary

The environmental benefits associated with the recycling of the 90% recovered steel are considered in Module D. The recovered steel is assumed to substitute primary steel production in a subsequent product system, and the resulting potential benefits and loads are reported separately 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 %                                | 200.00        | 0.043                   | l/tkm | 8.60                |
| Assembly (A5)                                                               | Unit                                  | Value         |                         |       |                     |
| Waste, cardboard and paper, to average treatment (kg) - incl. 85 km transp. | kg                                    | 0.29          |                         |       |                     |
| Waste, packaging, wood (kg) (A5 included)                                   | kg                                    | 0.029         |                         |       |                     |
| 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                                    | 0.0576        |                         |       |                     |
| Waste, scrap steel, for incineration (kg)                                   | kg                                    | 3.23          |                         |       |                     |
| Disposal (C4)                                                               | Unit                                  | Value         |                         |       |                     |
| Waste, scrap steel, to landfill (kg)                                        | kg                                    | 0.17          |                         |       |                     |
| Waste, scrap steel, to landfill (kg)                                        | kg                                    | 0.0064        |                         |       |                     |
| Benefits and loads beyond the system boundaries (D)                         | Unit                                  | Value         |                         |       |                     |
| Substitution, Packaging, Pallet, EUR wooden pallet, single use (kg)         | kg                                    | 0.01873       |                         |       |                     |
| Substitution of primary steel with net scrap (kg)                           | kg                                    | 0.05454       |                         |       |                     |
| Substitution of thermal energy, district heating (MJ)                       | MJ                                    | 0.000002455   |                         |       |                     |
| Substitution of electricity (MJ)                                            | MJ                                    | 0.000001909   |                         |       |                     |
| Substitution of primary steel with net scrap (kg)                           | kg                                    | 1.66          |                         |       |                     |
| Substitution, Corrugated board box (kg)                                     | kg                                    | -0.01627      |                         |       |                     |

## 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 <sub>2</sub> -eq | 8.41E+00  | 1.22E-01 | 4.96E-01 | 0  | 5.17E-02 | 3.84E-02 | 7.56E-04 | -1.87E+00 |
|  | GWP-fossil                       | kg CO <sub>2</sub> -eq | 8.82E+00  | 1.21E-01 | 5.95E-03 | 0  | 5.16E-02 | 3.80E-02 | 7.55E-04 | -1.88E+00 |
|  | GWP-biogenic                     | kg CO <sub>2</sub> -eq | -4.37E-01 | 5.03E-05 | 4.90E-01 | 0  | 2.14E-05 | 3.36E-04 | 6.42E-07 | 1.96E-03  |
|  | GWP-luluc                        | kg CO <sub>2</sub> -eq | 1.90E-02  | 4.32E-05 | 1.99E-06 | 0  | 1.84E-05 | 1.15E-05 | 1.48E-07 | -1.89E-04 |
|  | ODP                              | kg CFC11 -eq           | 4.62E-07  | 2.75E-08 | 1.18E-10 | 0  | 1.17E-08 | 8.75E-09 | 3.67E-10 | -6.06E-08 |
|  | AP                               | mol H+ -eq             | 4.86E-02  | 3.49E-04 | 2.31E-05 | 0  | 1.48E-04 | 2.77E-04 | 7.37E-06 | -9.33E-03 |
|  | EP-FreshWater                    | kg P -eq               | 1.03E-03  | 9.71E-07 | 4.62E-07 | 0  | 4.13E-07 | 7.31E-07 | 5.64E-09 | -1.09E-04 |
|  | EP-Marine                        | kg N -eq               | 9.29E-03  | 6.91E-05 | 9.18E-06 | 0  | 2.94E-05 | 1.01E-04 | 2.76E-06 | -1.91E-03 |
|  | EP-Terrestrial                   | mol N -eq              | 1.02E-01  | 7.73E-04 | 9.25E-05 | 0  | 3.28E-04 | 1.11E-03 | 3.05E-05 | -1.97E-02 |
|  | POCP                             | kg NMVOC -eq           | 4.05E-02  | 2.96E-04 | 3.39E-05 | 0  | 1.26E-04 | 3.28E-04 | 8.71E-06 | -9.43E-03 |
|  | ADP-minerals&metals <sup>1</sup> | kg Sb-eq               | 5.89E-03  | 3.36E-06 | 1.91E-08 | 0  | 1.43E-06 | 5.11E-07 | 6.69E-09 | -3.25E-05 |
|  | ADP-fossil <sup>1</sup>          | MJ                     | 9.96E+01  | 1.84E+00 | 7.85E-02 | 0  | 7.81E-01 | 6.94E-01 | 2.44E-02 | -1.57E+01 |
|  | WDP <sup>1</sup>                 | m <sup>3</sup>         | 4.33E+01  | 1.78E+00 | 2.18E-03 | 0  | 7.55E-01 | 1.52E+00 | 5.13E-02 | 9.78E+01  |

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<sup>-3</sup> = 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.

## Additional environmental impact indicators

| Indicator                                                                                             | Unit              | A1-A3    | A4       | A5       | C1 | C2       | C3       | C4       | D         |
|-------------------------------------------------------------------------------------------------------|-------------------|----------|----------|----------|----|----------|----------|----------|-----------|
|  PM                  | Disease incidence | 6.92E-07 | 7.44E-09 | 4.65E-10 | 0  | 3.16E-09 | 8.64E-09 | 1.57E-10 | -1.56E-07 |
|  IRP <sup>2</sup>    | kgBq U235 -eq     | 4.00E-01 | 8.03E-03 | 1.10E-04 | 0  | 3.41E-03 | 2.60E-03 | 1.06E-04 | 7.95E-03  |
|  ETP-fw <sup>1</sup> | CTUe              | 3.60E+02 | 1.36E+00 | 4.90E-02 | 0  | 5.79E-01 | 1.54E+00 | 1.21E-02 | -1.05E+02 |
|  HTP-c <sup>1</sup>  | CTUh              | 5.80E-08 | 0.00E+00 | 1.00E-12 | 0  | 0.00E+00 | 1.62E-10 | 0.00E+00 | -9.10E-09 |
|  HTP-nc <sup>1</sup> | CTUh              | 3.02E-07 | 1.49E-09 | 1.17E-10 | 0  | 6.32E-10 | 1.02E-09 | 7.00E-12 | 1.97E-07  |
|  SQP <sup>1</sup>    | dimensionless     | 4.49E+01 | 1.28E+00 | 4.51E-02 | 0  | 5.46E-01 | 1.20E+00 | 8.89E-02 | -3.00E+00 |

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

"Reading example: 9.0 E-03 =  $9.0 \times 10^{-3}$  = 0.009"

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

| Resource use                                                                      |       |                |          |          |           |    |          |           |          |           |
|-----------------------------------------------------------------------------------|-------|----------------|----------|----------|-----------|----|----------|-----------|----------|-----------|
| Indicator                                                                         |       | Unit           | A1-A3    | A4       | A5        | C1 | C2       | C3        | C4       | D         |
|  | PERE  | MJ             | 1.41E+01 | 2.63E-02 | 1.55E-03  | 0  | 1.12E-02 | 1.73E-02  | 3.75E-04 | -1.35E+00 |
|  | PERM  | MJ             | 4.13E+00 | 0.00E+00 | -4.13E+00 | 0  | 0.00E+00 | 0.00E+00  | 0.00E+00 | -5.91E-02 |
|  | PERT  | MJ             | 1.80E+01 | 2.63E-02 | -4.13E+00 | 0  | 1.12E-02 | 1.73E-02  | 3.75E-04 | -1.41E+00 |
|  | PENRE | MJ             | 9.96E+01 | 1.84E+00 | 7.85E-02  | 0  | 7.81E-01 | 6.94E-01  | 2.44E-02 | -1.57E+01 |
|  | PENRM | MJ             | 3.95E-02 | 0.00E+00 | -3.95E-02 | 0  | 0.00E+00 | -1.03E+00 | 0.00E+00 | 6.82E-04  |
|  | PENRT | MJ             | 9.97E+01 | 1.84E+00 | 3.90E-02  | 0  | 7.81E-01 | -3.34E-01 | 2.44E-02 | -1.57E+01 |
|  | SM    | kg             | 1.57E+00 | 0.00E+00 | 0.00E+00  | 0  | 0.00E+00 | 1.46E+00  | 0.00E+00 | 1.60E-02  |
|  | RSF   | MJ             | 1.57E-01 | 9.41E-04 | 5.44E-07  | 0  | 4.00E-04 | 4.03E-04  | 7.75E-06 | 6.06E-02  |
|  | NRSF  | MJ             | 5.33E+00 | 3.36E-03 | 0.00E+00  | 0  | 1.43E-03 | 6.38E-03  | 2.23E-05 | 1.98E+00  |
|  | FW    | m <sup>3</sup> | 1.19E-01 | 1.96E-04 | 3.56E-05  | 0  | 8.35E-05 | 6.47E-04  | 2.90E-05 | -3.82E-03 |

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary materials; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water

"Reading example: 9.0 E-03 =  $9.0 \times 10^{-3}$  = 0.009"

**End of life - Waste**

| Indicator                                                                              | Unit | A1-A3    | A4       | A5       | C1 | C2       | C3       | C4       | D         |
|----------------------------------------------------------------------------------------|------|----------|----------|----------|----|----------|----------|----------|-----------|
|  HWD  | kg   | 4.41E-01 | 9.47E-05 | 1.06E-04 | 0  | 4.03E-05 | 2.14E+00 | 0.00E+00 | -9.27E-03 |
|  NHWD | kg   | 5.87E+00 | 8.93E-02 | 3.28E-02 | 0  | 3.80E-02 | 2.00E-02 | 1.76E-01 | -7.57E-01 |
|  RWD  | kg   | 2.46E-04 | 1.25E-05 | 2.33E-08 | 0  | 5.32E-06 | 3.88E-06 | 0.00E+00 | 5.50E-06  |

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed

"Reading example: 9.0 E-03 =  $9.0 \times 10^{-3}$  = 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  | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
|  MFR | kg   | 5.22E-01 | 0.00E+00 | 2.88E-01 | 0  | 0.00E+00 | 1.59E+00 | 0.00E+00 | 0.00E+00 |
|  MER | kg   | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0  | 0.00E+00 | 4.38E-06 | 0.00E+00 | 0.00E+00 |
|  EEE | MJ   | 1.17E-06 | 0.00E+00 | 3.95E-06 | 0  | 0.00E+00 | 8.96E-02 | 0.00E+00 | 0.00E+00 |
|  EET | MJ   | 6.13E-06 | 0.00E+00 | 4.44E-06 | 0  | 0.00E+00 | 1.35E+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 =  $9.0 \times 10^{-3}$  = 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 | 1.34E-01            |

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO<sub>2</sub>

## Additional requirements

### Transparent reporting of energy

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

| Electricity mix                                                                                                                      | Source                  | Amount   | Unit | GWPtotal [kg CO <sub>2</sub> /Unit] | SUM [kg CO <sub>2</sub> ] |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------|------|-------------------------------------|---------------------------|
| <b>Location-based approach.</b>                                                                                                      |                         |          |      |                                     |                           |
| Electricity, Turkey (kWh)                                                                                                            | ecoinvent 3.6           | 3.03E-01 | kWh  | 6.67E-01                            | 2.02E-01                  |
| Electricity, low voltage   electricity production, photovoltaic, 3kwp slanted-roof installation, multi-si, panel, mounted (kwh) - TR | ecoinvent 3.10.1        | 2.79E-01 | kWh  | 6.26E-02                            | 1.75E-02                  |
| <b>Market-based approach.</b>                                                                                                        |                         |          |      |                                     |                           |
| Electricity, Turkey, low voltage, residual mix (kWh)                                                                                 | Modified ecoinvent 3.11 | 5.82E-01 | kWh  | 9.99E-01                            | 5.81E-01                  |

"Reading example: 9.0 E-03 = 9.0\*10<sup>-3</sup> = 0.009"

### Dangerous substances

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

### Indoor environment

Not relevant.

## Additional Environmental Information

| Additional environmental impact indicators required in NPCR Part A for construction products |                        |          |          |          |    |          |          |          |           |
|----------------------------------------------------------------------------------------------|------------------------|----------|----------|----------|----|----------|----------|----------|-----------|
| Indicator                                                                                    | Unit                   | A1-A3    | A4       | A5       | C1 | C2       | C3       | C4       | D         |
| GWPIOBC                                                                                      | kg CO <sub>2</sub> -eq | 8.88E+00 | 1.22E-01 | 5.96E-03 | 0  | 5.17E-02 | 3.84E-02 | 7.56E-04 | -1.88E+00 |

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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