

ENVIRONMENTAL PRODUCT DECLARATION

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

SWEDOOR ADVANCE-LINE, INTERIOR UNCLASSIFIED DOORS, UNGLAZED

Stable Nature

JELD-WEN



EPD HUB, HUB-0442

Publishing date 12 May 2023, last updated on 12 May 2023, valid until 12 May 2028

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	JELD-WEN
Address	Retford Road, Woodhouse Mill, Sheffield, South Yorkshire, S13 9WH
Contact details	eu_sustainability@jeldwen.com
Website	www.jeld-wen.biz

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 EN 17213 Windows and doors
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	Piia Peever
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal certification ☑ External verification
EPD verifier	H.N, 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	SWEDOOR ADVANCE-LINE, Interior unclassified doors, Unglazed
Additional labels	Stable Nature
Place of production	Sdr Felding, Denmark
Period for data	Calendar year 2021
Averaging in EPD	No averaging

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 square meter
Declared unit mass	15.93 kg
GWP-fossil, A1-A3 (kgCO2e)	2,59E1
GWP-total, A1-A3 (kgCO2e)	8,76E0
Secondary material, inputs (%)	0.272
Secondary material, outputs (%)	66.5
Total energy use, A1-A3 (kWh)	139.0
Total water use, A1-A3 (m3e)	2,17E-1

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Headquartered in Charlotte, N.C., USA, JELD-WEN is a leading global manufacturer of high-performance interior and exterior building products, offering one of the broadest selections of windows, interior and exterior doors, and wall systems. JELD-WEN delivers a differentiated customer experience, providing construction professionals with durable, energy-efficient products and labor-saving services that help them maximize productivity and create beautiful, secure spaces for all to enjoy. The JELD-WEN team is driven by innovation and committed to creating safe, sustainable environments for customers, associates, and local communities. The JELD-WEN family of brands includes JELD-WEN® worldwide; LaCantina™ and VPI™ in North America; Swedoor® and DANA® in Europe; and Corinthian®, Stegbar®, and Breezway® in Australia.
Visit JELD-WEN.com for more information.

PRODUCT DESCRIPTION

Advance-line interior 40mm non-rebated door leaf with a solid core construction. Suitable for use in both private and public buildings e.g offices. Installing solid door leaf with a frame with sealing would give a high sound reducing effect. The specific technical standards and addition product information for each door design can be found on Swedoor website.
Further information can be found at www.jeld-wen.biz.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	1	GLO
Fossil materials	5	EU
Bio-based materials	94	EU

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	4.57
Biogenic carbon content in packaging, kg C	0.43

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 square meter (m^2)
Mass per declared unit	15.93 kg

The indicator results have been calculated for product size 0,825 m x 2,04 m. Surface area of said door is 1,683 m^2, which were used to obtain information for 1 m^2 of the product.

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 product is made of wood-based boards, veneer, metal parts, plastic parts and chemicals. The materials are transported to JELD-WENs production facility. The production of the door begins with the gluing and pressing of the door materials. The door leaf is then milled to the correct dimensions and the lock and hinge holes are milled. Edge band is glued to the edge of the door. Next, the door leaf moves to the surface treatment, where the surface of the door leaf is primed and lacquered. After surface treatment, the lock and hinges are installed and the product will be packed.

During the production process, wooden waste and chemical waste are being generated. Production waste and loss, including waste paint and cuttings of wood are sent to a waste management company to be incinerated; wastewater is treated in an average municipal treatment plant. Product packaging consist of plastic, cardboard, wood-based board and wooden pallet. The products are packed on an automated packing line and the packed products are stacked on a wooden pallet. After packing, the product is ready to be shipped to end customer / construction site.

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 calculated based on the product group specific sales data, taking into account the end customer locations; weighted average result is being used. The transportation method is assumed to be lorry. Vehicle capacity utilization volume factor is assumed to be 1 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. Installation includes the generated packaging waste. There is no loss on site during construction activities. Energy use during installation has not been taken into account, as installing the door only requires mounting and fastening. No additional materials are needed for installation.

PRODUCT USE AND MAINTENANCE (B1-B7)

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

PRODUCT END OF LIFE (C1-C4, D)

Consumption of energy and natural resources in demolition process is assumed to be negligible.

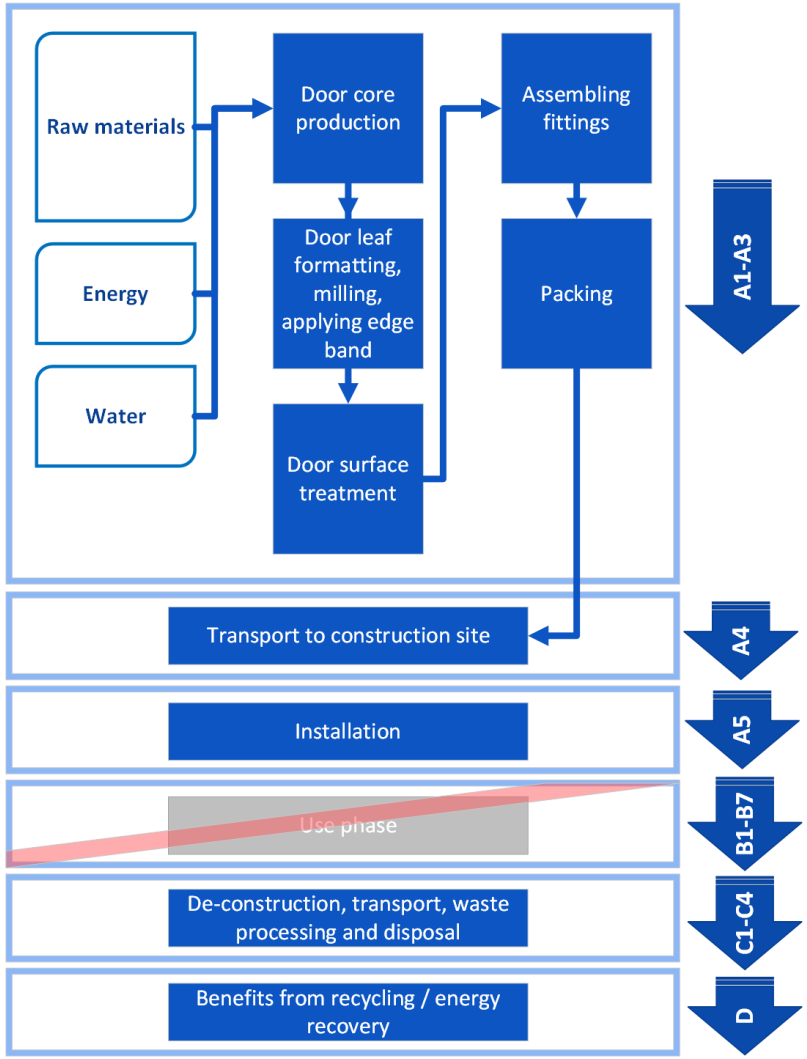
It is assumed that the waste is collected as mixed construction waste and transported to the waste treatment center. Transportation distance to treatment is assumed as 50 km and the transportation method is assumed to be lorry (C2).

Per the end of life scenario of timber windows and doorsets (EN17213 Annex B), the wood, steel, plastic, paint and glue are sorted. Module C3 accounts for energy and resource inputs for sorting and treating these waste streams for recycling and incineration with energy recovery.

Per the end of life scenario of timber windows and doorsets (EN17213 Annex B), 5% of wood, 5% of steel, 5% of plastic and 5% of paint and glue waste goes to landfill. Additionally, hazardous waste that is incinerated is included in Module C4 while the flow not included in Module D for benefits.

As specific national data is not used for timber / wooden products, then according to the end of life scenario of timber windows and doorsets (EN17213 Annex B), 100% of sorted timber materials goes to incineration. The wooden pallet, cardboard and plastic packaging used during transportation are also incinerated for energy recovery or recycled. The benefits and loads of incineration and recycling are included in Module D.

MANUFACTURING PROCESSAND SYSTEM BOUDARY



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	No allocation
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

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 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_2e	-2,15E0	4,34E0	6,57E0	8,76E0	1,28E0	1,67E0	MND	MND	MND	MND	MND	MND	MND	0E0	1,33E-1	1,65E1	3,72E0	8,91E0
GWP – fossil	kg CO_2e	1,49E1	4,34E0	6,66E0	2,59E1	1,29E0	9,4E-2	MND	MND	MND	MND	MND	MND	MND	0E0	1,33E-1	5,83E-1	2,81E0	-1,21E1
GWP – biogenic	kg CO_2e	-1,71E1	1,98E-3	-9,73E-2	-1,72E1	6,9E-4	1,58E0	MND	MND	MND	MND	MND	MND	MND	0E0	7,08E-5	1,59E1	9,13E-1	2,1E1
GWP – LULUC	kg CO_2e	1,11E-1	1,65E-3	4,75E-3	1,17E-1	4,59E-4	4,02E-5	MND	MND	MND	MND	MND	MND	MND	0E0	4,71E-5	3,01E-4	1,05E-4	-5,97E-3
Ozone depletion pot.	kg CFC_{-11}e	1,05E-6	9,74E-7	3,38E-7	2,36E-6	2,94E-7	1,13E-8	MND	MND	MND	MND	MND	MND	MND	0E0	3,02E-8	1,49E-8	4,36E-8	-9,82E-7
Acidification potential	mol H^+e	1,08E-1	3,03E-2	4,77E-2	1,86E-1	5,28E-3	4,45E-4	MND	MND	MND	MND	MND	MND	MND	0E0	5,42E-4	1,09E-3	6,39E-3	-9,21E-2
EP-freshwater[2)]	kg Pe	1,66E-3	3,45E-5	3,75E-4	2,07E-3	1,08E-5	1,32E-6	MND	MND	MND	MND	MND	MND	MND	0E0	1,11E-6	1,54E-5	3,91E-5	-4,87E-4
EP-marine	kg Ne	1,73E-2	8,32E-3	8,76E-3	3,44E-2	1,57E-3	1,62E-4	MND	MND	MND	MND	MND	MND	MND	0E0	1,61E-4	1,6E-4	5,72E-4	-1,08E-2
EP-terrestrial	mol Ne	2,25E-1	9,21E-2	9,45E-2	4,11E-1	1,73E-2	1,74E-3	MND	MND	MND	MND	MND	MND	MND	0E0	1,78E-3	1,9E-3	7,96E-3	-1,29E-1
POCP ("smog")[3)]	kg NMVOCe	6,85E-2	2,63E-2	2,68E-2	1,22E-1	5,31E-3	5,01E-4	MND	MND	MND	MND	MND	MND	MND	0E0	5,45E-4	6,61E-4	4,91E-3	-3,65E-2
ADP-minerals & metals[4)]	kg Sbe	8,26E-4	1,08E-4	2,64E-5	9,6E-4	3,5E-5	1,76E-6	MND	MND	MND	MND	MND	MND	MND	0E0	3,59E-6	1,05E-6	1,65E-6	-1,81E-5
ADP-fossil resources	MJ	2,24E2	6,44E1	1,26E2	4,14E2	1,95E1	1,03E0	MND	MND	MND	MND	MND	MND	MND	0E0	2E0	3,17E0	8,92E0	-1,33E2
Water use[5)]	m^3e depr.	6,89E0	2E-1	5,11E0	1,22E1	6,28E-2	7,65E-4	MND	MND	MND	MND	MND	MND	MND	0E0	6,44E-3	4,13E-2	5,39E-2	-1,28E0

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	1,1E-6	2,86E-7	5,25E-7	1,92E-6	9,01E-8	6,71E-9	MND	MND	MND	MND	MND	MND	MND	0E0	9,25E-9	8,05E-9	5,62E-8	-8,24E-7
Ionizing radiation[6)]	kBq U235e	5,58E-1	2,81E-1	2,01E0	2,85E0	8,52E-2	3,64E-3	MND	MND	MND	MND	MND	MND	MND	0E0	8,75E-3	2,32E-2	1,28E-2	-3,83E-1
Ecotoxicity (freshwater)	CTUe	3,8E2	4,88E1	1,69E2	5,98E2	1,5E1	1,19E0	MND	MND	MND	MND	MND	MND	MND	0E0	1,55E0	3,83E0	3,34E1	-2,55E2
Human toxicity, cancer	CTUh	4,4E-8	1,55E-9	3E-9	4,86E-8	4,37E-10	1,03E-10	MND	MND	MND	MND	MND	MND	MND	0E0	4,49E-11	6,62E-10	5,33E-9	-6,24E-9
Human tox. non-cancer	CTUh	2,7E-7	5,41E-8	7E-8	3,94E-7	1,7E-8	3,21E-9	MND	MND	MND	MND	MND	MND	MND	0E0	1,75E-9	6,71E-9	8,02E-8	-2,98E-8
SQP[7)]	-	3,15E1	4,94E1	1,08E1	9,16E1	1,62E1	5,87E-1	MND	MND	MND	MND	MND	MND	MND	0E0	1,67E0	5,76E-1	1,7E0	-9,84E0

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	1,04E2	8,64E-1	1,06E1	1,15E2	2,75E-1	3,43E-2	MND	MND	MND	MND	MND	MND	MND	0E0	2,83E-2	4,58E-1	2,06E-1	-4,63E1
Renew. PER as material	MJ	2E2	0E0	1,45E1	2,15E2	0E0	-1,91E1	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	-1,86E2	-9,79E0	0E0
Total use of renew. PER	MJ	3,04E2	8,64E-1	2,51E1	3,3E2	2,75E-1	-1,91E1	MND	MND	MND	MND	MND	MND	MND	0E0	2,83E-2	-1,86E2	-9,59E0	-4,63E1
Non-re. PER as energy	MJ	2,08E2	6,44E1	1,14E2	3,87E2	1,95E1	1,03E0	MND	MND	MND	MND	MND	MND	MND	0E0	2E0	3,17E0	8,92E0	-1,33E2
Non-re. PER as material	MJ	1,62E1	0E0	3,72E0	1,99E1	0E0	-5,68E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	-1,35E1	-7,09E-1	0E0
Total use of non-re. PER	MJ	2,24E2	6,44E1	1,18E2	4,06E2	1,95E1	-4,65E0	MND	MND	MND	MND	MND	MND	MND	0E0	2E0	-1,03E1	8,21E0	-1,33E2
Secondary materials	kg	3,96E-2	0E0	3,71E-3	4,33E-2	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	1,38E-1
Renew. secondary fuels	MJ	0E0	0E0	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Non-ren. secondary fuels	MJ	0E0	0E0	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Use of net fresh water	m^3	1,23E-1	1,06E-2	8,35E-2	2,17E-1	3,33E-3	4,64E-4	MND	MND	MND	MND	MND	MND	MND	0E0	3,42E-4	1,21E-3	4,62E-3	-2,06E-2

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	1,28E0	6,58E-2	3,03E-1	1,65E0	1,98E-2	8,46E-3	MND	MND	MND	MND	MND	MND	MND	0E0	2,03E-3	0E0	2,54E-1	-8,34E-1
Non-hazardous waste	kg	4,07E1	4,19E0	1,3E1	5,79E1	1,36E0	1,05E0	MND	MND	MND	MND	MND	MND	MND	0E0	1,4E-1	0E0	1,23E0	-3,25E0
Radioactive waste	kg	5,72E-4	4,42E-4	8,26E-4	1,84E-3	1,34E-4	5,12E-6	MND	MND	MND	MND	MND	MND	MND	0E0	1,37E-5	0E0	1,85E-5	-4,3E-4

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	0E0	0E0	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Materials for recycling	kg	0E0	0E0	1,19E-1	1,19E-1	0E0	3,56E-1	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	1,82E-1	0E0	0E0
Materials for energy rec	kg	0E0	0E0	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	1,04E1	0E0	0E0
Exported energy	MJ	0E0	0E0	3,34E0	3,34E0	0E0	1,1E1	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0

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	1,45E1	4,3E0	6,53E0	2,54E1	1,28E0	9,39E-2	MND	MND	MND	MND	MND	MND	MND	0E0	1,32E-1	5,67E-1	2,8E0	-1,18E1
Ozone depletion Pot.	kg $CFC_{-11}e$	9,33E-7	7,75E-7	2,77E-7	1,99E-6	2,34E-7	9,17E-9	MND	MND	MND	MND	MND	MND	MND	0E0	2,4E-8	1,6E-8	3,83E-8	-7,96E-7
Acidification	kg SO_2e	8,91E-2	1,93E-2	3,97E-2	1,48E-1	2,59E-3	2,87E-4	MND	MND	MND	MND	MND	MND	MND	0E0	2,66E-4	9,04E-4	5,5E-3	-8,02E-2
Eutrophication	kg PO_4^3e	3,61E-2	2,9E-3	1,21E-2	5,11E-2	5,33E-4	2,53E-4	MND	MND	MND	MND	MND	MND	MND	0E0	5,47E-5	1,9E-3	3,38E-3	-1,42E-2
POCP (“smog”)	kg C_2H_4e	6,29E-3	8,1E-4	1,98E-3	9,08E-3	1,71E-4	1,62E-5	MND	MND	MND	MND	MND	MND	MND	0E0	1,75E-5	1,24E-4	1,98E-3	-3,5E-3
ADP-elements	kg Sbe	8,26E-4	1,08E-4	2,64E-5	9,6E-4	3,5E-5	1,76E-6	MND	MND	MND	MND	MND	MND	MND	0E0	3,59E-6	1,05E-6	1,65E-6	-1,81E-5
ADP-fossil	MJ	2,24E2	6,44E1	1,26E2	4,14E2	1,95E1	1,03E0	MND	MND	MND	MND	MND	MND	MND	0E0	2E0	3,17E0	8,92E0	-1,33E2

ENVIRONMENTAL IMPACTS – FRENCH NATIONAL COMPLEMENTS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADP-elements	kg Sbe	8,26E-4	1,08E-4	2,64E-5	9,6E-4	3,49E-5	1,76E-6	MND	MND	MND	MND	MND	MND	MND	0E0	3,59E-6	1,04E-6	1,63E-6	-1,81E-5
Hazardous waste disposed	kg	6,62E-1	4,2E-2	4,69E-1	1,17E0	1,25E-2	1,4E-2	MND	MND	MND	MND	MND	MND	MND	0E0	1,29E-3	1,36E-2	6,04E-2	-1,36E-1
Non-haz. waste disposed	kg	4,07E1	4,19E0	3,26E0	4,82E1	1,36E0	1,05E0	MND	MND	MND	MND	MND	MND	MND	0E0	1,4E-1	1,23E0	1,23E0	-3,25E0
Air pollution	m^3	2,18E3	4,49E2	6,76E2	3,31E3	1,29E2	9,98E0	MND	MND	MND	MND	MND	MND	MND	0E0	1,33E1	4,66E1	7,23E2	-1,17E3
Water pollution	m^3	5,47E0	1,43E0	1,44E0	8,34E0	4,32E-1	4,55E-2	MND	MND	MND	MND	MND	MND	MND	0E0	4,44E-2	1,19E-1	9,17E-1	-1,33E0

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.

HaiHa Nguyen, as an authorized verifier acting for EPD Hub Limited

12.05.2023



VERIFIED ISO 14025