

ENVIRONMENTAL PRODUCT DECLARATION

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

SWEDOOR INTERIOR WOODEN FRAMESET WITHOUT THRESHOLD
JELD-WEN



EPD HUB, HUB-1114

Publishing on 15.02.2024, last updated on 15.02.2024, valid until 15.02.2029.

GENERAL INFORMATION

MANUFACTURER

Manufacturer	JELD-WEN
Address	Tootmise 8, 44317 Rakvere, Estonia; Europavej 1, 7280 Sonder Felding, Denmark; Zala iela 105, LV-3701 Dobeles, Latvia
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	Katren Sellik
EPD verification	Independent verification of this EPD and data, according to ISO 14025:

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

Swedoor interior wooden frameset without threshold is manufactured with a special technique which results in a very durable and stable constructions which makes the frame a perfect fit for both commercial and residential use. The frame type can be used for unclassified and classified door sets.

The specific technical standards and addition product information for frame can be found on Swedoor website.

Further information can be found at www.jeld-wen.biz.

PRODUCT RAW MATERIAL COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	4,2	EU
Minerals	-	EU
Fossil materials	4,2	EU
Bio-based materials	91,6	EU

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	4.44
Biogenic carbon content in packaging, kg C	0.05

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m2
Mass per declared unit	6.655 kg
Functional unit	One square meter of assembled frame set with basic hardware and sealing

The indicator results have been calculated for frame set with assembled size 1,044 m x 2,088 m. Surface area of said assembled frame set is 2,18 m2, which were used to obtain information for 1 m2 of the product.

The depth range of the considered frames is 68mm – 200mm. The indicator results have been calculated for average depth (134mm).

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 solid wood, and is assembled with metal parts, sealings and chemicals (surface treatment). The frame set in this EPD consists of the doorframe without threshold, and hardware.

The production of the components begins with the sizing and profiling the frame, after which they are milled to the correct dimensions, as well as the

installation holes, and the lock and hinge holes are milled. Next, the components move to the surface treatment processes, where the surface of the components are primed and painted. After surface treatment, the products are finished with adding the necessities like hardware (strikeplate, hinges and screws etc.) and sealings. After these components are installed to the products, the product is put together in the packaging. 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.

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-specific sales data, taking into account the end customer locations; weighted average result is being used. The transportation method is assumed to be lorry and ferry. 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)

N/A

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

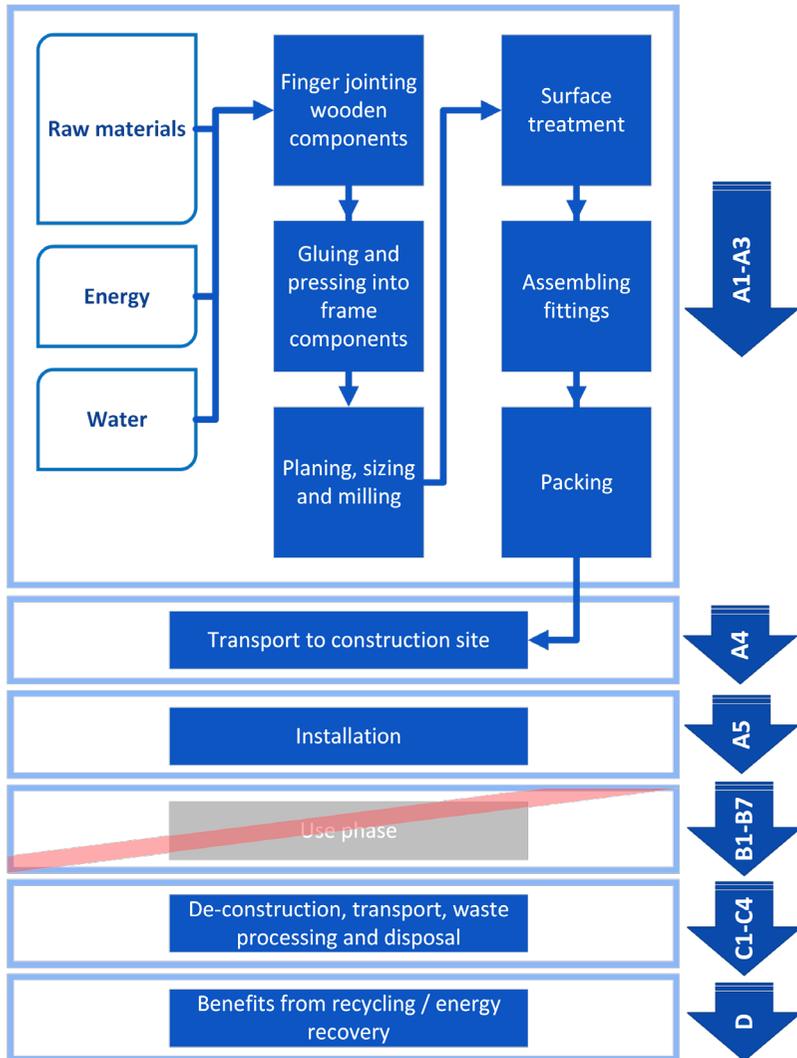
PRODUCT END OF LIFE (C1-C4, D)

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, metal, 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 metal, 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 packaging 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 PROCESS AND SYSTEM BOUNDARY



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	Partly 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	Multiple factories
Averaging method	Averaged by shares of total volume
Variation in GWP-fossil for A1-A3	5 %

The average EPD is created for products that have same construction and material content. These products are being produced in different factories and the 5% difference in A1-A3 GWP fossil value is only related to the different production location.

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	-1,74E+01	1,53E+00	1,02E+00	-1,49E+01	8,39E-01	1,92E-01	MND	0,00E+00	3,20E-02	1,98E+01	1,64E+00	-3,03E+01						
GWP – fossil	kg CO ₂ e	3,02E+00	1,53E+00	1,20E+00	5,75E+00	8,38E-01	7,53E-03	MND	0,00E+00	3,20E-02	1,95E-01	6,04E-01	-6,15E+00						
GWP – biogenic	kg CO ₂ e	-2,07E+01	6,07E-04	-1,75E-01	-2,09E+01	3,01E-04	1,85E-01	MND	0,00E+00	1,32E-06	1,96E+01	1,03E+00	-2,41E+01						
GWP – LULUC	kg CO ₂ e	2,74E-01	5,96E-04	7,14E-04	2,75E-01	3,86E-04	3,51E-06	MND	0,00E+00	1,18E-05	1,32E-04	2,57E-05	-1,39E-02						
Ozone depletion pot.	kg CFC ₁₁ e	3,14E-07	3,54E-07	1,09E-07	7,77E-07	1,87E-07	8,09E-10	MND	0,00E+00	7,37E-09	7,21E-09	4,53E-08	-3,39E-07						
Acidification potential	mol H ⁺ e	3,07E-02	6,30E-03	1,03E-02	4,73E-02	9,52E-03	3,65E-05	MND	0,00E+00	1,36E-04	4,18E-04	5,92E-04	-5,18E-02						
EP-freshwater ²⁾	kg Pe	9,56E-05	1,07E-05	3,88E-05	1,45E-04	5,10E-06	9,43E-08	MND	0,00E+00	2,62E-07	5,50E-06	6,88E-07	-2,49E-04						
EP-marine	kg Ne	5,12E-03	1,90E-03	2,41E-03	9,43E-03	2,50E-03	1,42E-05	MND	0,00E+00	4,03E-05	7,27E-05	1,02E-04	-5,50E-03						
EP-terrestrial	mol Ne	7,44E-02	2,10E-02	2,58E-02	1,21E-01	2,77E-02	1,50E-04	MND	0,00E+00	4,45E-04	8,17E-04	1,03E-03	-6,74E-02						
POCP (“smog”) ³⁾	kg NMVOCe	1,65E-02	6,40E-03	6,85E-03	2,97E-02	7,56E-03	4,02E-05	MND	0,00E+00	1,42E-04	2,35E-04	3,41E-04	-1,95E-02						
ADP-minerals & metals ⁴⁾	kg Sbe	9,73E-05	5,38E-06	1,49E-06	1,04E-04	2,48E-06	3,80E-08	MND	0,00E+00	7,51E-08	1,04E-06	3,51E-07	-1,23E-05						
ADP-fossil resources	MJ	4,48E+01	2,27E+01	4,26E+00	7,18E+01	1,20E+01	6,66E-02	MND	0,00E+00	4,81E-01	1,36E+00	2,72E+00	-8,35E+01						
Water use ⁵⁾	m ³ e depr.	1,76E+00	1,05E-01	5,81E-01	2,44E+00	5,03E-02	8,51E-03	MND	0,00E+00	2,15E-03	3,30E-02	1,24E-02	-8,40E-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	6,63E-07	1,35E-07	3,24E-07	1,12E-06	6,05E-08	5,76E-10	MND	0,00E+00	3,69E-09	3,32E-09	5,46E-09	-5,13E-07						
Ionizing radiation ⁶⁾	kBq U235e	2,16E-01	1,19E-01	1,57E-01	4,92E-01	6,09E-02	3,84E-04	MND	0,00E+00	2,29E-03	2,89E-02	1,32E-02	-1,98E+00						
Ecotoxicity (freshwater)	CTUe	8,96E+01	1,88E+01	2,90E+01	1,37E+02	9,36E+00	1,07E-01	MND	0,00E+00	4,33E-01	1,35E+00	2,67E+00	-1,63E+02						
Human toxicity, cancer	CTUh	7,76E-09	5,82E-10	6,62E-10	9,00E-09	3,57E-10	1,08E-11	MND	0,00E+00	1,06E-11	2,42E-10	1,18E-09	6,36E-10						
Human tox. non-cancer	CTUh	7,19E-08	1,90E-08	2,22E-08	1,13E-07	8,87E-09	3,22E-10	MND	0,00E+00	4,28E-10	1,71E-09	2,18E-09	-3,48E-08						
SQP ⁷⁾	-	2,62E+01	1,58E+01	1,46E+01	5,66E+01	6,86E+00	4,93E-02	MND	0,00E+00	5,54E-01	4,94E-01	5,51E-01	-6,05E+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	7,35E+01	3,24E-01	2,04E+00	7,59E+01	1,50E-01	2,37E-03	MND	0,00E+00	5,42E-03	1,94E-01	2,00E-02	-2,19E+01						
Renew. PER as material	MJ	1,85E+02	0,00E+00	1,61E+00	1,87E+02	0,00E+00	-1,61E+00	MND	0,00E+00	0,00E+00	-1,76E+02	-9,25E+00	-1,62E+00						
Total use of renew. PER	MJ	2,59E+02	3,24E-01	3,66E+00	2,63E+02	1,50E-01	-1,61E+00	MND	0,00E+00	5,42E-03	-1,76E+02	-9,23E+00	-2,35E+01						
Non-re. PER as energy	MJ	4,03E+01	2,27E+01	1,63E+01	7,93E+01	1,20E+01	6,66E-02	MND	0,00E+00	4,81E-01	1,36E+00	2,72E+00	-8,34E+01						
Non-re. PER as material	MJ	4,46E+00	0,00E+00	6,80E-01	5,14E+00	0,00E+00	-6,80E-01	MND	0,00E+00	0,00E+00	-4,23E+00	-2,23E-01	-3,46E+00						
Total use of non-re. PER	MJ	4,48E+01	2,27E+01	1,70E+01	8,44E+01	1,20E+01	-6,14E-01	MND	0,00E+00	4,81E-01	-2,88E+00	2,50E+00	-8,69E+01						
Secondary materials	kg	7,33E-02	7,62E-03	3,51E-02	1,16E-01	4,22E-03	1,11E-04	MND	0,00E+00	1,34E-04	8,73E-04	1,02E-03	1,82E-01						
Renew. secondary fuels	MJ	1,24E-03	8,33E-05	6,83E+00	6,83E+00	3,74E-05	6,74E-07	MND	0,00E+00	1,35E-06	8,22E-06	3,01E-06	-7,57E-05						
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Use of net fresh water	m ³	4,23E-02	2,84E-03	6,91E-03	5,20E-02	1,33E-03	-8,40E-06	MND	0,00E+00	6,23E-05	9,84E-04	3,71E-04	-7,38E-02						

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	5,07E-01	2,55E-02	8,48E-02	6,18E-01	1,38E-02	2,66E-04	MND	0,00E+00	6,38E-04	2,06E-02	1,71E-01	-6,50E-01						
Non-hazardous waste	kg	6,73E+00	4,50E-01	2,96E+00	1,01E+01	2,13E-01	1,22E-01	MND	0,00E+00	1,05E-02	3,68E-01	3,33E-01	-1,56E+01						
Radioactive waste	kg	1,45E-04	1,56E-04	7,68E-05	3,78E-04	8,29E-05	3,26E-07	MND	0,00E+00	3,22E-06	9,45E-06	0,00E+00	-5,44E-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	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	0,00E+00	0,00E+00	0,00E+00	4,20E-02	MND	0,00E+00	0,00E+00	2,65E-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	0,00E+00	0,00E+00	4,30E+00	0,00E+00	9,41E-02						
Exported energy	MJ	0,00E+00	0,00E+00	2,78E+01	2,78E+01	0,00E+00	9,78E-01	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	3,20E+00	1,51E+00	1,18E+00	5,90E+00	8,31E-01	7,61E-03	MND	0,00E+00	3,17E-02	1,92E-01	6,23E-01	-6,03E+00						
Ozone depletion Pot.	kg CFC ₁₁ e	2,69E-07	2,80E-07	8,78E-08	6,37E-07	1,48E-07	6,56E-10	MND	0,00E+00	5,84E-09	5,94E-09	3,60E-08	-2,78E-07						
Acidification	kg SO ₂ e	2,31E-02	4,88E-03	8,37E-03	3,64E-02	7,55E-03	2,69E-05	MND	0,00E+00	1,05E-04	3,46E-04	4,98E-04	-4,44E-02						
Eutrophication	kg PO ₄ ³ e	8,14E-03	1,11E-03	2,13E-03	1,14E-02	1,08E-03	2,84E-05	MND	0,00E+00	2,40E-05	5,82E-04	1,01E-03	-8,54E-03						
POCP ("smog")	kg C ₂ H ₄ e	1,53E-03	1,98E-04	4,69E-04	2,19E-03	2,22E-04	1,30E-06	MND	0,00E+00	4,11E-06	1,63E-05	2,38E-05	-2,08E-03						
ADP-elements	kg Sbe	9,69E-05	5,26E-06	2,74E-06	1,05E-04	2,43E-06	3,70E-08	MND	0,00E+00	7,27E-08	1,04E-06	3,30E-07	-1,23E-05						
ADP-fossil	MJ	4,48E+01	2,27E+01	1,69E+01	8,44E+01	1,20E+01	6,66E-02	MND	0,00E+00	4,81E-01	1,36E+00	2,72E+00	-8,34E+01						

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	9,69E-05	5,26E-06	2,74E-06	1,05E-04	2,43E-06	3,70E-08	MND	0,00E+00	7,27E-08	1,04E-06	3,30E-07	-1,23E-05						
Hazardous waste disposed	kg	4,81E-01	2,55E-02	1,09E-01	6,16E-01	1,38E-02	2,66E-04	MND	0,00E+00	6,38E-04	2,06E-02	1,71E-01	-6,50E-01						
Non-haz. waste disposed	kg	6,56E+00	4,50E-01	1,86E+00	8,87E+00	2,13E-01	1,22E-01	MND	0,00E+00	1,05E-02	3,68E-01	3,33E-01	-1,56E+01						
Air pollution	m ³	9,43E+02	2,05E+02	2,27E+02	1,37E+03	1,23E+02	1,21E+00	MND	0,00E+00	5,75E+00	1,90E+01	8,83E+00	-2,77E+03						
Water pollution	m ³	2,82E+01	2,06E+00	3,33E+00	3,36E+01	9,92E-01	4,57E-02	MND	0,00E+00	3,39E-02	4,50E+00	1,46E+00	-1,29E+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 ₂ e	3,02E+00	1,53E+00	1,20E+00	5,75E+00	8,38E-01	7,53E-03	MND	MNR	0,00E+00	0,00E+00	0,00E+00	-6,15E+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.

HaiHa Nguyen, as an authorized verifier acting for EPD Hub Limited
15.02.2024

