

ENVIRONMENTAL PRODUCT DECLARATION

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

Facade Plank door
Outrup Vinduer og Døre A/S



EPD HUB, HUB-1360

Published on 03.05.2024, last updated on 03.05.2024, valid until 03.05.2029.

GENERAL INFORMATION

MANUFACTURER

| | |
|-----------------|-------------------------------------|
| Manufacturer | Outrup Vinduer og Døre A/S |
| Address | Outrupstræde 31, 7900 Nykøbing Mors |
| Contact details | salg@outrup.dk |
| Website | https://www.outrup.dk/ |

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 1.1, 5 Dec 2023 EN 17213 Windows and doors |
| Sector | Construction product |
| Category of EPD | Third party verified EPD |
| Parent EPD number | HUB-1359 |
| Scope of the EPD | Cradle to gate with options, A4-A5, and modules C1-C4, D |
| EPD author | Henrik Søgaard Pedersen, Inwido |
| EPD verification | Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal verification <input checked="" type="checkbox"/> External verification |
| EPD verifier | Elma Avdyli, 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 | Facade Plank door |
| Additional labels | TræFront og AluCapFront / Wood and alu-clad wood products |
| Product reference | Plank door |
| Place of production | Nykøbing Mors, Denmark |
| Period for data | Calendar year 2022 |
| Averaging in EPD | No averaging |
| Variation in GWP-fossil for A1-A3 | 0 % |

ENVIRONMENTAL DATA SUMMARY

| | |
|--|--|
| Declared unit | 1m ² of a plank door with aluminum cladding |
| Declared unit mass | 23.8 kg |
| GWP-fossil, A1-A3 (kgCO ₂ e) | 5,08E+01 |
| GWP-total, A1-A3 (kgCO ₂ e) | 2,49E+01 |
| Secondary material, inputs (%) | 12.2 |
| Secondary material, outputs (%) | 86.4 |
| Total energy use, A1-A3 (kWh) | 261 |
| Net fresh water use, A1-A3 (m ³) | 0.55 |

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Outrup Vinduer og Døre A/S is a Danish window and door manufacturer placed in Nykøbing Mors in Northwest Jutland. All our windows and doors are manufactured at Mors by competent and passionate employees who work every day to fulfill our customers wishes for customized solutions and odd measurements. We take pride in continuing the proud Danish craft traditions and preserving and developing healthy Danish workplaces.

PRODUCT DESCRIPTION

This EPD covers Plank doors made with an aluminium clad wooden frame and GRP treshold. The 71mm thick door blade is made from HDF inside and outside and with EPS foam insulation in between. Door is hinged and with triple-point locking system and includes handle and lock.

Main application is to provide thermal insulation and access for residential buildings, U-value about 0,71W/m2K. Frame depth 124mm. Market area of the product covers Denmark

Further information can be found at <https://www.outrup.dk/>.

PRODUCT RAW MATERIAL MAIN COMPOSITION

| Raw material category | Amount, mass- % | Material origin |
|-----------------------|-----------------|-----------------|
| Metals | 21 | EU - China |
| Minerals | 0 | |
| Fossil materials | 14 | EU |
| Bio-based materials | 65 | EU - Africa |

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

| | |
|--|------|
| Biogenic carbon content in product, kg C | 8.89 |
| Biogenic carbon content in packaging, kg C | 0.47 |

FUNCTIONAL UNIT AND SERVICE LIFE

| | |
|------------------------|--|
| Declared unit | 1m2 of a plank door with aluminum cladding |
| Mass per declared unit | 23.8 kg |
| Functional unit | 1 m2 plank door with GFRP treshold. In accordance with EN 17213, the indicators results have been calculated on the basis of a standard door size measuring 1.23 m x 2,18 m. The declared environmental impacts of this EPD refer to the declared unit of 1 m2 |
| Reference service life | No RSL is declared since EPD does not contain C-modules |

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.

The manufacturing process includes the production and supply of raw materials as well as their processing at the factory. Manufacturing starts in the timber transformation plant where fingerjointed heartwood pine wood are cut to length for the frame whereafter parts are milled and flattened. Pieces are jointed together with glue using tongue and groove joints and the frame is then clamped in a hydraulic press where the corners

are pressed together tightly. Next the frame is primed/ painted. In parallel to this, the door plank follow a similar process of milling for hardware and painting. Aluminium cladding and cill follows a third route of milling and cutting of ready painted profiles to be ready for assembly on frame when assembling product Finally, customised hardware are fixed on to the frame/plank as well as gaskets are mounted onto plank. The finished product then passes through inspection before being loaded onto wooden pallet and secured with corner pads and plastic wrapping for distribution. Timber shavings are collected by suction system into silo to be used for heating on-site. Other manufacturing wastes include, aluminium and metal waste, paint and primer, which are collected separately and sent to local waste contractor close to factory to be recycled/incinerated. The production line uses electricity, and shavings for heat.

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.

Using transportation scenario from EN 17213 PCR for windows and doors., Distance of transport to construction site takes place using small batches using distributors as prescribed scenario: 40T truck full capacity, 150km and return empty 150km and 7.5T truck 20% payload 50km one-way and 50km return empty Total 400km. Transportation does not cause losses as product is packaged properly. The most common installation scenario has been considered where the product is installed manually without the use of mechanical handling, with electrical screwdriver. No ancillary material is required and no waste generated. This module also considers environmental impacts from installation process due to generation of waste from packaging materials (A5). This study assumed the loads of preprocessing of packaging waste, namely wooden pallet chipped to be used as secondary fuel, PE and paper sorted for recycling.

PRODUCT USE AND MAINTENANCE (B1-B7)

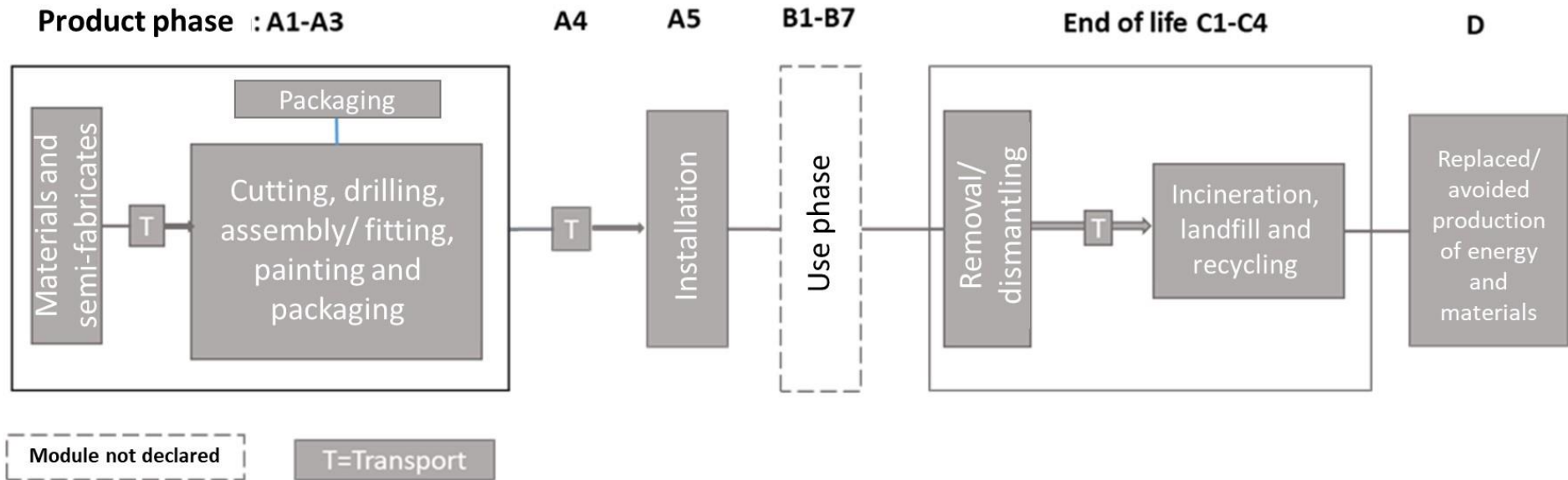
This EPD does not cover the use phase.

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

PRODUCT END OF LIFE (C1-C4, D)

The door is at its EoL dismantled manually and separately from other construction waste, hence no energy nor material is required. Per Annex B, EN 17213, 5% non glass are rejected and sent directly to landfill. The remaining 95% of non glass are sorted and sent to a local treatment facility for processing. This share of metals are recycled, while timber is conservatively assumed to be chipped to be used as secondary fuel. Module D claims the benefits of avoided production of metal through recycling, avoided production of heat and electricity through wood and plastic incineration. It also takes into account the loads of incineration and recycling activities. Specific national data are used for timber. According to Danish national statistics. 53% is recycled, 46% incinerated and 1% landfilled.

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 | No allocation |
| 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 | 0 % |

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. The EPD Generator uses Ecoinvent v3.8, Plastics Europe, Federal LCA Commons and One Click LCA databases 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 | 1,47E+01 | 8,21E-01 | 9,41E+00 | 2,49E+01 | 1,18E+00 | 1,85E+00 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 1,96E-01 | 3,50E+01 | 1,31E+00 | -1,72E+01 |
| GWP – fossil | kg CO ₂ e | 4,57E+01 | 8,21E-01 | 4,26E+00 | 5,08E+01 | 1,18E+00 | 1,41E-01 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 1,96E-01 | 1,05E+01 | 2,42E-02 | -1,74E+01 |
| GWP – biogenic | kg CO ₂ e | -3,26E+01 | 2,86E-05 | 5,14E+00 | -2,74E+01 | 0,00E+00 | 1,71E+00 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 6,60E-10 | 2,44E+01 | 1,29E+00 | 2,00E-01 |
| GWP – LULUC | kg CO ₂ e | 1,56E+00 | 4,33E-04 | 8,06E-03 | 1,57E+00 | 4,95E-04 | 8,91E-05 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 7,76E-05 | 6,05E-04 | 1,12E-05 | -2,97E-02 |
| Ozone depletion pot. | kg CFC ₁₁ e | 3,87E-06 | 1,80E-07 | 1,96E-07 | 4,24E-06 | 2,82E-07 | 3,38E-09 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 4,54E-08 | 4,99E-08 | 1,91E-09 | -1,08E-06 |
| Acidification potential | mol H ⁺ e | 3,16E-01 | 1,21E-02 | 1,74E-02 | 3,46E-01 | 3,58E-03 | 2,96E-04 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 6,87E-04 | 5,55E-03 | 7,62E-05 | -1,23E-01 |
| EP-freshwater ²⁾ | kg Pe | 1,18E-03 | 4,68E-06 | 2,57E-04 | 1,44E-03 | 8,99E-06 | 3,59E-06 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 1,39E-06 | 2,61E-05 | 2,77E-07 | -6,80E-04 |
| EP-marine | kg Ne | 4,84E-02 | 2,91E-03 | 4,14E-03 | 5,55E-02 | 7,44E-04 | 8,97E-05 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 1,80E-04 | 1,55E-03 | 3,94E-05 | -1,67E-02 |
| EP-terrestrial | mol Ne | 5,06E-01 | 3,23E-02 | 4,67E-02 | 5,85E-01 | 8,27E-03 | 1,01E-03 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 1,99E-03 | 1,71E-02 | 2,38E-04 | -2,13E-01 |
| POCP (“smog”) ³⁾ | kg NMVOCe | 1,74E-01 | 8,77E-03 | 1,21E-02 | 1,95E-01 | 3,22E-03 | 2,55E-04 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 6,53E-04 | 4,36E-03 | 7,66E-05 | -6,49E-02 |
| ADP-minerals & metals ⁴⁾ | kg Sbe | 3,38E-04 | 2,19E-06 | 5,48E-05 | 3,95E-04 | 4,07E-06 | 2,89E-07 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 7,02E-07 | 3,59E-05 | 2,79E-08 | -7,78E-05 |
| ADP-fossil resources | MJ | 4,27E+02 | 1,15E+01 | 5,40E+01 | 4,92E+02 | 1,82E+01 | 7,72E-01 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 2,92E+00 | 7,70E+00 | 1,82E-01 | -2,13E+02 |
| Water use ⁵⁾ | m ³ e depr. | 2,42E+01 | 4,66E-02 | 2,75E+00 | 2,70E+01 | 8,88E-02 | 6,38E-02 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 1,36E-02 | 9,03E-01 | 1,70E-03 | -3,80E+00 |

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.

ADDITIONAL (OPTIONAL) 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 |
|----------------------------------|-----------|----------|----------|----------|----------|----------|----------|-----|-----|-----|-----|-----|-----|-----|----------|----------|----------|----------|-----------|
| Particulate matter | Incidence | 2,95E-06 | 5,12E-08 | 1,84E-07 | 3,19E-06 | 1,12E-07 | 4,89E-09 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 1,64E-08 | 6,28E-08 | 1,30E-09 | -1,32E-06 |
| Ionizing radiation ⁶⁾ | kBq U235e | 2,96E+00 | 5,76E-02 | 7,22E-01 | 3,74E+00 | 9,57E-02 | 1,14E-02 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 1,53E-02 | 9,13E-02 | 9,73E-04 | -2,86E+00 |
| Ecotoxicity (freshwater) | CTUe | 1,24E+03 | 8,76E+00 | 1,01E+02 | 1,35E+03 | 1,54E+01 | 1,99E+00 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 2,42E+00 | 2,28E+01 | 1,01E+02 | -4,41E+02 |
| Human toxicity, cancer | CTUh | 1,01E-07 | 3,82E-10 | 4,29E-09 | 1,06E-07 | 4,59E-10 | 7,33E-11 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 7,48E-11 | 1,20E-09 | 8,78E-12 | -1,32E-08 |
| Human tox. non-cancer | CTUh | 1,19E-06 | 7,71E-09 | 8,53E-08 | 1,28E-06 | 1,51E-08 | 2,05E-09 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 2,42E-09 | 5,09E-08 | 2,39E-10 | -1,53E-07 |

| | | | | | | | | | | | | | | | | | | | | |
|-------------------|---|----------|----------|----------|----------|----------|----------|-----|-----|-----|-----|-----|-----|-----|-----|----------|----------|----------|----------|-----------|
| SQP ⁷⁾ | - | 2,00E+02 | 6,07E+00 | 1,24E+02 | 3,31E+02 | 1,68E+01 | 7,78E-01 | MND | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 2,05E+00 | 5,60E+00 | 3,33E-01 | -1,24E+02 |
|-------------------|---|----------|----------|----------|----------|----------|----------|-----|-----|-----|-----|-----|-----|-----|-----|----------|----------|----------|----------|-----------|

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. 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; 7) SQP = Land use related impacts/soil quality.

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 | 2,16E+02 | 1,34E-01 | 9,35E+01 | 3,10E+02 | 2,69E-01 | 4,15E-01 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 4,21E-02 | 9,52E-01 | 7,51E-03 | -3,79E+01 |
| Renew. PER as material | MJ | 3,02E+02 | 0,00E+00 | -4,36E+01 | 2,58E+02 | 0,00E+00 | -1,99E+01 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | -2,26E+02 | -1,19E+01 | 1,38E+01 |
| Total use of renew. PER | MJ | 5,18E+02 | 1,34E-01 | 5,00E+01 | 5,68E+02 | 2,69E-01 | -1,95E+01 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 4,21E-02 | -2,25E+02 | -1,19E+01 | -2,41E+01 |
| Non-re. PER as energy | MJ | 5,64E+02 | 1,15E+01 | 5,10E+01 | 6,27E+02 | 1,82E+01 | 7,72E-01 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 2,92E+00 | 7,70E+00 | 1,82E-01 | -2,12E+02 |
| Non-re. PER as material | MJ | 8,31E+01 | 0,00E+00 | -4,85E+00 | 7,83E+01 | 0,00E+00 | -3,34E+00 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | -7,12E+01 | -3,75E+00 | -7,63E-01 |
| Total use of non-re. PER | MJ | 6,47E+02 | 1,15E+01 | 4,61E+01 | 7,05E+02 | 1,82E+01 | -2,56E+00 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 2,92E+00 | -6,35E+01 | -3,57E+00 | -2,13E+02 |
| Secondary materials | kg | 2,90E+00 | 4,34E-03 | 2,72E-01 | 3,17E+00 | 6,14E-03 | 4,86E-04 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 9,84E-04 | 7,30E-03 | 5,31E-05 | 6,61E-01 |
| Renew. secondary fuels | MJ | 4,46E+00 | 3,19E-05 | 2,13E-01 | 4,68E+00 | 6,29E-05 | 2,45E-06 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 1,08E-05 | 1,36E-04 | 2,58E-06 | -5,19E-03 |
| 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 | 3,96E-01 | 1,20E-03 | 1,49E-01 | 5,45E-01 | 2,48E-03 | 1,30E-03 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 3,69E-04 | 3,68E-03 | 1,68E-04 | -1,91E-01 |

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 | 8,81E+00 | 1,39E-02 | 4,07E-01 | 9,23E+00 | 2,13E-02 | 4,86E-03 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 3,29E-03 | 7,16E-02 | 0,00E+00 | -2,79E+00 |
| Non-hazardous waste | kg | 6,80E+01 | 1,94E-01 | 1,53E+01 | 8,35E+01 | 3,78E-01 | 6,78E-01 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 5,85E-02 | 1,22E+01 | 5,69E-01 | -4,20E+01 |
| Radioactive waste | kg | 3,26E-03 | 7,99E-05 | 2,09E-04 | 3,55E-03 | 1,25E-04 | 3,39E-06 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 2,01E-05 | 2,88E-05 | 0,00E+00 | -9,27E-04 |

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 | 1,45E-02 | 0,00E+00 | 7,72E-01 | 7,86E-01 | 0,00E+00 | 6,44E-01 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 1,85E+01 | 0,00E+00 | 0,00E+00 |
| Materials for energy rec | kg | 0,00E+00 | 0,00E+00 | 3,85E+00 | 3,85E+00 | 0,00E+00 | 4,27E-01 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 0,00E+00 | 2,11E+00 | 0,00E+00 | 0,00E+00 |
| Exported energy | MJ | 0,00E+00 | 0,00E+00 | 6,78E+01 | 6,78E+01 | 0,00E+00 | 1,31E+01 | 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 | 4,37E+01 | 8,14E-01 | 4,21E+00 | 4,87E+01 | 1,17E+00 | 1,43E-01 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 1,94E-01 | 1,05E+01 | 3,12E-02 | -1,69E+01 |
| Ozone depletion Pot. | kg CFC-11e | 3,82E-06 | 1,43E-07 | 1,57E-07 | 4,12E-06 | 2,23E-07 | 2,84E-09 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 3,60E-08 | 4,27E-08 | 1,52E-09 | -9,33E-07 |
| Acidification | kg SO ₂ e | 2,58E-01 | 9,68E-03 | 1,36E-02 | 2,81E-01 | 2,92E-03 | 2,25E-04 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 5,45E-04 | 4,34E-03 | 5,96E-05 | -1,02E-01 |
| Eutrophication | kg PO ₄ ³ e | 7,89E-02 | 1,20E-03 | 1,12E-02 | 9,12E-02 | 6,37E-04 | 3,52E-04 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 1,21E-04 | 2,87E-03 | 1,25E-03 | -2,70E-02 |
| POCP ("smog") | kg C ₂ H ₄ e | 1,98E-02 | 2,77E-04 | 7,84E-04 | 2,09E-02 | 1,42E-04 | 1,26E-05 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 2,43E-05 | 1,59E-04 | 7,48E-06 | -5,98E-03 |
| ADP-elements | kg Sbe | 4,08E-04 | 2,14E-06 | 5,44E-05 | 4,64E-04 | 3,97E-06 | 2,83E-07 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 6,86E-07 | 3,57E-05 | 2,66E-08 | -7,44E-05 |
| ADP-fossil | MJ | 6,36E+02 | 1,15E+01 | 5,43E+01 | 7,01E+02 | 1,82E+01 | 7,72E-01 | MND | MND | MND | MND | MND | MND | MND | 0,00E+00 | 2,91E+00 | 7,70E+00 | 1,82E-01 | -2,10E+02 |

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.

Elma Avdyli, as an authorized verifier acting for EPD Hub Limited
03.05.2024

