ENVIRONMENTAL PRODUCT DECLARATION

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

Facade door with glazing unit
Outrup Vinduer & Døre A/S

EPD HUB, HUB-3116
Published on 04.04.2025, last updated on 04.04.2025, valid until 03.04.2030

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.1 (5 Dec 2023) and JRC characterization factors EF 3.1.

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Outrup Vinduer & 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	-
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Henrik Pedersen
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Sarah Curpen, 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 door with glazing unit
Additional labels	AluCapFront, alu-clad wood based facade door
Product reference	Facade door
Place of production	7900 Nykøbing Mors, Denmark
Period for data	Calendar year 2023 (1/1-23 to 31/12-23)
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	%

ENVIRONMENTAL DATA SUMMARY

Declared unit	1m2 of a glazed facade door with aluminum cladding
Declared unit mass	41,05 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	8,31E+01
GWP-total, A1-A3 ($kgCO_2e$)	6,22E+01
Secondary material, inputs (%)	4,18
Secondary material, outputs (%)	99,8
Total energy use, A1-A3 (kWh)	444
Net freshwater use, A1-A3 (m^3)	4,09

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 facade doors made with wooden frame and sash, with an aluminium cladding and GRP treshold. The door blade is made from fingerjointed pine and an insulating glazing unit installed therein. Door is hinged and with triple-point locking system and includes handle and lock. According to c-PCR the door is converted to a unit of 1 sqm., while the door in calculation is a 1230x2180mm inward opening door.
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	13	Europe, Asia
Minerals	53	Europe
Fossil materials	5	Europe
Bio-based materials	29	Scandinavia

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	7,6
Biogenic carbon content in packaging, kg C	0,39

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1m2 of a glazed facade door with aluminum cladding
Mass per declared unit	41,05 kg
Functional unit	-
Reference service life	-

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	Deconstruction/ demolition	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 finger-jointed heartwood pine wood is 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

Finally, customized hardware is fixed onto the frame/sash, and gaskets are mounted onto sashes. Lastly, glass is installed, and beads are used to seal the glass. The finished product then passes through inspection before being loaded onto wooden pallets and secured with corner pads and plastic wrapping for distribution. Timber shavings are collected by a suction system into a silo to be used for heating on-site. Other manufacturing wastes include paint/primer, which are collected separately and sent to a local waste contractor close to the 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 the transportation scenario from EN 17213 PCR for windows and doors. Distance of transport to the construction site takes place using small batches with distributors as prescribed in the scenario: a 40T truck at full capacity for 150km and returning empty for 150km, and a 7.5T truck with 20% payload for 50km one-way and 50km return empty, totaling 400km. Transportation does not cause losses as the product is packaged properly

The most common installation scenario has been considered, where the product is installed manually without the use of mechanical handling, using

an electrical screwdriver. No ancillary material is required, and no waste is generated. This module also considers environmental impacts from the installation process due to the generation of waste from packaging materials (A5). This study assumed the loads of preprocessing of packaging waste, namely wooden pallets chipped to be used as secondary fuel, and PE and paper sorted for recycling

PRODUCT USE AND MAINTENANCE (B1-B7)

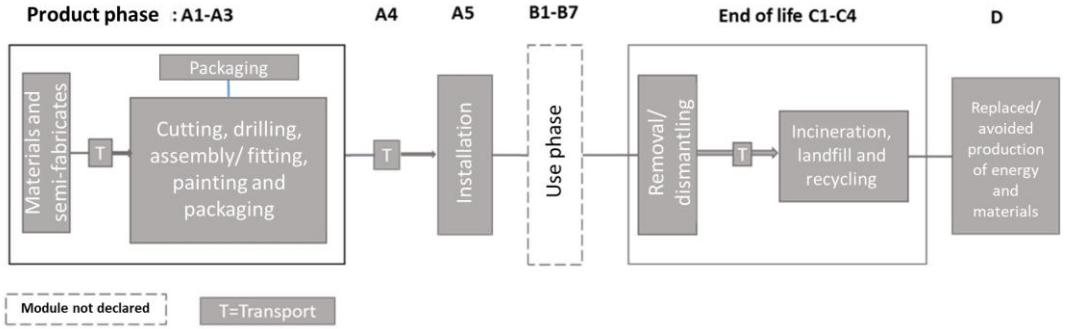
N/A

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

PRODUCT END OF LIFE (C1-C4, D)

The door is dismantled manually with hand tools at the end of its life (EoL) and separately from other construction waste, hence only little energy is required. EoL scenarios from Danish statistics have been used for certain material groups, while others align with Annex B, EN 17213. 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.

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 material	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	%

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 v3.10.1 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1 environmental data sources follow the methodology ‘allocation, Cut-off, EN 15804+A2‘.

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_2e	4,60E+01	6,81E+00	9,35E+00	6,22E+01	3,48E+00	1,47E+00	MND	MND	MND	MND	MND	MND	MND	1,87E-02	2,37E-01	2,31E+01	9,91E-01	-5,35E+00
GWP – fossil	kg CO_2e	7,38E+01	6,80E+00	2,50E+00	8,31E+01	3,48E+00	3,75E-02	MND	MND	MND	MND	MND	MND	MND	1,86E-02	2,37E-01	4,44E+00	9,60E-03	-5,01E+00
GWP – biogenic	kg CO_2e	-2,79E+01	0,00E+00	6,84E+00	-2,11E+01	0,00E+00	1,43E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	1,86E+01	9,81E-01	-3,10E-01
GWP – LULUC	kg CO_2e	9,79E-02	2,88E-03	8,27E-03	1,09E-01	1,31E-03	1,07E-04	MND	MND	MND	MND	MND	MND	MND	7,96E-05	9,05E-05	1,20E-03	7,22E-07	-2,75E-02
Ozone depletion pot.	kg $CFC\text{-}_{11}$e	2,81E-06	1,25E-07	5,35E-08	2,99E-06	6,27E-08	6,15E-10	MND	MND	MND	MND	MND	MND	MND	3,98E-10	4,89E-09	1,44E-08	2,77E-11	-1,37E-06
Acidification potential	mol H^+e	5,87E-01	8,58E-02	7,75E-03	6,81E-01	1,10E-02	1,63E-04	MND	MND	MND	MND	MND	MND	MND	1,12E-04	5,44E-04	5,96E-03	7,93E-06	7,52E-02
EP-freshwater[2)]	kg Pe	5,08E-03	3,68E-04	4,18E-04	5,86E-03	2,42E-04	1,90E-05	MND	MND	MND	MND	MND	MND	MND	1,36E-05	1,64E-05	4,19E-04	1,17E-07	-1,71E-03
EP-marine	kg Ne	1,06E-01	2,17E-02	2,65E-03	1,31E-01	3,64E-03	4,78E-05	MND	MND	MND	MND	MND	MND	MND	2,01E-05	1,40E-04	1,48E-03	1,51E-04	1,05E-02
EP-terrestrial	mol Ne	1,23E+00	2,41E-01	2,39E-02	1,49E+00	3,96E-02	4,30E-04	MND	MND	MND	MND	MND	MND	MND	2,42E-04	1,52E-03	1,53E-02	3,19E-05	1,63E-01
POCP ("smog")[3)]	kg NMVOCe	3,37E-01	7,45E-02	7,92E-03	4,20E-01	1,66E-02	1,34E-04	MND	MND	MND	MND	MND	MND	MND	6,04E-05	9,37E-04	4,71E-03	1,30E-05	3,77E-02
ADP-minerals & metals[4)]	kg Sbe	2,75E-04	1,47E-05	1,30E-05	3,03E-04	1,13E-05	2,85E-07	MND	MND	MND	MND	MND	MND	MND	5,85E-07	7,02E-07	2,39E-05	2,43E-09	1,17E-04
ADP-fossil resources	MJ	1,17E+03	9,45E+01	2,00E+01	1,28E+03	4,86E+01	5,72E-01	MND	MND	MND	MND	MND	MND	MND	2,99E-01	3,50E+00	1,16E+01	2,39E-02	-7,76E+01
Water use[5)]	m^3e depr.	9,89E+01	4,03E-01	1,22E+00	1,01E+02	2,32E-01	3,92E-02	MND	MND	MND	MND	MND	MND	MND	3,36E-02	1,78E-02	8,82E-01	1,21E-04	-1,27E-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.

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	4,93E-06	4,74E-07	1,41E-07	5,55E-06	2,64E-07	4,65E-09	MND	MND	MND	MND	MND	MND	MND	7,33E-10	2,18E-08	8,97E-08	1,73E-10	1,49E-06
Ionizing radiation[6]	kBq U235e	5,16E+00	8,95E-02	7,68E-02	5,33E+00	5,55E-02	1,04E-02	MND	MND	MND	MND	MND	MND	MND	6,63E-03	4,29E-03	1,03E-01	2,51E-05	4,08E-01
Ecotoxicity (freshwater)	CTUe	1,85E+03	9,79E+00	3,90E+01	1,90E+03	6,97E+00	2,24E-01	MND	MND	MND	MND	MND	MND	MND	1,05E-01	4,24E-01	2,72E+01	2,47E-01	1,15E+02
Human toxicity, cancer	CTUh	4,81E-08	1,24E-09	1,73E-09	5,11E-08	5,82E-10	3,57E-11	MND	MND	MND	MND	MND	MND	MND	1,17E-11	3,95E-11	6,75E-10	9,18E-13	-8,69E-09
Human tox. non-cancer	CTUh	8,35E-07	4,81E-08	3,77E-08	9,21E-07	2,99E-08	9,41E-10	MND	MND	MND	MND	MND	MND	MND	6,19E-10	2,25E-09	3,48E-08	1,85E-10	-1,14E-07
SQP[7]	-	1,76E+02	6,25E+01	9,15E+01	3,30E+02	2,78E+01	7,13E-01	MND	MND	MND	MND	MND	MND	MND	5,21E-01	3,22E+00	1,03E+01	5,53E-02	-4,72E-01

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	3,54E+02	1,25E+00	-1,11E+01	3,44E+02	7,99E-01	-3,11E+00	MND	MND	MND	MND	MND	MND	MND	4,61E-01	5,80E-02	-5,65E+01	3,90E-04	-1,52E+02
Renew. PER as material	MJ	2,60E+02	0,00E+00	-5,96E+01	2,01E+02	0,00E+00	-1,75E+01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-1,83E+02	-7,98E-02	1,26E+02
Total use of renew. PER	MJ	6,14E+02	1,25E+00	-7,07E+01	5,45E+02	7,99E-01	-2,06E+01	MND	MND	MND	MND	MND	MND	MND	4,61E-01	5,80E-02	-2,39E+02	-7,94E-02	-2,63E+01
Non-re. PER as energy	MJ	1,15E+03	9,45E+01	4,34E+00	1,25E+03	4,86E+01	-8,05E-01	MND	MND	MND	MND	MND	MND	MND	2,99E-01	3,50E+00	-2,80E+01	-3,52E+00	-7,25E+01
Non-re. PER as material	MJ	4,47E+01	0,00E+00	-5,50E+00	3,92E+01	0,00E+00	-3,14E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-3,49E+01	-1,21E+00	0,00E+00
Total use of non-re. PER	MJ	1,20E+03	9,45E+01	-1,16E+00	1,29E+03	4,86E+01	-3,94E+00	MND	MND	MND	MND	MND	MND	MND	2,99E-01	3,50E+00	-6,28E+01	-4,72E+00	-7,25E+01
Secondary materials	kg	1,72E+00	4,13E-02	2,00E-01	1,96E+00	2,18E-02	5,34E-04	MND	MND	MND	MND	MND	MND	MND	1,70E-04	1,54E-03	9,45E-03	8,60E-06	-2,32E+01
Renew. secondary fuels	MJ	2,76E-02	3,78E-04	1,47E-01	1,75E-01	2,71E-04	3,25E-06	MND	MND	MND	MND	MND	MND	MND	1,15E-06	1,94E-05	2,42E-04	1,61E-07	1,14E-02
Non-ren. secondary fuels	MJ	2,99E-19	0,00E+00	0,00E+00	2,99E-19	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	4,01E+00	1,12E-02	6,59E-02	4,09E+00	6,43E-03	1,25E-03	MND	MND	MND	MND	MND	MND	MND	1,09E-03	5,09E-04	8,93E-03	-3,52E-04	-1,70E+00

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	2,39E+00	1,30E-01	7,25E-01	3,25E+00	7,37E-02	3,32E-03	MND	MND	MND	MND	MND	MND	MND	1,82E-03	5,07E-03	6,60E-01	4,26E-05	-2,23E+00
Non-hazardous waste	kg	8,24E+01	2,36E+00	1,13E+01	9,61E+01	1,51E+00	1,21E-01	MND	MND	MND	MND	MND	MND	MND	6,66E-02	1,03E-01	2,39E+01	4,74E-01	-4,29E+01
Radioactive waste	kg	3,24E-02	2,23E-05	2,39E-05	3,24E-02	1,37E-05	2,48E-06	MND	MND	MND	MND	MND	MND	MND	1,51E-06	1,07E-06	2,63E-05	6,24E-09	-9,28E-03

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	7,10E+00	0,00E+00	2,03E-02	7,12E+00	0,00E+00	1,01E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	3,55E+01	0,00E+00	-7,36E-01
Materials for energy rec	kg	0,00E+00	0,00E+00	6,13E+00	6,13E+00	0,00E+00	1,49E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	5,47E+00	0,00E+00	0,00E+00
Exported energy	MJ	1,07E+00	0,00E+00	7,40E+01	7,50E+01	0,00E+00	2,27E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,51E+01
Exported energy – Electricity	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
Exported energy – Heat	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_2e	2,88E+00	6,76E+00	3,70E-01	1,00E+01	3,46E+00	4,72E-02	MND	MND	MND	MND	MND	MND	MND	1,86E-02	2,35E-01	4,44E+00	9,19E-03	-4,51E+00
Ozone depletion Pot.	kg $CFC_{-11}e$	4,34E-07	9,92E-08	3,40E-09	5,36E-07	4,99E-08	5,34E-10	MND	MND	MND	MND	MND	MND	MND	3,64E-10	3,89E-09	1,19E-08	2,21E-11	-1,00E-06
Acidification	kg SO_2e	1,59E-02	6,83E-02	1,47E-03	8,57E-02	8,39E-03	1,29E-04	MND	MND	MND	MND	MND	MND	MND	8,96E-05	4,32E-04	4,79E-03	5,88E-06	6,21E-02
Eutrophication	kg PO_4^3e	1,20E-02	8,69E-03	3,45E-04	2,10E-02	2,08E-03	3,57E-05	MND	MND	MND	MND	MND	MND	MND	1,62E-05	1,08E-04	8,87E-04	8,28E-06	1,84E-03
POCP (“smog”)	kg C_2H_4e	1,18E-03	3,80E-03	1,19E-04	5,10E-03	7,81E-04	1,51E-05	MND	MND	MND	MND	MND	MND	MND	5,78E-06	4,44E-05	3,18E-04	1,83E-06	1,85E-03
ADP-elements	kg Sbe	1,51E-05	1,44E-05	7,62E-06	3,71E-05	1,11E-05	2,83E-07	MND	MND	MND	MND	MND	MND	MND	5,83E-07	6,86E-07	2,35E-05	2,36E-09	8,53E-05
ADP-fossil	MJ	5,41E+01	9,30E+01	4,33E+00	1,51E+02	4,77E+01	4,11E-01	MND	MND	MND	MND	MND	MND	MND	2,03E-01	3,43E+00	9,82E+00	2,35E-02	-3,14E+01

ENVIRONMENTAL IMPACTS – GWP-GHG - THE INTERNATIONAL EPD SYSTEM

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[9)]	kg CO_2e	7,39E+01	6,81E+00	2,51E+00	8,32E+01	3,48E+00	3,76E-02	MND	MND	MND	MND	MND	MND	MND	1,87E-02	2,37E-01	4,44E+00	9,60E-03	-5,04E+00

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product as defined by IPCC AR 5 (IPCC 2013). In addition, the characterisation factors for the flows - CH4 fossil, CH4 biogenic and Dinitrogen monoxide - were updated in line with the guidance of IES PCR 1.2.5 Annex 1. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterization factor for biogenic CO2 is set to zero.

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.

Sarah Curpen, as an authorized verifier acting for EPD Hub Limited.
04.04.2025

VERIFIED ISO 14025