



## ENVIRONMENTAL PRODUCT DECLARATION

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

INLOOK WOODY 37 (1) – sound insulating glass wall with wooden frames and door  
Inlook Oy



## GENERAL INFORMATION

### MANUFACTURER

Manufacturer	Inlook Oy
Address	Sahaajankatu 1, 00880 Helsinki
Contact details	info@inlook.fi
Website	<a href="https://www.inlook.fi">https://www.inlook.fi</a>

### 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
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	Riikka Anttonen, Laura Sariola, Afry Finland Oy
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal certification <input type="checkbox"/> External verification
EPD verifier	Haiha Nguyen, 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	INLOOK WOODY 37 (1) - glass wall with wooden frames and solid wooden door
Place of production	Finland, Estonia
Period for data	1.10.2021 - 30.9.2022

### ENVIRONMENTAL DATA SUMMARY

Declared unit	One piece of wall system with hinged door (7,02 m <sup>2</sup> )
Declared unit mass	184 kg
GWP-fossil, A1-A3 (kgCO <sub>2</sub> e)	2,36E+02
GWP-total, A1-A3 (kgCO <sub>2</sub> e)	7,82E+01
Secondary material, inputs (%)	7.7
Secondary material, outputs (%)	80.3
Total energy use, A1-A3 (kWh)	1310.0
Total water use, A1-A3 (m <sup>3</sup> e)	2,06E+00

## PRODUCT AND MANUFACTURER

### ABOUT THE MANUFACTURER

Inlook is a Finnish company specialized in interior construction. Its range of services includes solutions for new construction, renovation, demanding special projects, main contracting and material selling as well as industrial powder coating.

INLOOK glass wall systems provide a practical working environment with a highly customizable look. The glass walls create the sense of open space but offer the possibility for privacy when needed. Fine-tuned details ensure a stylish and functional result. A wide range of products and a versatile choice of colours / surfaces allow for a variety of styles available for each solution. INLOOK glass wall systems are typically used in offices and commercial premises.

### PRODUCT DESCRIPTION

INLOOK WOODY 37 is a wooden frame glass wall system. The reference product (Woody 37-1) consists of a single solid glass module and a hinged wooden door with solid wooden top part and side panel and wooden frame profiles. In addition, the product contains parts such as lock-case and seals.

Technical specifications are as follows:

- dimensions 2650 x 2650 mm x 92 mm (width x height x depth)
- glass thickness 4+4 mm (solid glass module)
- PVB (PolyVinyl Butyral) interlayer for sound control (0,76 mm)
- Lock-case LC190
- plastic seals
- sound insulation class 30 dB (Rw 37 dB); VTT-S-01876-11 and EUFI29-19001962-T2 (specimen No. 13)

Further information can be found at <https://www.inlook.fi>

### PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	2	EU
Minerals	42	EU
Fossil materials	1	EU
Bio-based materials	55	EU

### BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	39.9
Biogenic carbon content in packaging, kg C	3.9

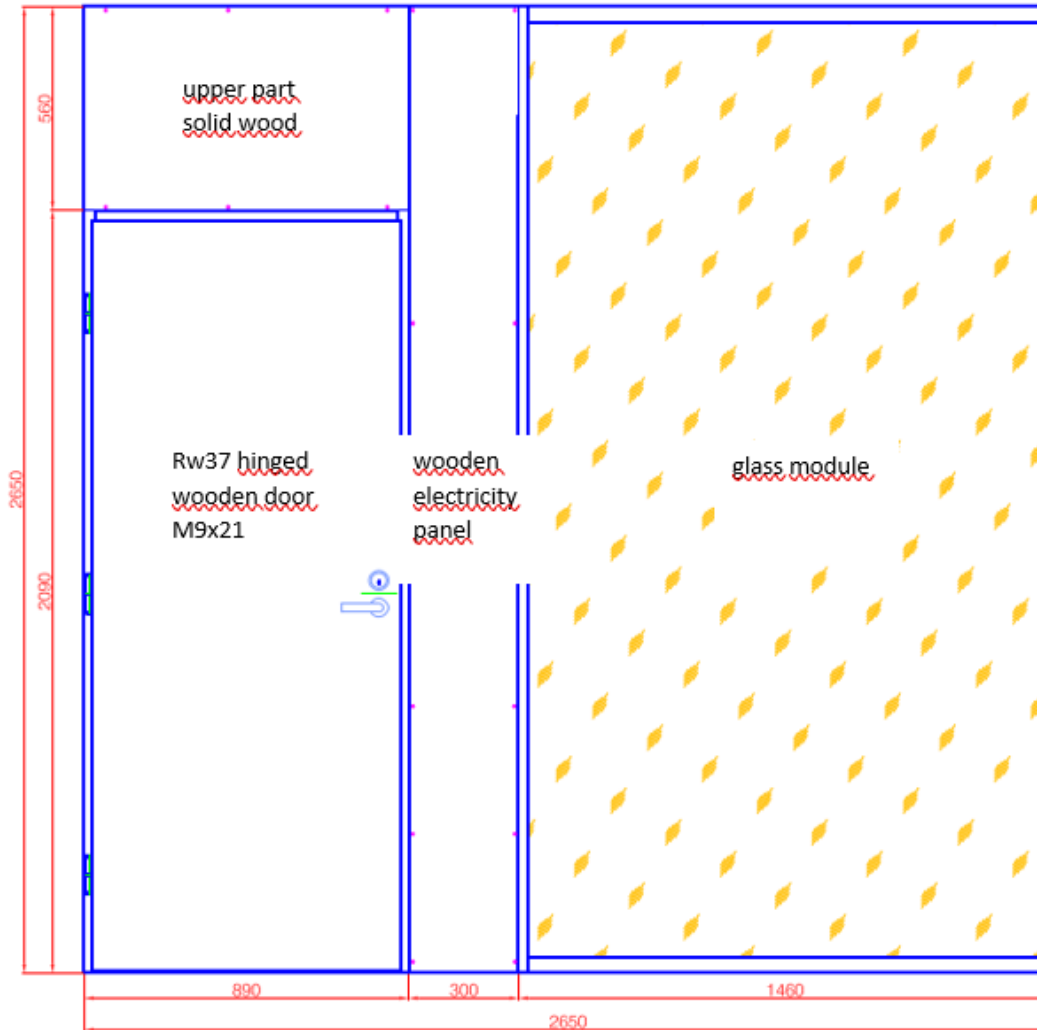
### FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	One piece of wall system with hinged door (7,02 m <sup>2</sup> )
Mass per declared unit	184 kg

### SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

# TECHNICAL DRAWING



# 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, 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 consists of a solid glass wall with wooden frames and a hinged wooden door (A1). The production is subcontracted to Estonia; wooden frames and door leaves are made by carpentry in Haapsalu. Small parts such as wheels and gaskets are added during the assembly phase. The glass is pre-laminated (PVB) glass, which is manufactured in Europe and purchased cut-to-size from a supplier.



For raw material transports (A2) an occupancy rate of 50% is assumed for road haulage and 100% for sea transport.

The manufacturing process (A3) includes carpentry, painting of door leaves and wooden profiles, assembly, and packaging of products. Production uses electricity and fuels. An estimate of the energy consumption of glass cutting (subcontracted) is included. Packaging materials such as wood, plastics and cardboard are used for packing the final product. The production generates different types of production waste: landfilled waste from waste paint/glue, energy waste from e.g. plastic raw material packages and recyclable waste from cardboard packages and metal parts. The transportation distance to treatment is approximately 8 km except for hazardous waste for which the distance to treatment is approximately 108 km.

### TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurring from final product delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

The average transport distance to the site (A4) is 125 km by lorry, calculated as a weighted average considering the sales shares of the regional offices. Transportation volume includes packaging materials. An occupancy rate of 50% is assumed for product delivery. Transportation losses are assessed as insignificant (<1%). The estimated installation time (2-3h) is based on site experience. The installation (A5) is done with a 5Ah electric tool and energy consumption is estimated based on the battery charge level before and after installation. Installation generates waste for energy recovery (wooden and plastic packages) and recycling (packaging cardboard). The estimated transport distance to waste treatment is 20 km.

### 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)

At the end of the life cycle, the product is dismantled. The impacts cover the use of energy to dismantle the product with an electric drill (C1). The dismantled waste material is transported to the closest facility for recycling (C2). The assumption for an average distance and transport method is estimated to be 20 km by truck. The wooden parts are easily separated and assumed to be incinerated for energy recovery. For steel/metal parts 85% recycling rate is assumed. The national average recycling rate of construction waste (56%) has been used for the laminated flat glass. Sorted glass is assumed to be recycled to the production of glass wool. (C3).

The remaining 44% of glass waste and 10% of mixed construction waste (sealant scraps etc.) is expected to be landfilled (C4).

The benefits of material recycling (glass, metal parts) and energy recovery (packages, EoL- product) are accounted for in module D.

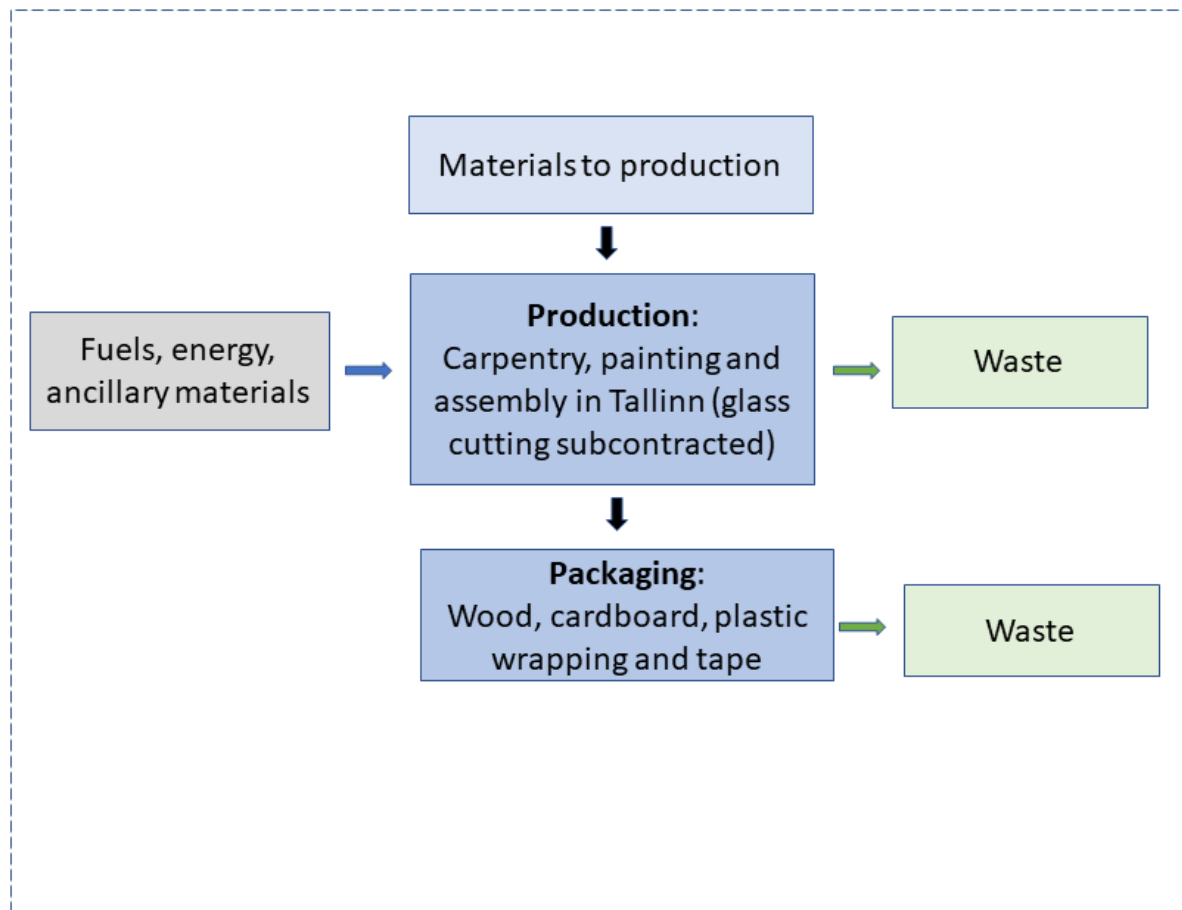
References for recycling rates:

<https://worldsteel.org/>

<https://www.stat.fi/tietotrendit/>

## MANUFACTURING PROCESS

System boundary in A1-A3 modules (wooden profiles)





## 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	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

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 <sup>1)</sup>	kg CO <sub>2</sub> e	2,57E+01	1,88E+01	3,37E+01	7,82E+01	7,98E+00	1,63E+01	MND	MND	MND	MND	MND	MND	MND	3,92E-02	6,85E-01	1,54E+02	3,25E-01	-1,41E+01
GWP – fossil	kg CO <sub>2</sub> e	1,69E+02	1,88E+01	4,78E+01	2,36E+02	7,98E+00	2,21E+00	MND	MND	MND	MND	MND	MND	MND	3,89E-02	6,85E-01	6,69E+00	3,24E-01	-1,40E+01
GWP – biogenic	kg CO <sub>2</sub> e	-1,47E+02	0,00E+00	-1,41E+01	-1,61E+02	0,00E+00	1,41E+01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	1,47E+02	0,00E+00	0,00E+00
GWP – LULUC	kg CO <sub>2</sub> e	3,24E+00	7,11E-03	4,80E-02	3,30E+00	3,19E-03	3,14E-03	MND	MND	MND	MND	MND	MND	MND	3,51E-04	2,53E-04	2,37E-02	2,90E-04	-1,34E-01
Ozone depletion pot.	kg CFC <sub>11</sub> e	7,27E-06	4,66E-06	8,35E-06	2,03E-05	1,85E-06	1,02E-07	MND	MND	MND	MND	MND	MND	MND	2,19E-09	1,58E-07	7,21E-07	1,04E-07	-6,48E-07
Acidification potential	mol H <sup>+</sup> e	9,94E-01	5,93E-02	4,26E-01	1,48E+00	2,27E-02	5,26E-03	MND	MND	MND	MND	MND	MND	MND	1,58E-04	2,88E-03	2,98E-02	2,79E-03	-6,96E-02
EP-freshwater <sup>2)</sup>	kg Pe	4,81E-03	1,34E-04	8,41E-04	5,78E-03	5,70E-05	1,87E-05	MND	MND	MND	MND	MND	MND	MND	1,47E-06	5,59E-06	1,35E-04	5,37E-06	-5,01E-04
EP-marine	kg Ne	2,20E-01	1,30E-02	8,05E-02	3,13E-01	4,52E-03	1,89E-03	MND	MND	MND	MND	MND	MND	MND	2,65E-05	8,53E-04	9,37E-03	1,43E-03	-1,60E-02
EP-terrestrial	mol Ne	2,48E+00	1,44E-01	8,51E-01	3,48E+00	5,03E-02	2,03E-02	MND	MND	MND	MND	MND	MND	MND	3,18E-04	9,41E-03	1,02E-01	1,07E-02	-1,81E-01
POCP (“smog”) <sup>3)</sup>	kg NMVOCe	6,69E-01	5,66E-02	2,68E-01	9,93E-01	1,93E-02	5,42E-03	MND	MND	MND	MND	MND	MND	MND	8,46E-05	3,01E-03	2,87E-02	3,15E-03	-4,64E-02
ADP-minerals & metals <sup>4)</sup>	kg Sbe	6,68E-04	4,83E-05	9,26E-05	8,09E-04	2,89E-05	2,83E-06	MND	MND	MND	MND	MND	MND	MND	1,56E-07	1,62E-06	2,19E-05	1,04E-06	-5,17E-05
ADP-fossil resources	MJ	2,58E+03	2,98E+02	6,90E+02	3,56E+03	1,19E+02	1,16E+01	MND	MND	MND	MND	MND	MND	MND	1,17E+00	1,03E+01	7,01E+01	7,52E+00	-3,89E+02
Water use <sup>5)</sup>	m <sup>3</sup> e depr.	6,80E+01	1,38E+00	8,65E+00	7,80E+01	5,56E-01	8,62E-01	MND	MND	MND	MND	MND	MND	MND	2,51E-02	4,61E-02	1,02E+00	3,51E-02	-1,51E+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 PO<sub>4</sub>e; 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.

## 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 <sup>8)</sup>	MJ	9,68E+02	3,91E+00	2,53E+02	1,22E+03	1,73E+00	9,89E-01	MND	MND	MND	MND	MND	MND	MND	2,87E-01	1,17E-01	3,85E+00	9,23E-02	-9,50E+01
Renew. PER as material	MJ	1,35E+03	0,00E+00	1,22E+02	1,47E+03	0,00E+00	-1,22E+02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-1,35E+03	0,00E+00	0,00E+00
Total use of renew. PER	MJ	2,31E+03	3,91E+00	3,75E+02	2,69E+03	1,73E+00	-1,21E+02	MND	MND	MND	MND	MND	MND	MND	2,87E-01	1,17E-01	-1,34E+03	9,23E-02	-9,50E+01
Non-re. PER as energy	MJ	2,46E+03	2,98E+02	6,50E+02	3,41E+03	1,19E+02	1,16E+01	MND	MND	MND	MND	MND	MND	MND	1,17E+00	1,03E+01	7,01E+01	7,52E+00	-3,89E+02
Non-re. PER as material	MJ	1,22E+02	0,00E+00	3,17E+01	1,53E+02	0,00E+00	-3,17E+01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-1,21E+02	-6,02E-01	0,00E+00
Total use of non-re. PER	MJ	2,59E+03	2,98E+02	6,82E+02	3,57E+03	1,19E+02	-2,01E+01	MND	MND	MND	MND	MND	MND	MND	1,17E+00	1,03E+01	-5,11E+01	6,92E+00	-3,89E+02
Secondary materials	kg	1,42E+01	8,58E-02	1,18E+00	1,54E+01	4,04E-02	7,77E-03	MND	MND	MND	MND	MND	MND	MND	8,00E-05	2,87E-03	3,76E-02	2,61E-03	-4,80E-02
Renew. secondary fuels	MJ	8,44E+01	7,77E-04	3,20E+00	8,76E+01	4,45E-04	6,54E-05	MND	MND	MND	MND	MND	MND	MND	3,44E-07	2,90E-05	5,19E-04	4,77E-05	-7,81E-04
Non-ren. secondary fuels	MJ	1,29E-09	0,00E+00	0,00E+00	1,29E-09	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 <sup>3</sup>	1,76E+00	3,95E-02	2,58E-01	2,06E+00	1,51E-02	3,72E-03	MND	MND	MND	MND	MND	MND	MND	1,04E-03	1,33E-03	2,19E-02	8,33E-03	-3,24E-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	9,77E+00	3,22E-01	1,28E+00	1,14E+01	1,35E-01	3,11E-02	MND	MND	MND	MND	MND	MND	MND	2,52E-03	1,36E-02	2,43E-01	0,00E+00	-8,02E-01
Non-hazardous waste	kg	1,52E+02	5,61E+00	2,94E+01	1,87E+02	2,40E+00	1,14E+01	MND	MND	MND	MND	MND	MND	MND	6,22E-02	2,24E-01	1,63E+01	3,29E+01	-1,12E+03
Radioactive waste	kg	3,10E-02	2,06E-03	4,29E-03	3,73E-02	8,17E-04	6,99E-05	MND	MND	MND	MND	MND	MND	MND	1,24E-05	6,89E-05	3,99E-04	0,00E+00	-3,99E-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	1,64E+00	0,00E+00	4,27E-01	2,07E+00	0,00E+00	7,40E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	4,35E+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	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	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 <sub>2</sub> e	1,49E+02	2,88E+01	4,71E+01	2,25E+02	7,91E+00	2,20E+00	MND	MND	MND	MND	MND	MND	MND	3,85E-02	6,78E-01	6,63E+00	5,27E-01	-1,38E+01
Ozone depletion Pot.	kg CFC-11e	1,44E-05	5,72E-06	6,77E-06	2,69E-05	1,47E-06	8,30E-08	MND	MND	MND	MND	MND	MND	MND	1,91E-09	1,25E-07	5,77E-07	8,23E-08	-5,79E-07
Acidification	kg SO <sub>2</sub> e	1,15E+00	7,48E-02	3,54E-01	1,58E+00	1,86E-02	3,95E-03	MND	MND	MND	MND	MND	MND	MND	1,29E-04	2,24E-03	2,29E-02	2,10E-03	-5,56E-02
Eutrophication	kg PO <sub>4</sub> <sup>3</sup> e	3,08E-01	1,59E-02	5,77E-02	3,81E-01	4,01E-03	2,39E-03	MND	MND	MND	MND	MND	MND	MND	5,65E-05	5,10E-04	8,25E-03	1,57E-03	-3,14E-02
POCP (“smog”)	kg C <sub>2</sub> H <sub>4</sub> e	6,07E-02	3,50E-03	1,86E-02	8,28E-02	9,40E-04	1,48E-04	MND	MND	MND	MND	MND	MND	MND	5,88E-06	8,78E-05	8,52E-04	1,20E-04	-2,44E-03
ADP-elements	kg Sbe	1,75E-03	7,15E-05	9,07E-05	1,91E-03	2,82E-05	2,72E-06	MND	MND	MND	MND	MND	MND	MND	1,58E-07	1,57E-06	2,15E-05	1,00E-06	-5,18E-05
ADP-fossil	MJ	2,04E+03	4,63E+02	6,85E+02	3,18E+03	1,19E+02	1,15E+01	MND	MND	MND	MND	MND	MND	MND	1,11E+00	1,03E+01	7,00E+01	7,52E+00	-3,69E+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.

HaiHa Nguyen, as an authorized verifier acting for EPD Hub Limited  
03.11.2023



## ANNEX 1: CARBON FOOTPRINT DATA FOR DIFFERENT GLASS THICKNESS

The reference product is available in different glass thicknesses. Corresponding gwp -values are presented in the table below.

Product	GWP (kg CO2e)	A1	A2	A3	A1-A3	A4	A5	C1	C2	C3	C4	D
<b>Reference</b>												
Woody -1 (wall 4+4 mm, wooden door)	<i>total</i>	2,57E+01	1,88E+01	3,37E+01	7,82E+01	7,98E+00	1,63E+01	3,92E-02	6,85E-01	1,54E+02	3,25E-01	-1,41E+01
	<i>fossil</i>	1,69E+02	1,88E+01	4,78E+01	2,36E+02	7,98E+00	2,21E+00	3,89E-02	6,85E-01	6,69E+00	3,24E-01	-1,40E+01
<b>Variant</b>												
Woody -1 (wall 5+5 mm, wooden door)	<i>total</i>	5,01E+01	1,88E+01	3,37E+01	1,03E+02	8,76E+00	1,63E+01	3,92E-02	7,66E-01	1,54E+02	4,13E-01	-1,40E+01
	<i>fossil</i>	1,94E+02	1,88E+01	4,78E+01	2,60E+02	8,75E+00	2,21E+00	3,89E-02	7,65E-01	6,75E+00	4,12E-01	-1,39E+01

The difference in glass thickness compared to the reference product is considered as follows:

A1: The amount of glass as raw material (no effect on the consumption of other raw materials)

A2: Transported quantity (raw material)

A3: No effect (For glass cutting, the effect of the change in glass thickness could not be reliably assessed so the data of the reference product has been used)

A4: Transported quantity (finished element)

A5: No effect (Glass thickness does not affect the assembly)

C1: No effect (Glass thickness does not affect the deconstruction)

C2-C4: The amount of glass waste

D: The amount of glass in the evaluation of effects beyond the system boundaries