

# Environmental Product Declaration



In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

## Components for fence

from

**Wimex Aps**



Programme:

Programme operator:

EPD registration number:

Publication date:

Valid until:

The International EPD® System, [www.environdec.com](http://www.environdec.com)

EPD International AB

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*An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)*



## General information

### Programme information

|                   |   |
|-------------------|---|
| <b>Programme:</b> | The International EPD® System                                       |
| <b>Address:</b>   | EPD International AB<br>Box 210 60<br>SE-100 31 Stockholm<br>Sweden |
| <b>Website:</b>   | <a href="http://www.environdec.com">www.environdec.com</a>          |
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|   |
|---|
| <b>Accountabilities for PCR, LCA and independent, third-party verification</b>  |
| <b>Product Category Rules (PCR)</b>   |
| CEN standard EN 15804 serves as the Core Product Category Rules (PCR)   |
| Product Category Rules (PCR): <i>PCR 2019:14 Construction products (EN 15804:A2) (1.3.1) UN CPC 412 Products of iron or steel</i>   |
| PCR review was conducted by: <i>IVL Swedish Environmental Research Institute Secretariat of the International EPD® System</i>   |
| <b>Life Cycle Assessment (LCA)</b>  |
| LCA accountability: <i>Dr. Ing. Kaspars Zudrags, BM Certification</i>   |
| <b>Third-party verification</b>   |
| Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:<br><br><input checked="" type="checkbox"/> EPD verification by individual verifier<br><br>Third-party verifier: <i>Prof. Vladimír Kočí, PhD, LCA Studio</i><br><br>Approved by: The International EPD® System |
| Procedure for follow-up of data during EPD validity involves third party verifier:<br><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

## Company information

Owner of the EPD: Wimex Aps

Contact: info@wimex.dk

Description of the organisation: Wimex have mission to create outdoor spaces that inspire relaxation. Wimex not only deliver the beautiful frames in the form of terraces, fences and facades, but also make sure that the materials are produces with the respect of nature. We are passionate about sustainable materials. Our composite is made from recycled fibers, and heat-treated wood is produced without the use of chemicals.

Wimex provides a framework with respect for nature while you live good life. The happy outdoor life!

## Product information

Product name: Components for fence

Product description: Wimex Aps is a reliable supplier with years of experience in manufacturing parts for construction industry such as gates, rails, gate columns, fence poles, poles accessories etc. painted or galvanized.



UN CPC code: UN CPC 412 Products of iron or steel

HS Code 83024200 - Base, metal, mountings

Geographical scope: European Union

## LCA information

Functional unit / declared unit: 1 kg of components for fence.

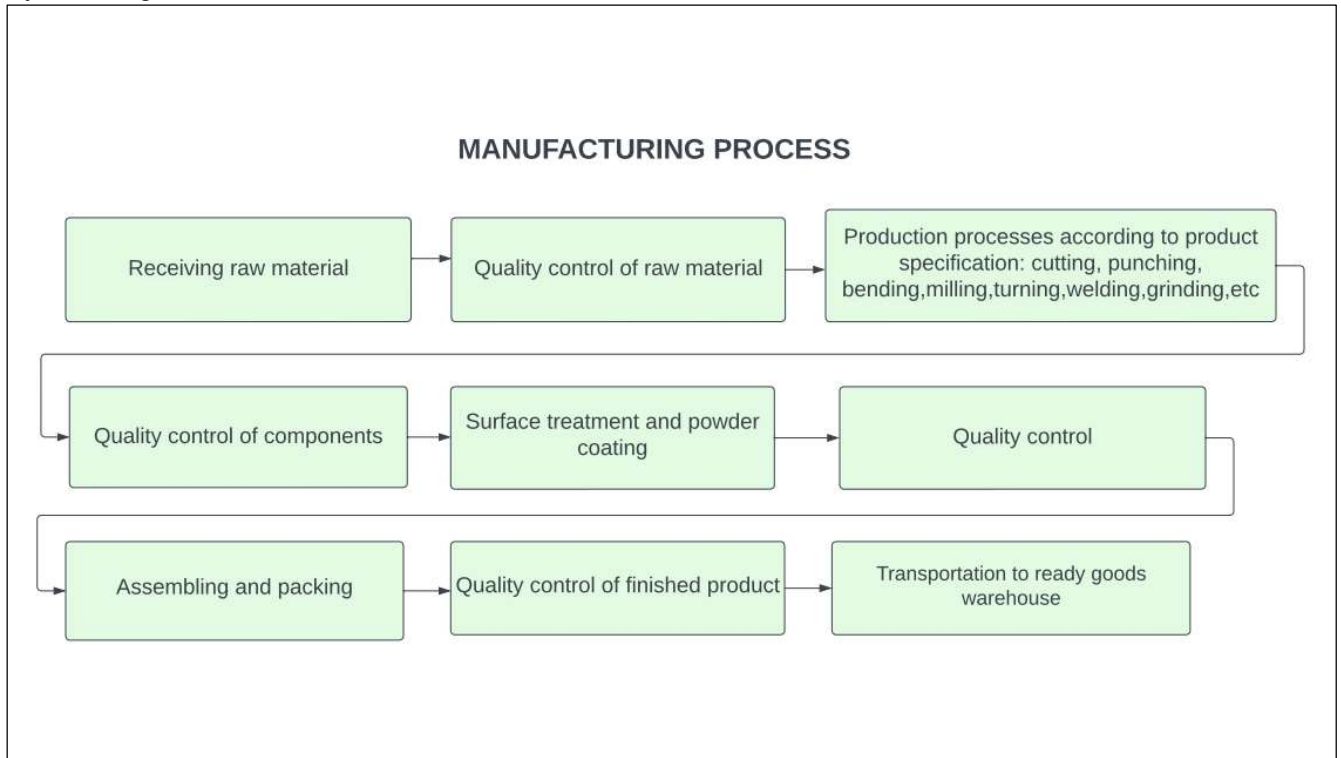
Reference service life: 30 years.

Time representativeness Data for calculation cover period of 12 months 2022.

Database(s) and LCA software used: One Click LCA, Ecoinvent 3.8.

Description of system boundaries: Cradle to gate with modules C1–C4 and module D (A1–A3 + C + D).

#### System diagram:



More information All known inputs and outputs are included in the study. The ancillary materials have been cut-off due to insufficient and minor influence of data. The packaging is excluded as its mass is insignificant and its reused many times and collected by producer.

Energy sources of the electricity used in manufacturing processes of module A3 is modelling used by Market for electricity, medium voltage in Latvia from Ecoinvent 3.8 and its climate impact in kg CO<sub>2</sub> eq./kWh using the GWP GHG indicator is 0.56.

Model A4 And C2 is modelled assumed that distance is 100km and transport lorry Euro 5 class. The components are disassembly by hand. The screwdriver electricity consumption is neglected (C1).

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

|                      | Product stage       |           |               | Construction process stage |                           | Use stage |             |        |             |               |                        |                       | End of life stage          |           |                  |          | Resource recovery stage            |
|----------------------|---------------------|-----------|---------------|----------------------------|---------------------------|-----------|-------------|--------|-------------|---------------|------------------------|-----------------------|----------------------------|-----------|------------------|----------|------------------------------------|
|                      | Raw material supply | Transport | Manufacturing | Transport                  | Construction installation | Use       | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling-potential |
| Module               | A1                  | A2        | A3            | A4                         | A5                        | B1        | B2          | B3     | B4          | B5            | B6                     | B7                    | C1                         | C2        | C3               | C4       | D                                  |
| Modules declared     | X                   | X         | X             | X                          | X                         | ND        | ND          | ND     | ND          | ND            | ND                     | ND                    | X                          | X         | X                | X        | X                                  |
| Geography            | Europe              |           |               | -                          | -                         | -         | -           | -      | -           | -             | -                      | -                     | Europe                     |           |                  |          | Europe                             |
| Specific data used   | <90%                |           |               | -                          | -                         | -         | -           | -      | -           | -             | -                      | -                     | -                          | -         | -                | -        | -                                  |
| Variation – products | <10%                |           |               | -                          | -                         | -         | -           | -      | -           | -             | -                      | -                     | -                          | -         | -                | -        | -                                  |
| Variation – sites    | 0%                  |           |               | -                          | -                         | -         | -           | -      | -           | -             | -                      | -                     | -                          | -         | -                | -        | -                                  |

X – included, ND – Module Not Declared.

## Content information

| Product components              | Weight, kg | Post-consumer material, weight-% | Biogenic material, weight-% and kg C/kg |
|---------------------------------|------------|----------------------------------|---|
| metal                           | 0.97       | 0                                | 0                                       |
| Coating (zinc or powder colour) | 0.03       | 0                                | 0                                       |
| TOTAL                           | 1          | 0                                | 0                                       |
| Packaging materials             | Weight, kg | Weight-% (versus the product)    | Weight biogenic carbon, kg C/kg         |
| Wooden pallet                   | 0.04       | 4                                | 0.02                                    |
| Cardboard                       | 0.04       | 4                                | 0                                       |
| Plastic                         | >0.01      | > 1                              | 0                                       |
| TOTAL                           | 0.08       |                                  | 0.02                                    |

None of the substances listed in the “Candidate list of substances of very high concern for authorization” is used for production.

## Results of the environmental performance indicators

### Mandatory impact category indicators according to EN 15804:2012+A2:2019

| Results per functional or declared unit |   |           |          |           |          |          |           |          |           |
|---|---|-----------|----------|-----------|----------|----------|-----------|----------|-----------|
| Indicator                               | Unit  | A1-A3     | A4       | A5        | C1       | C2       | C3        | C4       | D         |
| GWP-total                               | kg CO <sub>2</sub> eq.  | 3.10E+00  | 9.10E-03 | 5.70E-02  | 0.00E+00 | 9.40E-03 | 2.00E-02  | 7.90E-04 | -2.27E+00 |
| GWP-fossil                              | kg CO <sub>2</sub> eq.  | 3.22E+00  | 3.60E-06 | -1.20E-01 | 0.00E+00 | 3.60E-06 | 2.10E-02  | 5.10E-07 | -2.26E+00 |
| GWP-biogenic                            | kg CO <sub>2</sub> eq.  | -1.18E-01 | 3.30E-06 | 5.20E-04  | 0.00E+00 | 3.50E-06 | -7.40E-04 | 7.50E-07 | -3.50E-03 |
| GWP-luluc                               | kg CO <sub>2</sub> eq.  | 2.45E-03  | 9.10E-03 | -6.20E-02 | 0.00E+00 | 9.40E-03 | 2.70E-05  | 7.90E-04 | -1.40E-03 |
| ODP                                     | kg CFC 11 eq.   | 3.07E-07  | 2.20E-09 | 5.20E-09  | 0.00E+00 | 2.20E-09 | 2.40E-09  | 3.20E-10 | -1.05E-07 |
| AP                                      | mol H <sup>+</sup> eq.  | 3.24E-02  | 3.80E-05 | 3.30E-04  | 0.00E+00 | 4.00E-05 | 2.50E-04  | 7.40E-06 | -9.60E-03 |
| EP-freshwater                           | kg P eq.  | 1.29E-04  | 6.20E-08 | 3.50E-06  | 0.00E+00 | 7.70E-08 | 1.10E-06  | 8.30E-09 | -1.08E-04 |
| EP-marine                               | kg N eq.  | 4.47E-03  | 1.10E-05 | 8.10E-05  | 0.00E+00 | 1.20E-05 | 5.40E-05  | 2.60E-06 | -1.86E-03 |
| EP-terrestrial                          | mol N eq.   | 1.03E-01  | 1.30E-04 | 8.30E-04  | 0.00E+00 | 1.30E-04 | 6.10E-04  | 2.80E-05 | -2.22E-02 |
| POCP                                    | kg NMVOC eq.  | 1.74E-02  | 4.10E-05 | 2.90E-04  | 0.00E+00 | 4.20E-05 | 1.70E-04  | 8.20E-06 | -9.20E-03 |
| ADP-minerals&metals*                    | kg Sb eq.   | 4.79E-05  | 2.10E-08 | 4.30E-07  | 0.00E+00 | 2.20E-08 | 2.60E-06  | 1.80E-09 | -2.83E-05 |
| ADP-fossil*                             | MJ  | 4.09E+01  | 1.40E-01 | 1.41E+00  | 0.00E+00 | 1.40E-01 | 2.80E-01  | 2.20E-02 | -2.46E+01 |
| WDP*                                    | m <sup>3</sup>  | 1.03E+00  | 6.40E-04 | 5.00E-02  | 0.00E+00 | 6.30E-04 | 5.60E-03  | 6.90E-05 | -7.60E-01 |
| Acronyms                                | 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 |           |          |           |          |          |           |          |           |

\* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

### Additional mandatory and voluntary impact category indicators

| Indicator            | Unit                   | A1-A3    | A4       | A5       | C1       | C2       | C3       | C4       | D         |
|----------------------|------------------------|----------|----------|----------|----------|----------|----------|----------|-----------|
| GWP-GHG <sup>1</sup> | kg CO <sub>2</sub> eq. | 3.11E+00 | 9.10E-03 | 5.70E-02 | 0.00E+00 | 9.40E-03 | 2.10E-02 | 7.90E-04 | -2.26E+00 |

<sup>1</sup> This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO<sub>2</sub> is set to zero.

## Resource use indicators

| Results per functional or declared unit |  |          |          |          |          |          |          |          |           |
|---|--|----------|----------|----------|----------|----------|----------|----------|-----------|
| Indicator                               | Unit   | A1-A3    | A4       | A5       | C1       | C2       | C3       | C4       | D         |
| PERE                                    | MJ   | 4.76E+00 | 1.80E-03 | 1.61E+00 | 0.00E+00 | 1.60E-03 | 4.90E-02 | 1.90E-04 | -2.72E+00 |
| PERM                                    | MJ   | 9.30E-01 | 0.00E+00 | 8.90E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00  |
| PERT                                    | MJ   | 5.69E+00 | 1.80E-03 | 2.51E+00 | 0.00E+00 | 1.60E-03 | 4.90E-02 | 1.90E-04 | -2.72E+00 |
| PENRE                                   | MJ   | 3.75E+01 | 1.40E-01 | 1.00E+00 | 0.00E+00 | 1.40E-01 | 2.80E-01 | 2.20E-02 | -2.46E+01 |
| PENRM                                   | MJ   | 3.43E+00 | 0.00E+00 | 4.10E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00  |
| PENRT                                   | MJ   | 4.09E+01 | 1.40E-01 | 1.41E+00 | 0.00E+00 | 1.40E-01 | 2.80E-01 | 2.20E-02 | -2.46E+01 |
| SM                                      | kg   | 2.95E-01 | 3.90E-05 | 2.20E-03 | 0.00E+00 | 3.90E-05 | 3.20E-04 | 4.60E-06 | -1.13E+00 |
| RSF                                     | MJ   | 1.91E-02 | 3.50E-07 | 1.80E-02 | 0.00E+00 | 3.90E-07 | 1.80E-05 | 1.20E-07 | -2.95E-04 |
| NRSF                                    | 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  |
| FW                                      | m <sup>3</sup>   | 2.08E-02 | 1.80E-05 | 1.20E-03 | 0.00E+00 | 1.80E-05 | 1.70E-04 | 2.40E-05 | -1.92E-02 |
| Acronyms                                | 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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water |          |          |          |          |          |          |          |           |

## Waste indicators

| Results per functional or declared unit |  |          |          |          |          |          |          |          |           |
|---|--|----------|----------|----------|----------|----------|----------|----------|-----------|
| Indicator                               | Unit   | A1-A3    | A4       | A5       | C1       | C2       | C3       | C4       | D         |
| HW                                      | kg   | 4.69E-01 | 1.50E-04 | 3.70E-03 | 0.00E+00 | 1.90E-04 | 0.00E+00 | 0.00E+00 | -1.13E+00 |
| NHW                                     | kg   | 5.35E+00 | 2.60E-03 | 9.80E-02 | 0.00E+00 | 3.10E-03 | 0.00E+00 | 1.50E-01 | -4.56E+00 |
| RW                                      | kg   | 1.37E-04 | 9.60E-07 | 5.50E-06 | 0.00E+00 | 9.40E-07 | 0.00E+00 | 0.00E+00 | -7.20E-05 |
| Acronyms                                | HW = Hazardous waste disposed; NHW = Non-hazardous waste disposed; RW = Radioactive waste disposed |          |          |          |          |          |          |          |           |

## Output flow indicators

| Results per functional or declared unit |      |          |          |          |          |          |          |          |          |
|---|------|----------|----------|----------|----------|----------|----------|----------|----------|
| Indicator                               | Unit | A1-A3    | A4       | A5       | C1       | C2       | C3       | C4       | D        |
| Components for re-use                   | 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 |
| Material for recycling                  | kg   | 0.97E+00 | 0.00E+00 | 8.40E-03 | 0.00E+00 | 0.00E+00 | 8.50E-01 | 0.00E+00 | 0.00E+00 |
| Materials for energy recovery           | kg   | 0.00E+00 | 0.00E+00 | 4.04E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Exported energy, electricity            | 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 |
| Exported energy, thermal                | 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 |

## References

General Programme Instructions of the International EPD<sup>®</sup> System. Version 4.0.

PCR 2019:14 Construction products (EN 15804:A2) (1.3.1)

LCA background report 13.11.2023

ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations. Principles and procedures.

ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.

ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.

EN 15804:2012+A2:2019 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products

