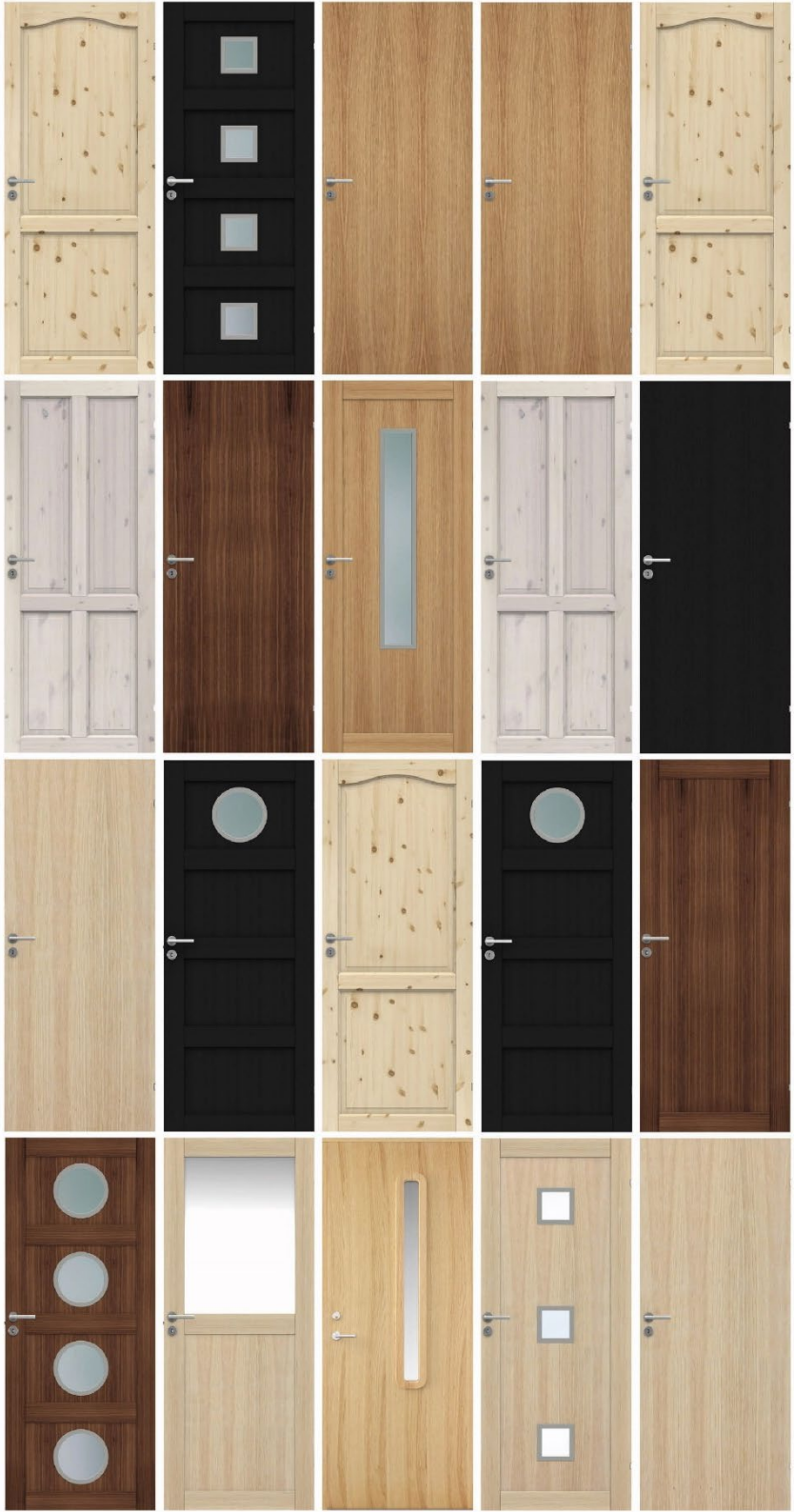


SWEDOOR | JW

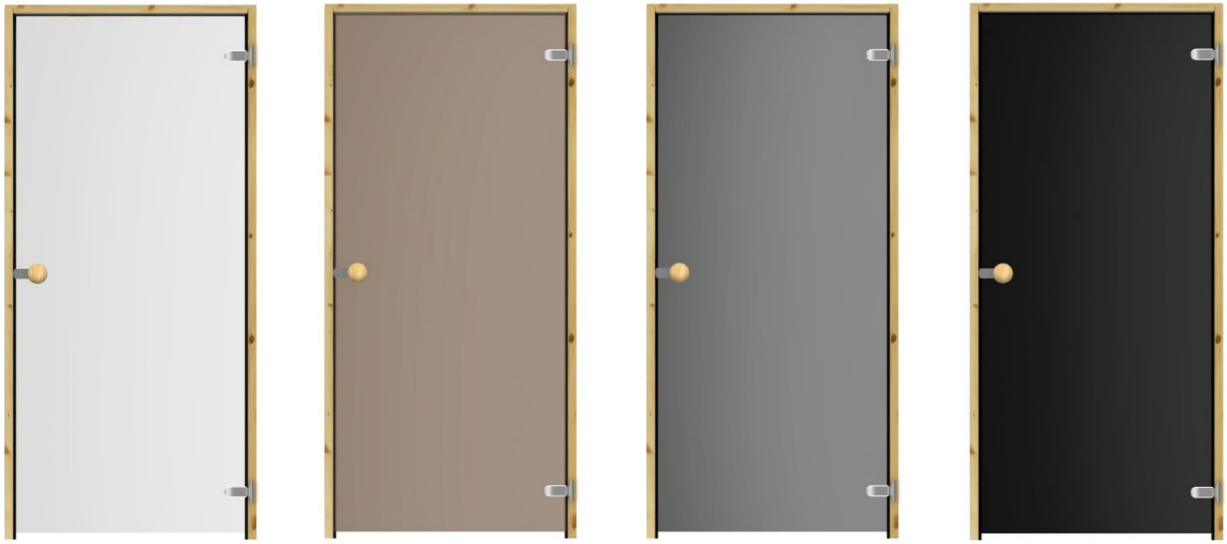
ENVIRONMENTAL PRODUCT DECLARATION

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

SWEDOOR CLEVER-LINE

FULL GLASS SAUNA DOOR SET

JELD-WEN



EPD HUB, HUB-1523

Publishing on 11.07.2024, last updated on 11.07.2024, valid until 11.07.2029

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	Aleksandra Andrejeva
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☒ External verification
EPD verifier	Imane Uald lamkaddam, 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 CLEVER-LINE full glass sauna door set
Additional labels	SWEDOOR sauna door
Product reference	
Place of production	Finland, Estonia
Period for data	2022
Averaging in EPD	Multiply factories
Variation in GWP-fossil for A1-A3	<10 %

ENVIRONMENTAL DATA SUMMARY

Declared unit	one square meter
Declared unit mass	24.11 kg
GWP-fossil, A1-A3 (kgCO2e)	6.44E+01
GWP-total, A1-A3 (kgCO2e)	5,67E+01
Secondary material, inputs (%)	0.64
Secondary material, outputs (%)	39.8
Total energy use, A1-A3 (kWh)	666
Total water use, A1-A3 (m3e)	4.1E-01

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 JELDWEN 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

Clever-line 8 mm sauna door made of glass with heat-treated frames, including sealing and standard hardware. See-through sauna door gives spacious feeling for sauna room and glass has excellent heat and moisture resistance, making it suitable for sauna and bathroom spaces.
The indicator results for the declared unit of one square meter of sauna doorset in this EPD are calculated for the module size of 9X19 with the reference product size of 0,890 m x 1,890 m.

The specific technical standards and addition product information for each door design can be found on Swedoor website, at www.jeld-wen.biz.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass-%	Material origin
Bio-based materials	18.4	EU
Fossil materials	1.3	EU
Metals	3.9	GLOBAL
Minerals	76.4	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	2.23
Biogenic carbon content in packaging, kg C	0.31

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	one square meter
Mass per declared unit	24.11 kg

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							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 doorleaf is made from 8 mm tempered glass. It contains hinges, plastic lock strike plate and wooden handle. The frame is made from solid wood and contains rubber sealing and hardware (lock and screws). The set in this EPD consists of doorleaf and frame. The production of doorleaf includes drilling holes in the glass for hinges and handle. The production of the frame 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. The products are finished with adding the necessities like hardware (lock, hinges etc.) and sealings. After these components are installed to the products, the product is put together in the packaging. Before leaving the factory, the door is stacked onto pallets along other doors (max. 20 doors per pallet) and to shield the finished product during transportation phase, the stack is protected with cardboard and plastic packaging materials and wooden slits in between doorleaves. During the production process, wooden waste and glass waste is generated. Production waste and loss, including cuttings of wood are sent to a waste management company to be incinerated and/or recycled; 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.

When considering this phase of the life cycle, there is not only one place where the transportation from us would end, as our customers can have multiple locations between each other, thus causing variance to the transport distance and the needed vehicles. The travel distances used on the transportation data is then a theoretical value, a weighted average value for this product, which is calculated based on its previous transportation history. The assumed vehicle for the transportation is a lorry, with the vehicle capacity value of 1, meaning that the lorry is carrying a full load all

around while transporting the goods, causing distortion to the results. However, when considering the overall results of the product life cycle, the impact of the old variance among transportation can be considered negligible due having a low impact to the overall results. Empty returns are considered to be out of scope, as the transportation company is considered to be out of our use, when they are not having our goods on board, and serving their other customers or routes. Material loss is not expected to take place during transportation phase due to sufficient protective packaging of our products.
Upon installing the products, the packaging materials are removed, leading to generating packaging waste. As the final product is only installed, there is no material loss expected to happen during installing phase nor such construction practices that would lead to material loss are needed. The installing work consists of mounting and fastening, which can be done with hand tools. There are no extra materials needed to be used for the installing purposes. The energy consumption for installing is then considered to be zero, due to the small size of the consumption and the impact it has on this life-cycle stage.

PRODUCT USE AND MAINTENANCE (B1-B7)

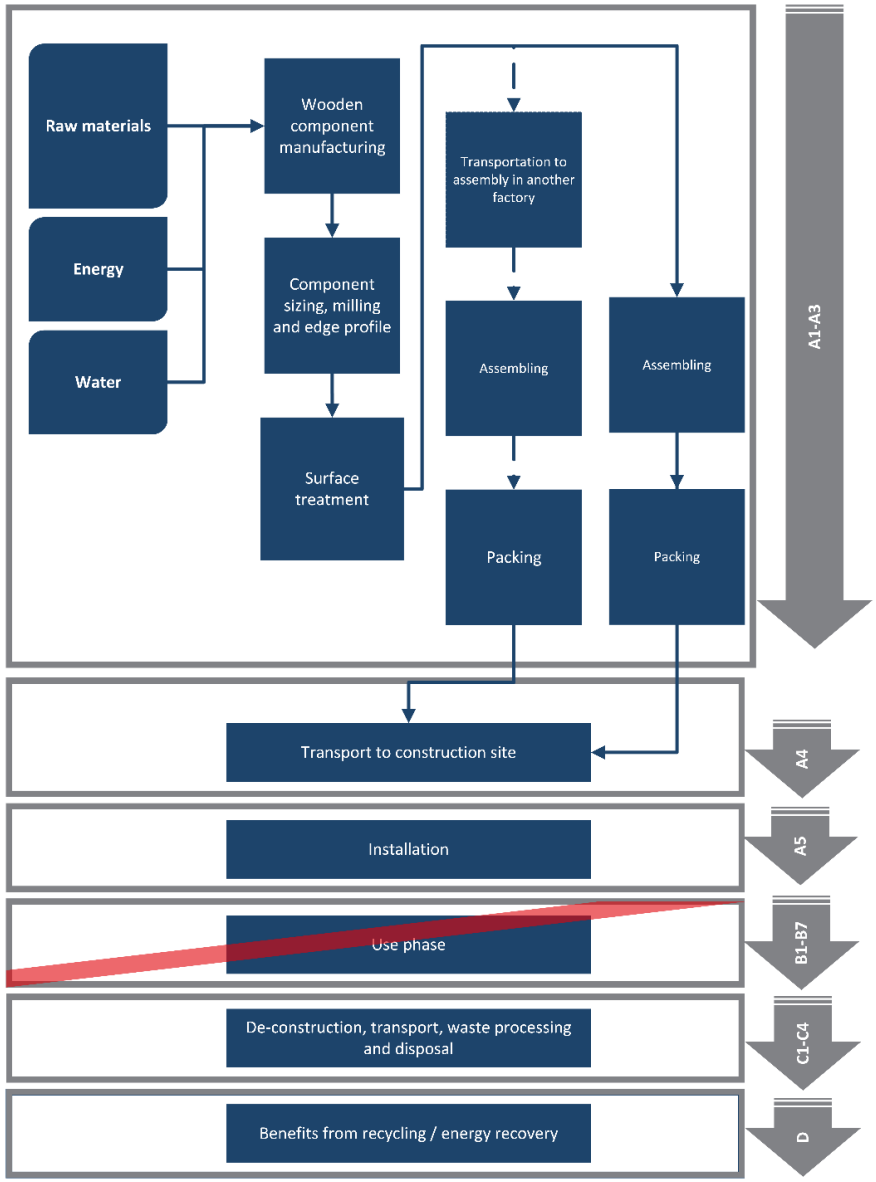
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

The energy and use of natural resources upon demolition process are considered negligible. Assumptions regarding the waste management are given regarding the sorting practices and transport distance. The waste collecting vehicle is assumed to a lorry and the waste is assumed to be part of the mixed construction waste- fraction. The travel distance of the lorry carrying the waste from the demolition site to the waste handling site is assumed to be 50 kilometres and the transportation method is assumed to be lorry (C2). Upon arriving to the waste management plant, the recyclable material of the waste and/or the energy-recovery applicable materials are separated from the waste and diverted to correct use. (C3) Other material left that cannot be recycled, re-used or used in incineration processes are assumed to be disposed to landfill (C4). Plastic, glass and steel parts hold potential for recycling and material recovery for secondary material production purposes, that reduce the need for virgin raw materials (D) The wooden content of the doorleaf have great heating value and are applicable for energy production upon used as a fuel in the incineration process (D), decreasing the demand for virgin fuel production and use. 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, wooden board, 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 Modules A3, A5 and D. Plastic and steel parts hold potential for recycling and material recovery for secondary material production purposes, that reduce the need for virgin raw materials (D) The fibreboards and wooden content of the doorleaf have great heating value and are applicable for energy production upon used as a fuel in the incineration process (D), decreasing the demand for virgin fuel production and use.

MANUFACTURING PROCESS AND SYSTEM BOUNDARY

The products are assembled in two JELD-WEN factories: Vääksy in Finland and Rakvere in Estonia.



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	Multiple factories
Averaging method	Representative product
Variation in GWP-fossil for A1-A3	<10%

The products are produced in two JELD-WEN factories, doorleaf and assembling of the whole door set in Vääksy in Finland and frames produced in Rakvere in Estonia, the product calculations do not contain averages and are product specific, but the production calculations are not factory specific to include the environmental data from the Rakvere assembling process. Regarding the transportation data, also the transportation between the two factories for the components is taken into account. The finished products are then leaving to the customer from one of the locations, and the transportation data represents an average distance from one of the sites to the customer of one of the factories.

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_2e	3,30E+01	3,80E+00	1,99E+01	5,67E+01	1,56E+00	6,99E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,11E-01	7,27E+00	5,12E-01	-6,74E+01
GWP – fossil	kg CO_2e	4,09E+01	3,80E+00	1,97E+01	6,44E+01	1,56E+00	2,50E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,11E-01	2,77E-01	1,43E-01	-7,47E+01
GWP – biogenic	kg CO_2e	-8,12E+00	5,51E-05	1,93E-01	-7,93E+00	5,49E-04	6,74E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	7,00E+00	3,68E-01	7,39E+00
GWP – LULUC	kg CO_2e	1,76E-01	1,41E-03	6,23E-02	2,40E-01	6,85E-04	1,25E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,09E-05	2,28E-04	3,28E-04	-5,53E-02
Ozone depletion	kg CFC_{-11}e	4,36E-06	8,73E-07	1,53E-06	6,77E-06	3,48E-07	1,43E-09	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,55E-08	1,51E-08	3,80E-08	-7,71E-06
Acidification potential	mol H^+e	2,48E-01	1,73E-02	4,70E-01	7,36E-01	1,74E-02	1,15E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,69E-04	1,06E-03	9,29E-04	-3,78E-01
EP-freshwater[2)]	kg Pe	7,68E-04	3,09E-05	9,05E-04	1,70E-03	1,10E-05	3,15E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	9,08E-07	9,08E-06	1,33E-06	-2,28E-03
EP-marine	kg Ne	5,90E-02	5,08E-03	2,07E-01	2,71E-01	4,57E-03	4,78E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,39E-04	1,73E-04	3,25E-04	-1,29E-01
EP-terrestrial	mol Ne	4,48E-01	5,61E-02	2,33E+00	2,83E+00	5,07E-02	5,09E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,54E-03	1,98E-03	3,50E-03	-7,72E-01
POCP ("smog")[3)]	kg NMVOCe	1,29E-01	1,77E-02	5,75E-01	7,22E-01	1,41E-02	1,32E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,92E-04	5,72E-04	1,02E-03	-2,07E-01
ADP-minerals & metals[4)]	kg Sbe	4,42E-04	8,86E-06	8,29E-05	5,33E-04	3,25E-06	1,14E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,60E-07	8,55E-06	3,27E-07	-1,16E-03
ADP-fossil	MJ	4,58E+02	5,70E+01	2,31E+02	7,46E+02	2,25E+01	1,48E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,66E+00	2,42E+00	2,61E+00	-9,13E+02
Water use[5)]	m^3e depr.	2,12E+01	2,54E-01	9,03E+00	3,04E+01	9,28E-02	3,42E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,45E-03	5,74E-02	1,17E-02	-3,53E+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	Incidenc	2,10E-06	4,34E-07	5,90E-05	6,15E-05	1,48E-07	1,82E-09	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,28E-08	1,56E-08	1,80E-08	-3,27E-06
Ionizing radiation[6)]	kBq U235e	2,86E+00	2,71E-01	1,71E+00	4,84E+00	1,07E-01	8,05E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,93E-03	3,85E-02	1,21E-02	-3,84E+00
Ecotoxicity (freshwater)	CTUe	8,74E+02	5,11E+01	3,39E+03	4,32E+03	1,89E+01	2,87E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,50E+00	5,38E+00	2,18E+00	-1,63E+03
Human toxicity, cancer	CTUh	3,56E-08	1,27E-09	4,19E-08	7,87E-08	6,03E-10	4,20E-11	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,68E-11	2,27E-10	1,21E-10	-4,39E-08
Human tox. non-cancer	CTUh	7,47E-07	5,05E-08	2,55E-06	3,35E-06	1,77E-08	1,21E-09	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,48E-09	6,35E-09	1,53E-09	-1,06E-06
SQP[7)]	-	1,05E+03	6,51E+01	1,93E+02	1,30E+03	2,11E+01	1,52E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,92E+00	2,18E+00	4,59E+00	-2,18E+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	1,97E+02	6,39E-01	2,43E+01	2,22E+02	2,31E-01	7,29E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,88E-02	3,33E-01	3,07E-02	-6,65E+01
Renew. PER as material	MJ	6,54E+01	0,00E+00	-7,14E-01	6,47E+01	0,00E+00	-5,82E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-5,60E+01	-2,95E+00	0,00E+00
Total use of renew. PER	MJ	2,63E+02	6,39E-01	2,36E+01	2,87E+02	2,31E-01	-5,81E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,88E-02	-5,56E+01	-2,91E+00	-6,65E+01
Non-re. PER as energy	MJ	5,06E+02	5,70E+01	2,29E+02	7,92E+02	2,25E+01	1,48E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,66E+00	2,42E+00	2,61E+00	-9,13E+02
Non-re. PER as material	MJ	9,70E+00	0,00E+00	4,11E+00	1,38E+01	0,00E+00	-4,11E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-9,21E+00	-4,85E-01	-3,79E+00
Total use of non-re. PER	MJ	5,16E+02	5,70E+01	2,33E+02	8,05E+02	2,25E+01	-3,96E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,66E+00	-6,80E+00	2,13E+00	-9,17E+02
Secondary materials	kg	1,53E-01	1,59E-02	1,73E-01	3,42E-01	6,90E-03	4,57E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,62E-04	2,07E-03	7,59E-04	-3,29E-01
Renew. secondary fuels	MJ	2,40E-03	1,59E-04	1,38E+03	1,38E+03	5,53E-05	2,88E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,66E-06	3,80E-05	1,37E-05	-1,22E-04
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	m3	3,09E-01	7,34E-03	9,44E-02	4,10E-01	2,59E-03	-4,60E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,16E-04	1,90E-03	2,15E-03	-6,51E-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	4,72E+00	7,55E-02	1,36E+00	6,16E+00	2,96E-02	1,01E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,21E-03	2,43E-02	1,27E-02	-5,37E+00
Non-hazardous	kg	5,89E+01	1,23E+00	2,90E+01	8,91E+01	4,37E-01	4,95E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,63E-02	1,57E+00	3,24E-01	-1,03E+02
Radioactive waste	kg	1,66E-03	3,81E-04	9,29E-04	2,97E-03	1,53E-04	4,71E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,11E-05	1,35E-05	1,59E-05	-2,50E-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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,92E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	6,58E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	4,82E-01	4,82E-01	0,00E+00	4,80E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	3,02E+00	4,21E-02	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	4,77E+00	4,77E+00	0,00E+00	3,40E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-7,07E+01

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	4,02E+01	3,76E+00	1,95E+01	6,35E+01	1,55E+00	2,44E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,10E-01	2,75E-01	1,55E-01	-7,29E+01
Ozone depletion Pot.	kg CFC-$_{11}$e	4,96E-06	6,91E-07	1,23E-06	6,88E-06	2,75E-07	1,19E-09	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,02E-08	1,26E-08	3,01E-08	-8,34E-06
Acidification	kg SO_2e	2,06E-01	1,35E-02	3,31E-01	5,50E-01	1,38E-02	8,32E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,65E-04	8,83E-04	7,04E-04	-3,10E-01
Eutrophication	kg PO_4^3e	6,54E-02	2,94E-03	1,10E-01	1,78E-01	2,00E-03	1,16E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	8,31E-05	5,65E-04	7,80E-04	-1,18E-01
POCP (“smog”)	kg C_2H_4e	1,14E-02	5,11E-04	4,09E-02	5,27E-02	4,02E-04	3,69E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,42E-05	4,13E-05	3,13E-05	-1,43E-02
ADP-elements	kg Sbe	4,75E-04	8,58E-06	8,21E-05	5,65E-04	3,15E-06	1,10E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,52E-07	8,53E-06	3,20E-07	-1,16E-03
ADP-fossil	MJ	5,31E+02	5,70E+01	2,33E+02	8,20E+02	2,25E+01	1,48E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,66E+00	2,42E+00	2,61E+00	-9,13E+02

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	4,74E-04	8,58E-06	8,21E-05	5,65E-04	3,15E-06	1,10E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,52E-07	8,53E-06	3,20E-07	-1,16E-03
Hazardous waste disposed	kg	4,57E+00	7,55E-02	1,37E+00	6,02E+00	2,96E-02	1,01E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,21E-03	2,43E-02	1,27E-02	-4,87E+00
Non-haz. waste disposed	kg	4,40E+01	1,23E+00	2,86E+01	7,38E+01	4,37E-01	4,95E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,63E-02	1,57E+00	3,24E-01	-8,28E+01
Air pollution	m3	5,94E+03	6,82E+02	2,86E+04	3,53E+04	2,83E+02	3,70E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,99E+01	4,68E+01	2,40E+01	-8,98E+03
Water pollution	m3	4,08E+01	4,00E+00	8,21E+01	1,27E+02	1,51E+00	1,77E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,17E-01	1,10E+02	5,42E+00	4,20E+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	4,09E+01	3,80E+00	1,97E+01	6,44E+01	1,56E+00	2,50E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,11E-01	2,77E-01	1,43E-01	-7,47E+01

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.

Imane Uald lamkaddam, as an authorized verifier acting for EPD Hub Limited
11.07.2024