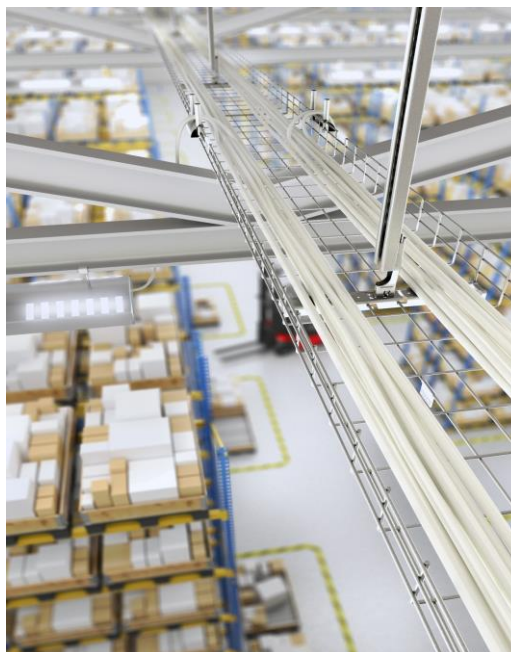


ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

Cable support systems with EG surface treatment.

AB Wibe



EPD HUB, HUB-0993

Publishing date 5 January 2024

Last updated on 5 January 2024

Valid until 5 January 2029

GENERAL INFORMATION

MANUFACTURER

| | |
|-----------------|---|
| Manufacturer | AB Wibe |
| Address | Wibevägen 1 BOX 401 |
| Contact details | inquiry-INT@wibe-group.com |
| Website | https://wibe-group.com/ |

EPD STANDARDS, SCOPE AND VERIFICATION

| | |
|--------------------|---|
| Program operator | EPD Hub, hub@epdhub.com |
| Reference standard | EN 15804+A2:2019 and ISO 14025 |
| PCR | EPD Hub Core PCR version 1.0, 1 Feb 2022 |
| Sector | Construction product |
| Category of EPD | Third party verified EPD |
| Scope of the EPD | Cradle to gate with options, A4-A5, and modules C1-C4, D |
| EPD author | Burak Bugdayci & Jeremy Melun |
| EPD verification | Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal certification <input checked="" type="checkbox"/> External verification |
| EPD verifier | Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited |

The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

| | |
|-----------------------------------|--|
| Product name | Cable support systems with EG surface treatment. |
| Additional labels | WIBE, DEFEM |
| Product reference | - |
| Place of production | Mora / Sweden |
| Period for data | 01/01/2022-31/12/2022 |
| Averaging in EPD | No averaging |
| Variation in GWP-fossil for A1-A3 | % |

ENVIRONMENTAL DATA SUMMARY

| | |
|--|--|
| Declared unit | 1 kg of EG Cable Support Product, steel based. |
| Declared unit mass | 1 kg |
| GWP-fossil, A1-A3 (kgCO2e) | 1,63E+00 |
| GWP-total, A1-A3 (kgCO2e) | 1,51E+00 |
| Secondary material, inputs (%) | 143.0 |
| Secondary material, outputs (%) | 95.0 |
| Total energy use, A1-A3 (kWh) | 7.67 |
| Total water use, A1-A3 (m3e) | 1,24E-01 |

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Wibe Group has nearly a 100-year-long history of continuous development. It started in Mora with Anders Wikstrand's invention of the hexagon shaped ladder. Today we are in a new and exciting development phase with renewed vigor and a desire to show what we can do together with our customers. With our four strong brands Wibe, Stago, Mita and Defem, we offer a complete, innovative range of cable ladders, cable trays, mesh trays and installation system – for applications ranging from commercial buildings to extreme demanding industrial environments.

PRODUCT DESCRIPTION

The cable support system is as essential for the building's infrastructure as the bone structure is for the body. Wibe Group electro galvanized cable support systems are suitable for areas with heated facilities, low exposure to corrosion, such as hotels and offices. This EPD covers the cable support products made from pre galvanized material, produced at Wibe Group Mora Plant located in Sweden. The cable support system consist of ladders, trays, mesh trays, joints, pendants, cantilevers and accessories

Galvanization is the process of coating iron and steel with zinc, which alloys with the surface of the base metal when immersing the metal in a bath of molten zinc at a temperature of around 450 °C (842 °F). When exposed to the atmosphere, the pure zinc (Zn) reacts with oxygen (O₂) to form zinc oxide (ZnO), which further reacts with carbon dioxide (CO₂) to form zinc carbonate (ZnCO₃), a usually dull grey, fairly strong material that protects the steel underneath from further corrosion in many circumstances. Galvanized steel is widely used in applications where corrosion resistance is needed and is considered superior in terms of cost and life-cycle. Electro galvanization is a form of galvanization which is done already at the steel mill directly on the flat steel raw material. This process results in lower layer thickness compared Hot dip galvanization post-processing.

Further information can be found at <https://wibe-group.com/>.

PRODUCT RAW MATERIAL MAIN COMPOSITION

| Raw material category | Amount, mass- % | Material origin |
|-----------------------|-----------------|-----------------|
| Metals | 100 | Europe |
| Minerals | - | - |
| Fossil materials | - | - |
| Bio-based materials | - | - |

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

| | |
|--|-------|
| Biogenic carbon content in product, kg C | 0 |
| Biogenic carbon content in packaging, kg C | 0.047 |

FUNCTIONAL UNIT AND SERVICE LIFE

| | |
|------------------------|--|
| Declared unit | 1 kg of EG Cable Support Product, steel based. |
| Mass per declared unit | 1 kg |
| Functional unit | - |
| Reference service life | Experience shows +20 years in C1 environment according to EN ISO 12944-2 |

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

| Product stage | | | Assembly stage | | Use stage | | | | | | | End of life stage | | | | Beyond the system boundaries | | |
|---------------|-----------|---------------|----------------|----------|-----------|-------------|--------|-------------|---------------|------------------------|-----------------------|-------------------|-----------|------------------|----------|------------------------------|----------|-----------|
| 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 | | |
| Raw materials | Transport | Manufacturing | Transport | Assembly | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | Deconstr./demol. | Transport | Waste processing | Disposal | Reuse | Recovery | Recycling |

Modules not declared = MND. Modules not relevant = MNR.

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

Raw material consists of steel purchased in black steel wire shaped, electro galvanized parts and fasteners. The distance between exact manufacturer location and Wibe factory has been considered. Mainly truck but based on manufacturer location also sea freight has been considered for transportation of raw materials. The manufacturing process includes a variation of process steps like cutting, punching forming of the steel raw material.

After these manufacturing steps, black steel materials are being sent for electrogalvanization process to one of our supplier. During manufacturing of 1 kg final 0.31kg production loss has been considered in the calculations. All production wastes are being sent to several different recycling facilities. %100 renewable (hydropower) electricity is being used for manufacturing. Finally, the products are stored as is, or packed in either wood crates, pallets, cardboard boxes or plastic bags.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

The transportation distance is defined according to the PCR. Average distance of transportation from production plant to building site is assumed as 567 km by lorry and 30km by ferry based on 1 year delivery data. Vehicle capacity utilization volume factor is assumed to be 100% which means full load. In reality, it may vary but as role of transportation emissions in total results is small, the variety in load is assumed to be negligible. Empty returns are not taken into account as it is assumed that return trip is used by the transportation company to serve the needs of other clients. Transportation does not cause losses as product are packaged properly. For installation of the product small hand drill will be enough. 0.01 kWh is required to assemble 1kg of PG product. As manufacturing waste packaging materials has been considered. %95 of packaging (Plastic, wood, paper) considered to be recycled and %5 has been considered as landfill.

PRODUCT USE AND MAINTENANCE (B1-B7)

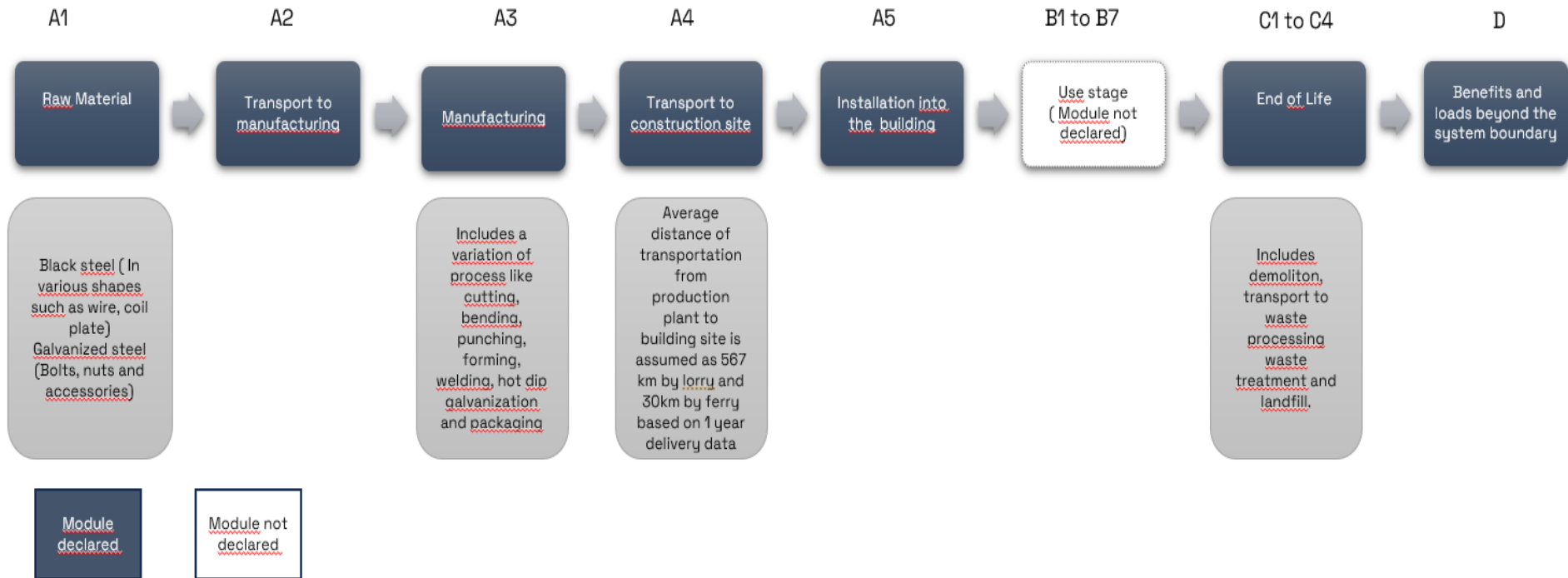
This EPD does not cover the use phase.

Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

Disassembling is assumed to consume 0,01 kWh/kg of product. Small hand drill has been considered same as mounting of the product. Transportation distance to treatment is assumed as 50 km and the transportation method is assumed to be lorry (C2). Approximately 95% of steel is assumed to be recycled based on World Steel Association, 2020 (C3). It is assumed that the remaining 5 % of steel is taken to landfill for final disposal (C4). Due to the recycling process, the end-of-life product is converted into recycled steel, while the wooden pallet is incinerated for energy recovery (D).

MANUFACTURING PROCESS



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

| Data type | Allocation |
|--------------------------------|-----------------------------|
| Raw materials | Allocated by mass or volume |
| Packaging materials | Allocated by mass or volume |
| Ancillary materials | Allocated by mass or volume |
| Manufacturing energy and waste | Allocated by mass or volume |

AVERAGES AND VARIABILITY

| | |
|-----------------------------------|----------------|
| Type of average | No averaging |
| Averaging method | Not applicable |
| Variation in GWP-fossil for A1-A3 | Not relevant % |

This EPD is product and factory specific and does not contain average calculations.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. Ecoinvent v3.8 and One Click LCA databases were used as sources of environmental data.

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

| Impact category | Unit | A1 | A2 | A3 | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|-------------------------------------|------------------------|----------|----------|-----------|-----------|----------|----------|-----|-----|-----|-----|-----|-----|-----|----------|----------|----------|----------|-----------|
| GWP – total ¹⁾ | kg CO ₂ e | 1,25E+00 | 3,23E-01 | -6,43E-02 | 1,51E+00 | 5,39E-02 | 1,38E-01 | MND | MND | MND | MND | MND | MND | MND | 6,83E-06 | 4,69E-03 | 2,08E-02 | 2,64E-04 | -1,80E-01 |
| GWP – fossil | kg CO ₂ e | 1,24E+00 | 3,21E-01 | 7,03E-02 | 1,63E+00 | 5,39E-02 | 2,63E-03 | MND | MND | MND | MND | MND | MND | MND | 6,38E-06 | 4,69E-03 | 2,08E-02 | 2,63E-04 | -1,91E-01 |
| GWP – biogenic | kg CO ₂ e | 2,15E-03 | 1,63E-03 | -1,35E-01 | -1,32E-01 | 0,00E+00 | 1,35E-01 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 1,17E-02 |
| GWP – LULUC | kg CO ₂ e | 1,10E-02 | 6,51E-04 | 8,63E-04 | 1,25E-02 | 2,03E-05 | 2,72E-06 | MND | MND | MND | MND | MND | MND | MND | 4,48E-07 | 1,73E-06 | 2,73E-05 | 2,49E-07 | -2,84E-04 |
| Ozone depletion pot. | kg CFC-11e | 7,43E-08 | 5,03E-08 | 9,90E-09 | 1,34E-07 | 1,34E-08 | 1,48E-10 | MND | MND | MND | MND | MND | MND | MND | 3,11E-13 | 1,08E-09 | 2,57E-09 | 1,07E-10 | -2,18E-08 |
| Acidification potential | mol H ⁺ e | 6,67E-03 | 2,79E-02 | 4,63E-04 | 3,51E-02 | 1,81E-04 | 7,84E-06 | MND | MND | MND | MND | MND | MND | MND | 4,45E-08 | 1,99E-05 | 2,64E-04 | 2,48E-06 | -1,11E-03 |
| EP-freshwater ²⁾ | kg Pe | 1,12E-04 | 1,93E-05 | 5,33E-06 | 1,37E-04 | 3,84E-07 | 8,08E-08 | MND | MND | MND | MND | MND | MND | MND | 3,48E-10 | 3,84E-08 | 1,12E-06 | 2,76E-09 | -1,28E-05 |
| EP-marine | kg Ne | 1,00E-03 | 1,21E-03 | 1,45E-04 | 2,36E-03 | 4,01E-05 | 1,99E-06 | MND | MND | MND | MND | MND | MND | MND | 7,62E-09 | 5,90E-06 | 5,58E-05 | 8,57E-07 | -2,24E-04 |
| EP-terrestrial | mol Ne | 1,82E-02 | 1,20E-01 | 1,32E-03 | 1,40E-01 | 4,45E-04 | 2,11E-05 | MND | MND | MND | MND | MND | MND | MND | 9,58E-08 | 6,51E-05 | 6,45E-04 | 9,43E-06 | -2,62E-03 |
| POCP (“smog”) ³⁾ | kg NMVOCe | 3,48E-03 | 1,38E-03 | 4,40E-04 | 5,30E-03 | 1,72E-04 | 6,25E-06 | MND | MND | MND | MND | MND | MND | MND | 2,26E-08 | 2,08E-05 | 1,77E-04 | 2,74E-06 | -7,61E-04 |
| ADP-minerals & metals ⁴⁾ | kg Sbe | 1,13E-05 | 8,37E-05 | 1,24E-06 | 9,63E-05 | 1,32E-07 | 9,57E-09 | MND | MND | MND | MND | MND | MND | MND | 4,37E-10 | 1,10E-08 | 2,80E-06 | 6,05E-10 | -2,98E-06 |
| ADP-fossil resources | MJ | 1,48E+01 | 5,32E+00 | 2,42E+00 | 2,25E+01 | 8,60E-01 | 2,33E-02 | MND | MND | MND | MND | MND | MND | MND | 8,66E-04 | 7,05E-02 | 2,82E-01 | 7,22E-03 | -3,73E+00 |
| Water use ⁵⁾ | m ³ e depr. | 1,31E+00 | 2,62E-01 | 8,85E-02 | 1,66E+00 | 3,96E-03 | 8,06E-04 | MND | MND | MND | MND | MND | MND | MND | 3,32E-05 | 3,15E-04 | 5,47E-03 | 2,29E-05 | -1,02E-01 |

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

USE OF NATURAL RESOURCES

| Impact category | Unit | A1 | A2 | A3 | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|------------------------------------|----------------|----------|----------|----------|----------|----------|-----------|-----|-----|-----|-----|-----|-----|-----|----------|----------|----------|----------|-----------|
| Renew. PER as energy ⁸⁾ | MJ | 1,99E+00 | 4,46E-01 | 2,94E+00 | 5,37E+00 | 1,11E-02 | 2,96E-03 | MND | MND | MND | MND | MND | MND | MND | 3,59E-04 | 7,94E-04 | 5,00E-02 | 6,27E-05 | -4,04E-01 |
| Renew. PER as material | MJ | 0,00E+00 | 0,00E+00 | 1,11E+00 | 1,11E+00 | 0,00E+00 | -1,11E+00 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | -8,06E-01 |
| Total use of renew. PER | MJ | 1,99E+00 | 4,46E-01 | 4,05E+00 | 6,48E+00 | 1,11E-02 | -1,11E+00 | MND | MND | MND | MND | MND | MND | MND | 3,59E-04 | 7,94E-04 | 5,00E-02 | 6,27E-05 | -1,21E+00 |
| Non-re. PER as energy | MJ | 1,47E+01 | 5,31E+00 | 2,17E+00 | 2,22E+01 | 8,60E-01 | 2,33E-02 | MND | MND | MND | MND | MND | MND | MND | 8,62E-04 | 7,05E-02 | 2,82E-01 | 7,22E-03 | -3,47E+00 |
| Non-re. PER as material | MJ | 0,00E+00 | 0,00E+00 | 2,90E-01 | 2,90E-01 | 0,00E+00 | -2,90E-01 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 4,50E-01 |
| Total use of non-re. PER | MJ | 1,47E+01 | 5,31E+00 | 2,46E+00 | 2,25E+01 | 8,60E-01 | -2,67E-01 | MND | MND | MND | MND | MND | MND | MND | 8,62E-04 | 7,05E-02 | 2,82E-01 | 7,22E-03 | -3,02E+00 |
| Secondary materials | kg | 1,43E+00 | 2,58E-03 | 2,68E-03 | 1,43E+00 | 2,43E-04 | 2,75E-05 | MND | MND | MND | MND | MND | MND | MND | 7,81E-08 | 1,96E-05 | 3,14E-04 | 1,52E-06 | -3,91E-01 |
| Renew. secondary fuels | MJ | 1,40E-04 | 1,22E-05 | 1,08E-02 | 1,09E-02 | 2,13E-06 | 1,91E-07 | MND | MND | MND | MND | MND | MND | MND | 3,24E-10 | 1,97E-07 | 1,63E-05 | 3,96E-08 | -2,89E-07 |
| Non-ren. secondary fuels | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Use of net fresh water | m ³ | 3,43E-02 | 6,41E-03 | 8,34E-02 | 1,24E-01 | 1,14E-04 | 1,38E-05 | MND | MND | MND | MND | MND | MND | MND | 8,35E-07 | 9,13E-06 | 1,65E-04 | 7,90E-06 | -9,74E-04 |

8) PER = Primary energy resources.

END OF LIFE – WASTE

| Impact category | Unit | A1 | A2 | A3 | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|---------------------|------|----------|----------|----------|----------|----------|----------|-----|-----|-----|-----|-----|-----|-----|----------|----------|----------|----------|-----------|
| Hazardous waste | kg | 7,12E-01 | 2,69E-02 | 4,76E-03 | 7,44E-01 | 9,23E-04 | 1,23E-04 | MND | MND | MND | MND | MND | MND | MND | 7,21E-07 | 9,34E-05 | 1,92E-03 | 0,00E+00 | -5,71E-02 |
| Non-hazardous waste | kg | 2,61E+00 | 6,84E-01 | 1,30E-01 | 3,42E+00 | 1,60E-02 | 7,93E-03 | MND | MND | MND | MND | MND | MND | MND | 1,95E-05 | 1,54E-03 | 6,12E-02 | 5,00E-02 | -5,87E-01 |
| Radioactive waste | kg | 7,63E-05 | 2,43E-05 | 2,51E-05 | 1,26E-04 | 5,93E-06 | 1,55E-07 | MND | MND | MND | MND | MND | MND | MND | 1,33E-08 | 4,71E-07 | 1,65E-06 | 0,00E+00 | -1,73E-05 |

END OF LIFE – OUTPUT FLOWS

| Impact category | Unit | A1 | A2 | A3 | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | 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 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Materials for recycling | kg | 0,00E+00 | 0,00E+00 | 1,77E+00 | 1,77E+00 | 0,00E+00 | 8,14E-02 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 9,50E-01 | 0,00E+00 | 0,00E+00 |
| Materials for energy rec | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Exported energy | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

| Impact category | Unit | A1 | A2 | A3 | A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|----------------------|------------------------------------|----------|----------|----------|----------|----------|----------|-----|-----|-----|-----|-----|-----|-----|----------|----------|----------|----------|-----------|
| Global Warming Pot. | kg CO ₂ e | 1,23E+00 | 3,18E-01 | 7,00E-02 | 1,61E+00 | 5,34E-02 | 2,66E-03 | MND | MND | MND | MND | MND | MND | MND | 6,75E-06 | 4,64E-03 | 2,05E-02 | 2,58E-04 | -1,87E-01 |
| Ozone depletion Pot. | kg CFC ₋₁₁ e | 6,72E-08 | 4,38E-08 | 8,02E-09 | 1,19E-07 | 1,06E-08 | 1,22E-10 | MND | MND | MND | MND | MND | MND | MND | 2,80E-13 | 8,55E-10 | 2,08E-09 | 8,43E-11 | -2,03E-08 |
| Acidification | kg SO ₂ e | 4,94E-03 | 1,54E-02 | 3,63E-04 | 2,07E-02 | 1,46E-04 | 6,26E-06 | MND | MND | MND | MND | MND | MND | MND | 3,58E-08 | 1,54E-05 | 2,13E-04 | 1,87E-06 | -7,87E-04 |
| Eutrophication | kg PO ₄ ³ e | 3,16E-03 | 3,96E-03 | 1,77E-04 | 7,30E-03 | 3,02E-05 | 1,04E-05 | MND | MND | MND | MND | MND | MND | MND | 1,79E-08 | 3,52E-06 | 7,05E-05 | 4,03E-07 | -4,78E-04 |
| POCP (“smog”) | kg C ₂ H ₄ e | 3,03E-04 | 6,05E-05 | 3,33E-05 | 3,97E-04 | 6,66E-06 | 4,09E-07 | MND | MND | MND | MND | MND | MND | MND | 1,73E-09 | 6,03E-07 | 8,07E-06 | 7,84E-08 | -6,63E-05 |
| ADP-elements | kg Sbe | 1,09E-05 | 8,35E-05 | 1,23E-06 | 9,56E-05 | 1,28E-07 | 9,46E-09 | MND | MND | MND | MND | MND | MND | MND | 4,39E-10 | 1,07E-08 | 2,80E-06 | 5,96E-10 | -2,98E-06 |
| ADP-fossil | MJ | 1,47E+01 | 5,31E+00 | 2,63E+00 | 2,27E+01 | 8,60E-01 | 2,33E-02 | MND | MND | MND | MND | MND | MND | MND | 8,62E-04 | 7,05E-02 | 2,82E-01 | 7,22E-03 | -3,73E+00 |

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? [Read more online](#)

This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited

05.01.2024

